

1 A. Yes, sir.

2 Q. And that stands for instant secure connect?

3 A. I believe that's correct, yes, sir.

4 Q. And that's also describing your inventions,  
5 correct?

6 A. Yes, sir. And that was another name we used.

7 Q. And despite the fact that you had this  
8 information that the federal technology managers wanted  
9 to spend money on internet security and information  
10 technology, the government simply didn't fund your  
11 effort or your invention, after you talked to the  
12 Federal Aviation Administration; is that right?

13 A. That's correct.

14 Q. What happened after this mid-September  
15 timeframe, as I understand it, is that your project at  
16 SAIC basically ran out of money around October or so of  
17 2001; is that right?

18 A. That's correct, yes, sir.

19 Q. And not much happened after October 2001 with  
20 respect to this project until about the middle or so of  
21 2002; is that right?

22 A. Yes, sir, that's true.

23 Q. Okay. Around that period of time, you were  
24 involved in some discussions with a company called  
25 SafeNet about taking a license to your technology; is

1 that correct?

2 A. Yes, sir.

3 Q. You were one of the people, not the only  
4 person, but one of the people that was involved in that  
5 effort with SafeNet; is that right?

6 A. Yes, I was.

7 Q. If you would take a look at 3199, Defendant's  
8 Exhibit 3199.

9 And, sir, you'll see towards the top there are  
10 a couple of e-mails, and you are copied on the lower  
11 one. It's talking about some SafeNet deal points.

12 Do you see that?

13 A. Yes, sir.

14 Q. And this is dated in April of 2003, correct?

15 A. 2002.

16 Q. Did I say '3? I apologize.

17 A. Yes, sir.

18 Q. April of 2002. Thank you.

19 If you go to the last page, there are a set of  
20 points for discussion, and it appears from these points  
21 that someone at SAIC is describing reasons to do a deal  
22 with SafeNet at that time, correct?

23 A. Yes, sir.

24 Q. One of them is that SafeNet had a track record  
25 of success in internet security.

1 Do you see that? That's --

2 A. Yes, sir.

3 Q. All right. And another reason -- it's a  
4 little farther down, but it's the second to last  
5 paragraph -- another reason is -- is -- was the simple  
6 reason that no other company had come forward with an  
7 offer to spend their own money on a significant  
8 development effort, such as required to develop more  
9 instant secure connect, or ISC technology, correct?

10 A. Yes, sir.

11 Q. So a deal was done in the middle of 2002  
12 between SafeNet and SAIC, correct?

13 A. That sounds right, yes, sir.

14 Q. And as I understand it, SafeNet, under that  
15 agreement, had an option under which it could  
16 unilaterally terminate the license.

17 That's your understanding, right?

18 A. I believe that's correct, yes, sir.

19 Q. They could essentially terminate the license,  
20 as you understood it, for any reason or no reason at  
21 all. They could simply turn it down?

22 A. That's my understanding, yes, sir.

23 Q. Now in the process of the steps following the  
24 entry of the license agreement, SAIC gave some  
25 information to SafeNet, right?

1           A.    Yes, sir, we did.

2           Q.    One of the things that you gave to SafeNet was  
3 the source code for the software that used your patented  
4 technology, right?

5           A.    Yes, we did.

6           Q.    They had access to the -- essentially the  
7 secret information that was the set of instructions for  
8 the computer to follow in executing and implementing  
9 your inventions, right?

10          A.    That's correct.

11          Q.    So they had every -- a full and fair  
12 opportunity to look at that code and see what they  
13 thought of it, right?

14          A.    Yes, sir, they did.

15          Q.    And thereafter, after getting that code and  
16 having an opportunity to review it, SafeNet decided to  
17 terminate the license, right?

18          A.    Yes, sir.

19          Q.    They decided not to pursue your inventions,  
20 correct?

21          A.    That's correct.

22          Q.    And decided to terminate the license without  
23 paying any royalties or money whatsoever to SAIC,  
24 correct?

25          A.    That is correct, yes, sir.



1 Q. Thank you very much, Dr. Short.

2 MR. BOBROW: I pass the witness.

3 THE COURT: All right. Redirect?

4 MR. CAWLEY: Thank you, Your Honor.

5 MR. BOBROW: And actually, Your Honor, if  
6 I may, one housekeeping matter.

7 We had marked two illustrative exhibits,  
8 which we'd simply like to enter into the record as  
9 illustrative exhibits. These are --

10 THE COURT: What are the numbers?

11 MR. BOBROW: Illustrative -- Defendant's  
12 Illustrative Exhibit 1 and Defendant's Illustrative  
13 Exhibit 2. Those were the https example from Dr.  
14 Short's illustration and also the VPN illustration from  
15 Dr. Short.

16 THE COURT: Any objection?

17 MR. CAWLEY: No, Your Honor.

18 THE COURT: Be admitted.

19 MR. BOBROW: Thank you.

20 MR. CAWLEY: And on that subject, Your  
21 Honor, we're going to mark the boards with the red ink  
22 on them Plaintiff's Demonstrative Exhibits 1 through 5.

23 THE COURT: Okay. They are admitted.

24 REDIRECT EXAMINATION

25 BY MR. CAWLEY:

1 Q. Just a few questions, Dr. Short, because I  
2 think -- I think maybe there was a little bit of  
3 information that wasn't covered in some of the questions  
4 that you were just asked that it's important that we  
5 hear to understand the rest of the story.

6 First of all, on Plaintiff's Exhibit 983,  
7 those are the -- that's the Microsoft document that you  
8 blew up on big boards and wrote on with red ink, right?

9 A. Yes, sir.

10 Q. In your view, is that document a fair example  
11 of how people had to set up VPNs back in that timeframe,  
12 the year 2000?

13 A. Yes, sir.

14 Q. Well, we saw in that document that it  
15 wasn't -- Microsoft didn't recommend that it be used for  
16 remote access.

17 What do you understand remote access is?

18 A. My understanding for a remote access is that  
19 you had an average user who had their laptop or desktop  
20 at home.

21 Q. So why wouldn't it be used for remote access?

22 A. It was just -- it would be too hard.

23 Q. Okay. So that's -- basically, you testified  
24 earlier it was too hard for average people to use, like  
25 remote users, right?

1 A. Yes, sir.

2 Q. What was it used for?

3 A. It was used primarily for connecting --  
4 interconnecting networks. Like if you had two offices  
5 that were remotely located from each other and you  
6 wanted to connect them, like you had a virtual network  
7 between them, then you could set up each side and  
8 establish a VPN between those two networks. So you  
9 would have network engineers doing that.

10 Q. Okay. Then you were asked some questions  
11 about a different way of setting up a VPN back then,  
12 something called PPTP.

13 Do you remember that?

14 A. Yes, sir.

15 Q. And you were shown some documents that seemed  
16 to create the impression that that was easy using PPTP?

17 A. Yes, sir.

18 Q. Let's take a look at that document again,  
19 though, Defendant's Exhibit 3121.

20 This is the document that Microsoft's lawyer  
21 showed you that had easy in it, right?

22 A. Yes, sir.

23 Q. Let's look at Page 7 where that appears first,  
24 that bold -- that's a little bit more than halfway down  
25 the page. Right there.

1           And let me read it to you: Microsoft virtual  
2 private networks have been designed to make their  
3 implementation easy for network administrators.

4           Who are network administrators?

5           A. Typically, these are network engineers, the  
6 kind I was talking about.

7           Q. Okay. And let's go to the next place in this  
8 document that Microsoft's lawyer pointed you to. Page  
9 11.

10           I want to find the language that says that  
11 setting up a VPN is easy. Right there: Setting up a  
12 VPN on Windows NT Server 4.0 is easy.

13           Right?

14           A. Yes, sir.

15           Q. You were shown that sentence by Microsoft's  
16 lawyer?

17           A. Yes, sir.

18           Q. Well, let's skip over the next sentence that  
19 talks about considering a special case or use of RAS,  
20 and let's highlight the sentence that follows that.

21           As a result, setting up a VPN using PPTP  
22 involves many of the same steps an IS administrator  
23 takes when setting up a server to accept dial-up  
24 networking connections via RAS.

25           What does that tell us?

1           A.    The way I read that, an IS administrator is  
2 like a network engineer.

3           Q.    Have you seen a Microsoft document that  
4 describes those steps?

5           A.    Yes, sir.

6           Q.    Well, let me show you a document that  
7 Microsoft's lawyer did not show you in your  
8 cross-examination, even though it is one of Defendant's  
9 exhibits.  It's 3021.

10                   What's this?

11           A.    This is an instruction manual, I believe,  
12 for --

13                   MR. CAWLEY:  If we can highlight that  
14 little language that says installing, configuring, et  
15 cetera.

16           Q.    (By Mr. Cawley) So this tells us it's an  
17 instruction manual about how we're going to install,  
18 configure, and use PPTP, right?

19           A.    Yes, sir.

20           Q.    So let's go to Page 4 of this Microsoft  
21 document.

22                   Is that an index or table of contents of the  
23 steps that you have to follow to set up a VPN using  
24 PPTP?

25           A.    Yes, sir.

1 Q. And many of these steps, as we can see from  
2 the numbers in the right-hand side, those refer to page  
3 numbers of the manual?

4 A. Yes, sir.

5 Q. So you have to go through all these steps,  
6 many of which have multiple pages.

7 Is that accurate?

8 A. Yes, sir.

9 Q. You were also asked some questions about the  
10 demonstration you gave to the jury in Court, and that  
11 when you got your computers, when you bought computers  
12 so you could be able to demonstrate that to the jury,  
13 you had to install your software.

14 Do you remember that?

15 A. Yes, sir.

16 Q. Well, Dr. Short, does any software have to be  
17 installed on a computer to be used?

18 A. Yes, sir.

19 Q. It's not any good in the box, is it?

20 A. That's correct.

21 Q. Now, it is possible, isn't it, as many people  
22 have done, that sometimes when you buy a computer,  
23 someone like Dell has already installed software on it?

24 A. Yes, sir.

25 Q. But it's also the case that if you want to

1 have some additional software, like maybe a game, like  
2 maybe a word processor, like maybe something that helps  
3 you take care of taxes, or whatever it is, you have to  
4 buy that software and install it on your computer?

5 A. Yes, sir.

6 Q. That's not unusual for Gabriel, is it?

7 A. No, sir.

8 Q. And it's possible, isn't it, that if you could  
9 find a computer-maker who was willing to do it, they  
10 could pre-install Gabriel on a computer that they sold  
11 to someone and the buyer of the computer wouldn't have  
12 to install anything?

13 A. That's correct.

14 Q. Microsoft's lawyer also showed you a section  
15 in the manual about how to get your Gabriel software  
16 registered, that you have to register the software?

17 A. Yes, sir.

18 Q. Why is that?

19 A. There are a couple of reasons. One, we were  
20 running a beta, so we wanted to get information about  
21 people who were doing the testing so we would know who  
22 they were and be able to interact with them on the  
23 results of their test.

24 Q. So when the user of Gabriel for the first time  
25 is using your beta test is going to have to register the

1 software, what kind of complicated information are they  
2 going to have to enter to get it registered?

3 A. This is after it's installed?

4 Q. Yes, sir.

5 A. All -- all they'd have to do is -- is register  
6 their name and ask for a domain name.

7 Q. Once it's installed, once it's registered,  
8 what does the user of your software have to do to set up  
9 a VPN?

10 A. Basically what I showed in the demo, sir.

11 Q. Okay. Let me ask you briefly about Aventail.  
12 Microsoft's lawyer was asking you about SAIC's decision  
13 in evaluating what it was going to use for security for  
14 its subsidiary, ANX, and they were looking at your  
15 invention and they were looking at Aventail, and they  
16 chose Aventail.

17 I believe the response you gave to Microsoft's  
18 lawyer was that's true, and you thought they made the  
19 right decision.

20 A. Yes, sir, I did.

21 Q. They didn't ask you about that, so let me.  
22 Why do you think that SAIC made the right decision in  
23 choosing Aventail over your invention at that time?

24 A. Our -- our technology was really in the very  
25 early beta stage at that point, and they were trying to



1 put together a system to immediately service real  
2 customers. So they needed a solid product that was  
3 tested and of commercial quality.

4 So I would have made the same decision.

5 Q. Was your product there yet?

6 A. No, sir.

7 Q. And finally, let me ask you about SafeNet.

8 This is the company that entered into a license  
9 agreement to pay 20 percent of its revenues from the  
10 invention to the owner of the patents.

11 Do you remember that?

12 A. Yes, sir.

13 Q. But then they canceled that agreement before  
14 they ever paid anything under it?

15 A. That's correct.

16 Q. And you understand that they did that --  
17 why -- why did they do that?

18 A. My understanding from their letter was that  
19 they had decided at that time they did not want to put  
20 the capital investment in it to productize it.

21 Q. Because what they were licensing in the  
22 agreement was not a product, right?

23 A. That's correct.

24 Q. It was just the right to use your invention?

25 A. Yes, sir.

1 Q. And where would they get a product?

2 A. They would have had to do a fair development  
3 themselves.

4 Q. So they would have to spend a bunch of money  
5 developing your idea into an invention, correct?

6 A. Yes, sir.

7 Q. And they eventually decided that they didn't  
8 want to do that?

9 A. That's correct.

10 Q. Thank you.

11 MR. CAWLEY: I'll pass the witness, Your  
12 Honor.

13 THE COURT: Any recross?

14 MR. BOBROW: Yes, Your Honor. Very  
15 brief.

16 RECROSS-EXAMINATION

17 BY MR. BOBROW:

18 Q. Dr. Short, in response to the questions just  
19 posed to you, you were asked some questions about PPTP.

20 Do you recall that?

21 A. Yes, sir.

22 Q. You were asked some questions about  
23 Exhibit 3121, which is the Windows NT server white paper  
24 that talks about PPTP.

25 Do you recall that?

1 A. Yes, sir.

2 Q. Do you still have that in front of you?

3 A. Yes, sir.

4 Q. Now, let me ask you about a page of this  
5 exhibit that VirnetX's lawyer didn't ask you about on  
6 redirect examination, all right?

7 Would you please turn to Page 12?

8 And if you look towards --

9 A. Yes.

10 Q. Please look towards the bottom where there is  
11 a reference --

12 A. I'm sorry. I have the wrong document here.

13 Q. 3121, please.

14 A. 21?

15 Q. 3-1-2-1.

16 A. That's what I've got.

17 And this is Page?

18 Q. Please look at Page 12, if you would.

19 A. Okay. I'll just look here.

20 Q. Okay. And you'll see towards the bottom there  
21 is a reference where it says on the client.

22 Do you see that?

23 A. Yes, sir.

24 Q. And unlike on the server side, which is a side  
25 that's written for administrators and others, the client

1 side is talking about the side of the VPN where the  
2 client actually enters a domain name into a computer,  
3 hits enter, and a connection is created, right? That's  
4 the side we're talking about here?

5 A. Yes, sir.

6 Q. And what this says, for PPTP from the client's  
7 side, is that VPN setup in use on the client is also  
8 easy.

9 That's what it says, doesn't it?

10 A. Yes, sir.

11 Q. And it says that when PPTP support is provided  
12 by an ISP -- now, let me pause there.

13 An ISP is a service like --

14 A. Excuse me.

15 Q. That's fine. Are you alright?

16 A. Yes, sir.

17 Q. An ISP is a company like AT&T or someone like  
18 that that provides internet service, right?

19 A. Yes, sir. It's internet service provider.

20 Q. So what this is saying is that when PPTP  
21 support is provided by an ISP, like AT&T, for example,  
22 no change in setup is required to the client computer,  
23 correct?

24 A. Yes, sir.

25 Q. The user doesn't need to do anything, because

1 the ISP, like AT&T or what-have-you, has taken care of  
2 that, right?

3 A. Yes, sir.

4 Q. And what it goes on to say is that in that  
5 situation, when you're hooked up through an ISP, the VPN  
6 support with PPTP is transparent.

7 A. Yes, sir.

8 Q. Transparent to the user, correct?

9 A. Yes, sir.

10 Q. Now, as we went through Exhibit 3021, which  
11 VirnetX's lawyer showed you, I think he just showed you  
12 the table of contents.

13 Do you recall that?

14 A. Yes, sir.

15 Q. Okay. Now, back in 1996, you had not set up a  
16 PPTP VPN, correct?

17 A. No, sir.

18 Q. Is that correct?

19 A. That is correct, yes, sir.

20 Q. And you hadn't set one up in 1997 either,  
21 right?

22 A. No, sir, we had not.

23 Q. Or in '98, correct?

24 A. That's correct.

25 Q. You had not set up a PPTP VPN?

1 A. That is correct.

2 Q. Thank you.

3 MR. BOBROW: No further questions. Pass  
4 the witness.

5 THE COURT: Redirect?

6 MR. CAWLEY: Nothing further, Your Honor.

7 THE COURT: All right. Thank you. You  
8 may step down.

9 THE WITNESS: Thank you, sir.

10 THE COURT: All right. Mr. Cawley, who  
11 will be your next witness.

12 MR. CAWLEY: Your Honor, may this witness  
13 be excused?

14 THE COURT: Yes, he may.

15 Who will be your next witness?

16 MR. CALDWELL: Your Honor, Plaintiff  
17 calls its expert, Mr. Mark Jones.

18 THE COURT: All right. Mr. Jones.

19 MR. CALDWELL: May we approach the bench?

20 THE COURT: Yes, you may.

21 (Bench conference.)

22 MR. CALDWELL: There is a motion in  
23 limine on the new operating system, Windows 7, and we  
24 are not going to say Windows 7 infringes. But rather  
25 than have the elephant in the room, while everybody's

1 seen it on the Olympics, I want to ask why is that not  
2 in your analysis, and have him say that it just came out  
3 too late to be part of the case.

4 I have not discussed this with  
5 Mr. Powers, so that's why we wanted to approach.

6 MR. POWERS: I think within reason, it  
7 raises a question in the jurors' minds about why does  
8 that mean it would be infringing, if it's not.  
9 I think just discussing it is going to raise the  
10 question.

11 THE COURT: I think the jurors -- so  
12 don't go into it.

13 MR. CALDWELL: Okay.

14 (Bench conference concluded.)

15 MR. CALDWELL: May I approach, Your  
16 Honor?

17 THE COURT: Yes, you may.

18 MARK JONES, Ph.D., PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

19 DIRECT EXAMINATION

20 BY MR. CALDWELL:

21 Q. Good afternoon.

22 A. Good afternoon, sir.

23 Q. Would you please introduce yourself to the  
24 jury.

25 A. My name is Mark Jones, and I am a professor at

1 Virginia Tech.

2 Q. Are you a Dr. Jones?

3 A. Yes, sir.

4 Q. A medical doctor.

5 A. No, not that kind. Not the kind to do you any  
6 good.

7 Q. A Ph.D. like Dr. Short?

8 A. Yes, sir.

9 Q. Are you a VirnetX employee?

10 A. No, sir.

11 Q. Well, Dr. Jones, why are you here today?

12 A. Well, I'm here because I was able to look at a  
13 lot of information in the case, including confidential  
14 information, study it, and then form conclusions.

15 And then I'm here to explain those conclusions  
16 to the jury today in a way that they can understand the  
17 issues.

18 Q. Okay.

19 THE COURT: Dr. Jones, you may want to  
20 get a little closer to the microphone. Not too close or  
21 it will pop. But you have a soft voice, and it's a  
22 little hard to hear you.

23 THE WITNESS: Thank you.

24 Q. (By Mr. Caldwell) Is that because we're going  
25 to dig into the technology today?



1           A.    Yes, sir.

2           Q.    Now, just at a very, very high level, the  
3 30,000-foot level, what kinds of opinions are you going  
4 to talk about today?

5           A.    I'm here to talk about opinions related to  
6 infringement of the VirnetX's patents.

7           Q.    Professor Jones, we're going to get to your  
8 infringement opinions in detail. Your presentation is  
9 one of the longer ones that Mr. Cawley alluded to in  
10 opening.

11                    But before we get into that, we need to find  
12 out a little bit about you. So how old a man are you?

13           A.    I'm 44 years old.

14           Q.    Have any kids?

15           A.    Yes, I do. I have four children.

16           Q.    How old are they?

17           A.    They are 18, 16, 8, and 8.

18           Q.    Are the eight year olds twins?

19           A.    No, they're two months apart. They're both  
20 adopted.

21           Q.    Where do you live?

22           A.    I live in Blacksburg, Virginia.

23           Q.    And what's in Blacksburg, Virginia?

24           A.    Pretty much Virginia Tech.

25           Q.    Is that a big town?

1 A. No, sir.

2 Q. Okay. Have you always lived in Virginia?

3 A. I was born there, but shortly -- shortly after  
4 that, we moved to the Dallas area.

5 Q. Well, where did you live when you were a  
6 little kid when you lived in Virginia?

7 A. I was in the Norfolk, Virginia area where my  
8 dad was stationed while he was in the Army. He had been  
9 assigned to work on the space program and was designing  
10 new nose cones for the space program.

11 Q. And that was in Norfolk, Virginia?

12 A. Yes, sir.

13 Q. And how long did you live in Norfolk before  
14 you moved to Dallas?

15 A. Oh, I was a real little kid. Just a few  
16 years.

17 Q. What took you guys to Dallas?

18 A. My dad had an opportunity to join the faculty  
19 at SMU in engineering, and he took that opportunity.

20 Q. And did you go to high school in Dallas?

21 A. Yes, I did. I went to Richardson High School.

22 Q. And then at some point, you guys moved back to  
23 Virginia?

24 A. Yes. Dallas was getting pretty big. My  
25 parents wanted to move to a smaller town, so we moved to

1 Blacksburg, Virginia.

2 Q. Your dad is a professor, and he's in  
3 Blacksburg, and we know that the only thing there is  
4 Virginia Tech, so did your dad become a professor at  
5 Virginia Tech?

6 A. Yes, he did. He's an engineering professor,  
7 or was an engineering professor there.

8 Q. Jumping forward several years, was there ever  
9 a time when there were two Professor Joneses in the  
10 engineering department?

11 A. Yes, there was. We overlapped for about five  
12 or six years before he retired.

13 Q. Did you get a bunch of misdirected mail?

14 A. Yes, I did.

15 Q. All right. Well, Professor Jones, when did  
16 you first think that you might want to be a teacher?

17 A. Growing up watching my dad teach, and then my  
18 mother went back to school to become a reading  
19 specialist to help disabled -- kids that were reading  
20 disabled, learn to read. Watching both of them, I  
21 admired them a lot, and it was just a natural career  
22 choice.

23 Q. So where did you go to college?

24 A. I went to Clemson University in South  
25 Carolina.

1 Q. What did you study at Clemson?

2 A. I studied computer science.

3 Q. Now, we've heard a lot about computer science,  
4 but can you kind of tell us generally what that is?

5 A. That's the study of computer hardware and  
6 software and how to use those things to solve real  
7 problems.

8 Q. So when you were at Clemson studying computer  
9 science, did you go to school full-time or did you take  
10 a job?

11 A. Both, actually. I was going to school  
12 full-time, and I had a job working for a group of  
13 professors in an Air Force research laboratory, working  
14 on networking together computers for the Air Force.  
15 I also supervised dorm rooms.

16 Q. So going to school and working two jobs, how  
17 long did it take you to get your computer science  
18 degree?

19 A. It seemed like a while. It took about three  
20 years.

21 Q. After that, did you keep going to school?

22 A. Yes, I did. I went to Duke University in  
23 North Carolina.

24 Q. What did you study at Duke?

25 A. Again, computer science.

1 Q. And what degree did you want to get from Duke?

2 A. A Ph.D.

3 Q. Did you have a job while you were at Duke?

4 A. Yes, I did. During -- during the summers, I  
5 worked at NASA Langley Research Center, and actually  
6 ended up working in the same department where my father  
7 had worked when I was a little kid.

8 Q. Did people remember your dad?

9 A. Yeah, there were still a few people there who  
10 had worked with him.

11 Q. I think we can all probably agree that NASA  
12 has a whole bunch of really smart people.

13 So what did NASA want from this Ph.D. student  
14 down at Duke?

15 A. This was a couple of years after the  
16 Challenger tragedy with the space shuttle, and they were  
17 looking at ways to analyze space vehicles and how to  
18 make them safer.

19 And I was working on computer software and  
20 computer methods for using parallel computers to analyze  
21 those kinds of structures.

22 Q. You mentioned parallel computing.

23 What is that?

24 A. Well, parallel computing is basically the idea  
25 of taking hundreds or thousands of computers, putting

1 them altogether, networking them together so that you  
2 can take all that power and apply it to a problem and  
3 solve it more quickly.

4 Q. Did you do a dissertation?

5 A. Yes, I did, in 1990.

6 Q. Is that when you got your Ph.D.?

7 A. Yes, sir.

8 Q. All right. So in 1990, when you have your  
9 Ph.D. and you're a newly minted Dr. Jones, did you go  
10 straight back into the university as a professor?

11 A. No, sir, I did not. I wanted to get some  
12 real-world experience, so I took a job at Argon National  
13 Laboratory.

14 Q. What is Argon National Laboratories?

15 A. That's a government research facility, a  
16 Department of Energy facility outside of Chicago.

17 Q. What sort of work did you do for Argon  
18 National Labs?

19 A. Well, I was doing more of this parallel  
20 computing work and applying it to problems, trying to  
21 improve the -- what we were working on, trying to  
22 improve how the country can use energy and use it more  
23 efficiently. And I was applying parallel computing to  
24 those problems.

25 Q. So by the time you came in here to the

1 courtroom, about how long had you been working on  
2 parallel computing and related matters?

3 A. It goes back about 25 years at this point.

4 Q. Has your work in parallel computing and your  
5 other research work involved network security?

6 A. Yes, sir. I've worked on multiple projects  
7 funded by the government on computer network security.  
8 Some of those projects have been funded by the National  
9 Security agency, the Air Force Research Laboratories as  
10 well as DARPA.

11 Q. What is DARPA?

12 A. DARPA is the Defense Advanced Research  
13 Projects Agency.

14 Q. So you were working at Argon National Labs.  
15 When did you decide to, hey, it's time to go fulfill  
16 that dream of being a teacher?

17 A. There was an older guy that I respected a lot  
18 who had been at Argon for a long time and went to the  
19 University of Tennessee. And he offered me a position  
20 to come and join him at the University of Tennessee, and  
21 I really couldn't pass that up, and it was a lot warmer  
22 there as well.

23 Q. What did you teach, then, at the University of  
24 Tennessee?

25 A. I taught computer science.

1 Q. And then you eventually moved to Virginia  
2 Tech?

3 A. Yes, sir, I did. I got an offer in 1997 to  
4 move there, a chance to be a lot closer to my family.  
5 And I couldn't pass that up.

6 Q. So did you do both research and teaching  
7 during your jobs at these universities?

8 A. Yes, sir, I did.

9 Q. What has made up most of your research?

10 A. In one way or another, taking networks of  
11 computers and computing devices and applying them to  
12 solve important problems.

13 Q. Are there any really interesting projects  
14 you've been working on in recent years?

15 A. Well, a project that I'm real excited about  
16 that I've been working on for the last 10 years is  
17 something called e-textiles.

18 Q. What are e-textiles?

19 A. Well, e-textiles is short for electronic  
20 textiles.

21 Q. What are those?

22 A. Well, the idea there is to take computing  
23 devices and sensors that can tell what's going on and  
24 actually putting them together in your clothing -- and  
25 putting a network of them in your clothing and using



1 that to see what's going on in the clothing.

2 Q. It sounds probably a little strange to some of  
3 us, but why -- why would you do something like that.

4 What could it be used for?

5 A. Well, two applications that we've worked on  
6 that I think are important. One is to monitoring of  
7 heart patients. Say a doctor wants to get more  
8 information on the health of a heart patient and monitor  
9 their heart, they can use this type of clothing to have  
10 sensors for detecting what their heartbeat is doing over  
11 time as well as the rest of your body so that the doctor  
12 can better understand how healthy or unhealthy that  
13 person is.

14 Q. Is that instead of laying in a hospital bed,  
15 for instance, and just being monitored over a long  
16 period of time?

17 A. Yes, sir. And you could do -- sort of allow  
18 someone to do this in their home or just as they're  
19 walking around their daily activity in clothing that is  
20 going to look and feel normal, so that they're not  
21 self-conscious, and the Doctor can get better reads in  
22 that case as well.

23 Q. Any other health missions you're working on  
24 with your research?

25 A. Yes, sir. With the same e-textiles, we've

1 been looking at or working with other faculty to monitor  
2 how people walk, and especially certain elderly people  
3 who are at risk for slip and fall and breaking a hip,  
4 for example, which can be very painful and debilitating.  
5 Our work has been trying to detect and prevent those  
6 kind of falls.

7 Q. Do you weave some of these networks of sensors  
8 into clothing?

9 A. Yes, sir, we do.

10 Q. Can you show us how you do that?

11 A. Yes, I'd like to do that.

12 So this is a picture of the electronic  
13 computer-automated loom that's in my lab that we use to  
14 weave and create these e-textile fabrics. We can put in  
15 sensors and wires as well as we put lots of regular  
16 cotton and polyester fabrics in as well.

17 Q. Now, do you have an example of what the  
18 clothing would look like?

19 A. Yes, sir.

20 So this is one of our prototype garments that  
21 is used to monitor how people walk. It has networks in  
22 it. It has lots of kind of sensors to determine how  
23 you're walking and what you're doing.

24 Q. Now, I thought you said this clothing looks  
25 normal. I can confidently say my wife would not let me

1 out wearing that.

2           So what's up with the color scheme that we see  
3 here?

4           A.    Well, this is normal for Virginia Tech. This  
5 is maroon and orange, and these are our school colors,  
6 so I designed this in a check pattern. And I find it  
7 very fashionable.

8           Q.    You took Jason Cassady's burnt orange and my  
9 Aggie maroon and combined them --

10          A.    In a very tasteful way.

11          Q.    -- would be a tragic piece of clothing.

12                Okay. Thank you. Thank you, Dr. Jones.

13                Now, do others research in that area as well?

14          A.    Yes, sir they do. There are other groups  
15 working on that, but I believe that we're a leader in  
16 it. We're the first group that comes up when you search  
17 for e-textile online.

18          Q.    All right. Let's go back to your more general  
19 research and teaching.

20                What kind of students do you teach? What  
21 levels?

22          A.    I teach all kinds of students from freshmen to  
23 seniors in design classes to graduate students.

24          Q.    Do you teach computer networking?

25          A.    Yes. I've taught classes there specifically

1 in computer networking. But at this point with the  
2 importance of computer networks and the internet, in  
3 every class I teach, I'm going to teach them about  
4 networking.

5 Q. Professor Jones, is this the first time that  
6 you've been retained to serve as an expert in a patent  
7 case?

8 A. No, sir, it's not.

9 Q. Approximately how many other times have you  
10 been retained?

11 A. I believe it's nine at this point.

12 Q. Now, have you always worked for the party that  
13 owns the patent?

14 A. No, sir. About half the time I've worked for  
15 the party that owns it and half the time for the other  
16 party.

17 Q. Now, Professor Jones, I want to give basically  
18 a road map to the jury of the things that we need to  
19 cover today.

20 Can you help us out with that?

21 A. Yes. Let me put up a slide for that.

22 Q. What are we seeing here?

23 A. This is sort of an overview of what I would  
24 like to talk about today.

25 First is a description of the investigation

1 that I performed.

2           Next is really two cases within a case to talk  
3 about there. First, I'll talk about the '135 patent,  
4 and then I'll talk about the '180 patent.

5           Q. So, for example, looking at the '135 patent,  
6 what -- what bullets do we need to cover here?

7           A. I'll talk somewhat about the invention of the  
8 '135 patent. I'll follow that with the operation of  
9 Microsoft's products that relate to that patent, compare  
10 the '135 patent to those products, and then examine how  
11 Microsoft infringes those products.

12          Q. Are we basically going to go through what  
13 infringes those patents?

14          A. Yes, sir.

15          Q. Then are we basically going to go through  
16 those same topics for the '180 patent?

17          A. Yes, sir.

18          Q. Now, candidly, this looks like a lot of  
19 information. Let me ask you, how long do you think this  
20 is going to take?

21          A. I think it will take about two and a half  
22 hours, sir.

23          Q. Is it going to be a fair amount of work?

24          A. Yes, it is, but I think there's a lot of  
25 information there that -- evidence that I've examined

1 that I would like for the jury to see how I reached my  
2 opinions, what I've based my opinions on. And so I  
3 think it's important that everyone see that.

4 Q. Professor Jones, I'd like you to give us a  
5 preview of what the conclusions are going to be so we  
6 can get in our minds or fit the pieces into the right  
7 spot as we come to them.

8 So can you do that for us?

9 A. Yes, sir.

10 Q. All right. Now, what are we looking at on  
11 this slide that's identified as the Microsoft '135  
12 products?

13 A. These are the products I'm going to talk about  
14 with infringement with respect to the '135 patent.

15 Q. Okay. At the top -- I was going to ask you  
16 what -- at the top, that says operating system.

17 A. Yes. Windows XP and -- are operating systems.  
18 And on the right, the other four are client  
19 applications. Those are Windows Message 5.X. Office  
20 Communicator 2005, 2007, and 2007 R/2.

21 Q. Okay. And then on the lower right-hand side,  
22 what are these on the lower right-hand side?

23 A. Those are four server programs. Those are  
24 Live Communication Server 2003 and 2005, as well as  
25 Office Communications Server 2007, and 2007 R/2.

1 Q. Now, we've seen Dr. Short teach us a lot about  
2 how the internet works and how VPNs work, and we have  
3 sort of this graphical arrangement where we have the  
4 user laptop computer, another in the left, and Acme  
5 Company on the right; fair?

6 A. Fair.

7 Q. Can you tell us, for example, starting with  
8 the operating system -- I know you can't see the green  
9 dot over your head, but looking at the operating  
10 systems, where would those be in Dr. Short's picture?

11 A. The operating systems would be in the proxy  
12 server that Dr. Short talked about.

13 Q. Would that be on the user computer?

14 A. Yes, sir.

15 Q. What computer would be running the client  
16 machine, these client applications?

17 A. That would be the user's laptop computer that  
18 was shown in the animation.

19 Q. Then last, the servers like Live Communication  
20 Server and Office Communication Server, where would  
21 those be running?

22 A. Those would be back at Acme.com.

23 Q. Now, about the '135 patent, we heard that it  
24 related to a system where you have a DNF proxy server  
25 that creates a virtual private network for the user.

1 Did you find that in these Microsoft products?

2 A. Yes, sir, I did.

3 Q. Can you show us that?

4 A. Yes, I can.

5 Q. Now, I understand that you worked with graphic  
6 slides taken from Dr. Short's presentation.

7 A. Yes. This is based on Dr. Short's  
8 presentation, and I modified it for this presentation.

9 Q. Explain to us what would be here (indicates).

10 A. What we see up here is an application up at  
11 the top, and that would be, for example, Office  
12 Communicator 2007 running on the user's computer.

13 Q. Okay. And now here we have the DNS proxy as  
14 Dr. Short described?

15 A. That would be the products I mentioned, and  
16 within those operating system products Windows RTC  
17 interfaces.

18 Q. I assume we're going to talk more about that  
19 in a minute.

20 A. Yes, sir.

21 Q. All right. And then what did you find for the  
22 gatekeeper?

23 A. That would be Office Communications Server,  
24 those products on the right-hand side of the previous  
25 screen.



1 Q. Now, there is a faint domain name we can see  
2 sort of hanging back there behind the scenes. I notice  
3 you didn't point to that for anything.

4 Why is that?

5 A. That's not part of the requirements of the  
6 claim.

7 Q. Well, looking at the slide here, when  
8 Microsoft's products are used in this manner, did you  
9 conclude that that infringes the patent?

10 A. Yes. I concluded that Microsoft's '135  
11 products infringe the '135 patent.

12 Q. Now, about the '180 patent, can we talk about  
13 that for a second?

14 A. Yes, sir.

15 Q. Okay. Dr. Jones, what products are we looking  
16 at for the '180 patent?

17 A. These are those same two operating systems  
18 that I saw before: Windows XP and Windows Vista.

19 Q. And just so everybody is clear, XP and Vista  
20 are both operating systems; is that fair?

21 A. Yes, sir.

22 Q. Is Vista a later generation of XP?

23 A. Yes, it is.

24 Q. All right. Now, can we go to the scene that  
25 Dr. Short showed us for the '180 patent? And explain to

1 us what we're going to see.

2 A. Okay. What we see, again, is an application  
3 running on that user computer, and we see a secure  
4 domain name, john.acme.scom. And on that computer, we  
5 have running what are called the Windows PeerNet  
6 interfaces.

7 Q. Okay. And now, is there a secure domain name  
8 service in the Microsoft '180 products?

9 A. Yes, sir. It's PeerNet resolution protocol,  
10 and that's the DNS -- I'm sorry -- the secure domain  
11 name service.

12 Q. Thank you.

13 What did you conclude when the Peer name (sic)  
14 resolution protocol was used in this fashion.

15 A. I concluded that the Microsoft '180 products  
16 infringed the '180 patent.

17 Q. Thank you, Professor Jones.

18 Now, next, I think, in our -- in our road map  
19 here, we've got to talk about the investigation that you  
20 performed. I'd like to start looking at that.

21 A. Okay.

22 Q. Is it reasonable to assume that you have, at  
23 this point, a detailed understanding of the patents that  
24 are in this lawsuit?

25 A. Yes, sir. I've studied the patents carefully,

1 as well as the file history for those patents and the  
2 claim constructions that Judge Davis has given us to  
3 use.

4 Q. Okay. Can you introduce us to some of the  
5 first few pages of the -- of the patent?

6 A. Yes. I'd like to do -- this is Page 1 of the  
7 '135 patent, and in the upper right-hand corner is the  
8 full number, 6,502,135, and that's the '135 for short.

9 Q. Okay. And what do we see under that?

10 A. That's the date that the Patent Office awarded  
11 the patent to the inventors, December 31st, 2002.

12 Q. And I believe Judge Davis gave us a pretty  
13 good introduction to this, so we might kind of run  
14 through these -- these quick parts here.

15 A. Yes, sir.

16 Q. The title?

17 A. There's the title, and then the list of the  
18 inventors underneath, and we see the two familiar names,  
19 Mr. Munger and Dr. Short.

20 Q. Munger and Dr. Short.

21 A. Then the company to which the patent was  
22 assigned, who they were working for. That's SAIC.

23 Q. Okay.

24 A. And then it was filed on February 15th, 2000.

25 Q. Thank you.

1 MR. CALDWELL: Mr. Moreno, can I get you  
2 to pull up Plaintiff's Exhibit 1?

3 Q. (By Mr. Caldwell) Now, there's some other  
4 information on this page that I'd like to pull out here.

5 MR. CALDWELL: If you could, Mr. Moreno.  
6 It's below that, actually. There you go. And now also  
7 in the upper right-hand corner.

8 Q. (By Mr. Caldwell) We see references cited.  
9 What is all this information we're seeing right here,  
10 Professor Jones?

11 A. These are patents and other publications that  
12 the Patent Office considered when determining whether or  
13 not to issue this patent.

14 MR. CALDWELL: Can we go to the next  
15 page, Mr. Moreno?

16 Q. (By Mr. Caldwell) And what are all these  
17 documents right here, Professor Jones?

18 A. Well, this is a list continued from the front  
19 page of more patents and more publications that were  
20 considered by the Patent Office when they're determining  
21 whether to issue this patent.

22 MR. CALDWELL: Now, can we flip to,  
23 basically, Page 32 of the document?

24 Q. (By Mr. Caldwell) Now, I see Figure 26 here.  
25 What is Figure 26?

1           A.     This is one of the figures in the section that  
2 Judge Davis described earlier. This is a figure that --  
3 or a block diagram describing some of the parts of the  
4 inventions and some of the ways that those parts can  
5 talk.

6           Q.     What is a block diagram?

7           A.     It's a high-level description or drawing that  
8 engineers use to show some of the parts of a system.

9           Q.     Now, if all you do is look at this figure,  
10 does that tell us what all the various components are  
11 and exactly what they send back and forth?

12          A.     No, sir. This is just a high-level view. We  
13 need to look into the text of the patent, the detailed  
14 description, to get more information on this.

15          Q.     And I believe the jurors have a copy of the  
16 patent with them in their binder if they want to follow  
17 along, but my understanding is, there are dozens of  
18 columns of text?

19          A.     Yes, sir, many in this patent.

20                   MR. CALDWELL: Can we flip to Page 39,  
21 Mr. Moreno?

22          Q.     (By Mr. Caldwell) What are we seeing right  
23 here?

24          A.     Well, this is the beginning of the -- of the  
25 detailed description, and this is the part called the

1 background of the invention when the inventors will talk  
2 about sort of the state of the art at the time.

3           Then that's followed in the lower right by the  
4 summary of the invention where the inventors give a  
5 brief summary of what they have invented.

6           Q.    You said that's a brief summary, so I assume  
7 that there must be something that's a little bit less  
8 brief that describes the invention.

9           A.    Yes, sir.  They're going to have a -- further  
10 on, there will be a much more detailed description.

11                   MR. CALDWELL:  Can we skip ahead to  
12 Page 57, Mr. Moreno?

13                           And now, there's an element I want you to  
14 highlight there in the upper left corner.

15           Q.    (By Mr. Caldwell) What do we see here in  
16 Column 37 of the patent?

17           A.    This is a section entitled Use of a DNS Proxy  
18 to Transparently Create Virtual Private Networks.  This  
19 is where the inventors go into more detail on examples  
20 of how to build and use their invention.

21           Q.    And does this document refer back to the  
22 figure that you just showed us?

23           A.    Yes, it does.

24           Q.    All right.  But, Dr. Jones, is this the  
25 portion of the patent that we look to in order to

1 determine if the patent is infringed?

2 A. No, sir. This is just where the inventors are  
3 teaching about the invention and giving some -- some  
4 examples of how to use it. We would turn to the claims  
5 to determine whether or not the patent is infringed.

6 Q. Well, here in the detailed description, all  
7 this column after column after column, are those the  
8 only ways to practice the invention?

9 A. No, sir. They're just examples of how to  
10 practice the invention.

11 Q. Well, then let's turn to those claims that you  
12 referred to.

13 MR. CALDWELL: Can we go to Page 62,  
14 Mr. Moreno? And I want to pull out Claim 1 here.

15 Q. (By Mr. Caldwell) All right. Tell us what  
16 we're seeing here.

17 A. Well, this is the beginning of the claims of  
18 the '135 patent starting underneath the highlighted  
19 portion, and this is the first claim of that patent,  
20 Claim 1.

21 Q. With regard to this patent, the '135 and the  
22 '180 patent, is it fair to say that they contain very  
23 technical information?

24 A. Yes, sir, it is.

25 Q. So who is the target audience of this patent?

1           A.     Well, the target audience for this patent is  
2 someone -- an engineer who would want to construct this  
3 invention or use this invention.

4           Q.     I've got a lot of family members who are -- I  
5 think are smart anyways, and they -- but they're just  
6 really not into computers. Would this patent be written  
7 to teach them how to use the invention?

8           A.     No, sir. Its purpose -- it's written for  
9 people who are termed ordinary skill of the art; people  
10 who would be using the invention or building it in one  
11 way or another.

12          Q.     Okay. And so who is that -- who is that  
13 person, that person of ordinary skill in the art, for  
14 these patents?

15          A.     In this patent, it would be someone who has a  
16 master's degree in computer science or computer  
17 engineering, a couple of additional years in -- in  
18 computer networking, as well as computer security.

19          Q.     So if that's the person this is -- this patent  
20 is targeted towards, how do you use that concept when  
21 you review the patent and analyze infringement?

22          A.     Well, when I read the patent for infringement,  
23 I put myself in the shoes of that person of ordinary  
24 skill in the art at the time of the filing of the  
25 patent, approximately the year 2000.



1 Q. As opposed to, say, the mindset of just sort  
2 of a layperson that doesn't work in the computer  
3 industry?

4 A. That's correct, sir.

5 Q. Now, you also mentioned the prosecution  
6 history of the patents. What is that?

7 A. The prosecution history is a record of what  
8 the Patent Office considered or how it made its  
9 considerations from the time the application was filed  
10 until the patent was issued. And it also -- it includes  
11 communications between the Patent Office and the  
12 inventors.

13 Q. So, Dr. Jones, have you reviewed that  
14 prosecution history?

15 A. Yes, sir, I have.

16 Q. Is this it (indicates)?

17 A. Yes, it is.

18 Q. I want to talk to you in a little bit more  
19 detail about the claims that you mentioned.

20 How do the claims of the patent help us  
21 determine if Microsoft is infringing VirnetX's patent?

22 A. The claims of the patent determine the  
23 boundaries of the property rights that the Patent Office  
24 have granted to the inventors.

25 Q. Okay. I want to get --

1 MR. CALDWELL: Your Honor, if I may move  
2 about here, I'd like to pull out a foam board of  
3 Claim 1.

4 THE COURT: Yes, you may.

5 MR. CALDWELL: Thank you.

6 Q. (By Mr. Caldwell) Now, I know the jury may not  
7 be able to read every word of this, but can you see it  
8 at least enough to see the pieces.

9 So I know that the jury has the patents in  
10 their -- in their notebook, if they wish to follow  
11 along, but where -- where would they find Claim 1 in the  
12 '135 patent?

13 A. This on the last two or three pages of the  
14 '135 patent.

15 Q. All right. So if we have the claim, Claim 1,  
16 how do we know what is in or out of the property right  
17 that has been awarded to VirnetX by the United States  
18 government?

19 A. Well, we have to look at each and every  
20 element of these claims and compare them to what we're  
21 looking at to determine whether or not something is in  
22 or out those -- those property rights.

23 Q. I mean, I -- if somebody buys a plot of land,  
24 there's normally a deed or a description of the property  
25 that says: Here are the lines.

1 A. Yes, sir.

2 Q. Is that analogous to what we're seeing here?

3 A. Yes, sir. You can essentially think of this  
4 as the lines, the boundary lines of the property. The  
5 elements of this -- this claim define those lines.

6 Q. Now, Professor Jones, has Judge Davis also  
7 provided some guidance about the meaning of words that  
8 appear in this claim?

9 A. Yes. Judge Davis has provided definitions for  
10 several of the terms in the '135 patent, as well as the  
11 '180.

12 Q. Now, I recall this, I think, came up in jury  
13 selection. It might be the thing that's in the very  
14 front of your binder, if I remember correctly, the claim  
15 construction with the terms, in case anybody is curious.  
16 So how do those definitions from Judge Davis fit into  
17 your analysis?

18 A. Well, everywhere I see those words used, I  
19 used Judge Davis' definition for those words.

20 Q. Okay. Well, let's start here in Claim 1.

21 Claim 1 starts with a method of transparently  
22 creating a virtual private network.

23 Is virtual private network one of those words  
24 that Judge Davis has defined?

25 A. Yes, sir, it is.

1 Q. Can you see that on the screen?

2 A. Yes.

3 Q. We have the claim construction chart.

4 A. And then blowing up, virtual private network  
5 or VPN is a network of computers which privately  
6 communicate with each other by encrypting traffic on  
7 insecure communication paths between the computers.

8 Q. Now, have you used that definition when you  
9 evaluate the patents?

10 A. Yes. Everywhere I see that in the claims, I  
11 used the definition.

12 Q. Have you done that for all of the terms on  
13 Judge Davis' chart?

14 A. Yes, sir.

15 Q. Have you done that for all of your opinions?

16 A. Yes, sir.

17 Q. Professor Jones, so if you have the claim,  
18 you have Judge Davis' definitions, and then you know  
19 about how Microsoft's products work, which we'll get to  
20 in a minute, how do you determine if Microsoft's  
21 products infringe the claim?

22 A. Well, I have to compare those products to each  
23 of the elements of the claims and determine whether each  
24 element is in Microsoft's products. Every element has  
25 to be present for there to be infringement.

1 Q. Now, I see these three basic chunks of this  
2 claim, three basic pieces. Must Microsoft software have  
3 only those three pieces and nothing more in order to  
4 infringe?

5 A. No, sir. They can have more and still  
6 infringe, but they have to have every element.

7 Q. Okay. Now, Professor Jones, if we're going  
8 through these elements and we see something in an  
9 element that isn't exactly the same in Microsoft's  
10 product, does that mean that there's no infringement?

11 A. No, sir. If there's just an insubstantial  
12 difference between the product and the claim, the  
13 claim -- or the product still infringes.

14 Q. Does that concept have a name?

15 A. Yes, it does. It's one of the two ways to  
16 infringe that Judge Davis mentioned called the Doctrine  
17 of Equivalents.

18 Q. All right. Thank you.

19 That helps us understand better how you  
20 studied the patents. Now, how did you come to learn  
21 about how Microsoft's products operate?

22 A. Well, I started by studying their manuals and  
23 user guides and other information that they put on their  
24 website.

25 I looked at deposition testimony from

1 Microsoft engineers. I looked at source code from  
2 Microsoft. I looked at technical documents from  
3 Microsoft. And I also operated the Microsoft products.

4 Q. Now, you mentioned technical documents. I  
5 want to follow up on that just briefly. I can go down  
6 to Barnes & Noble -- I think it's down on Broadway  
7 across from the -- across from the mall -- and I can get  
8 books, gigantic, fat books, like Windows Vista for  
9 dummies, something like that.

10 Are those the kind of technical documents  
11 you're talking about?

12 A. No, sir. Those documents might -- that you're  
13 talking about there might be something more like a user  
14 guide. What I'm talking about are internal confidential  
15 Microsoft documents.

16 Q. So if they're confidential internal Microsoft  
17 documents, how were you able to get them and study them?

18 A. Well, as part of this case, Judge Davis put  
19 into place orders that allowed me access to those  
20 documents.

21 Q. And did you mention software source code?

22 A. Yes, sir, I did.

23 Q. What is source code?

24 A. Well, source code is the language or the way  
25 of describing a program. For example, a computer

1 programmer would write source code in a programming  
2 language, and that would ultimately become an  
3 application or software.

4 Q. I'm not sure I'm clever enough to work the  
5 document camera. There we go.

6 Now, I won't -- I don't really intend to  
7 belabor this, Dr. Jones, but this is a portion of the  
8 source code, fair?

9 A. Yes, sir.

10 Q. And I see what to me looks like a whole bunch  
11 of gibberish with pound sign, include, alt engine dot H,  
12 and down at the bottom slash, slash, state SIP off,  
13 something.

14 What are we looking at here?

15 A. We're looking at the source code, and this is  
16 written in a programming language, and this language  
17 would ultimately be turned into something that would --  
18 an application or an execute -- a program that would  
19 execute on a computer.

20 Q. And do you have training in interpreting this  
21 sort of source code?

22 A. Well, yes, sir. In computer science, this  
23 is -- we write source code, and this is something I read  
24 and write on a daily basis.

25 Q. Thank you, Dr. Jones.

1           Have you looked at a large amount of source  
2 code for this case?

3           A.    Yes, sir.  Thousands of pages of source code.

4           Q.    Can we rest comfortably knowing that you're  
5 not going to walk us page by page through thousands of  
6 pages of source code?

7           A.    Yes, sir.  We won't be spending a lot of time  
8 looking at source code.

9           Q.    Have you taken it into account, though, in  
10 your opinions?

11          A.    Oh, absolutely.  My opinions are based on  
12 looking at the source code.

13          Q.    Well, if you had the technical documents, why  
14 was the source code for their software helpful?

15          A.    Well, the source code is sort of the ultimate  
16 way to determine what's going on in the programs, and I  
17 used it to confirm the understandings I reached from the  
18 documents I was reading.

19          Q.    Now, Professor Jones, you also mentioned  
20 deposition testimony.

21          A.    Yes, sir.

22          Q.    Tell us what that is.

23          A.    Well, Microsoft engineers were under oath and  
24 were asked a series -- questions about how the Microsoft  
25 products operated and how they were designed.



1 Q. All right. So with all your information from  
2 your study of the patents and all the information that  
3 you got on Microsoft, what did you do with all of that  
4 information that you analyzed?

5 A. Well, I took that information, and I studied  
6 it and formed opinions. I then wrote those up in some  
7 long reports that contained the opinions, as well as the  
8 reasons for those opinions and evidence for them.

9 Q. Can you show us -- give us a -- just hold up  
10 your report, so we see it. I think it's actually the  
11 other pile.

12 A. Yeah. They're actually these -- these right  
13 here (indicates).

14 Q. And those are double-sided, Professor Jones?

15 A. Yes, sir, they are.

16 Q. Have copies of your reports been provided to  
17 Microsoft so they can see exactly what your opinions  
18 are?

19 A. Yes, sir.

20 Q. All right. Now, the next issue that we need  
21 to talk about, according to our road map, is discussing  
22 the invention of the '135 patent. And we've already had  
23 some introduction to that, so I'll try to keep it brief.  
24 But you told us that we were going to need to look at  
25 the claims of the patent in order to determine if

1 there's infringement.

2 A. Yes, sir.

3 Q. How many claims do we need to look at in order  
4 to know whether or not the patent is infringed?

5 A. To know that, we only have to look at one  
6 claim. If one claim is infringed, then the patent is  
7 infringed.

8 Q. Well, trusty Claim 1 is still here on the  
9 easel, so we'll just start with that one. I'd like to  
10 walk through briefly how this claim establishes a  
11 property right for the invention that Dr. Short taught  
12 us about.

13 Can you do that for us?

14 A. Yes, sir. All right.

15 Q. Now, we've -- we've seen this -- we've seen  
16 this animation before, but now I want to walk through it  
17 with the claims and see where everything fits in.

18 A. All right.

19 Q. The first thing we have in this patent in the  
20 claim is the introduction sometimes known as the  
21 preamble.

22 It says: A method of transparently creating a  
23 virtual private network between a client computer and a  
24 target computer comprising the following steps.

25 Now, is this what Dr. Short showed us:

1 Transparently creating a virtual private network?

2 A. Yes, sir. He's shown a virtual private  
3 network being established between the client computer in  
4 the upper left and the computers in acme.com at the  
5 lower right.

6 Q. Now, Professor Jones, the first step of that  
7 was generating from a client computer a domain name  
8 service request that requests an IP address  
9 corresponding to a domain name associated with the  
10 target computer.

11 Now, where is that in the presentation that  
12 Dr. Short provided?

13 A. That happens in the -- when the application  
14 takes its domain name, www.acme.com, and that goes to  
15 the DNS proxy server.

16 Q. Now, the next step that we see in the claim is  
17 determining whether the DNS request transmitted in step  
18 one is requesting access to a secure website.

19 Where is that in Dr. Short's presentation?

20 A. That happens in the DNS proxy server where the  
21 proxy server is looking to determine whether or not the  
22 DNS request is for a secure website.

23 Q. All right. And now, the last step says:  
24 Recognize to determining that the DNS request in step  
25 two is requesting access to a secure target website

1 automatically initiating the VPN between the client  
2 computer and the target computer.

3           What is happening in that step?

4           A.    In that step, the DNS proxy server has  
5 determined that a VPN should be set up, and it's sending  
6 a request to the gatekeeper to start the process of  
7 setting up the VPN.

8           Q.    And so then the gatekeeper receives it, and  
9 what happens?

10          A.    At that point, the VPN will be created.

11          Q.    And I note this claim uses the word website.

12          A.    Yes, sir.

13          Q.    I'd like to talk to you about website for a  
14 second.

15                    Yesterday during -- during opening,  
16 Microsoft's lawyers seemed to -- I don't think your name  
17 was used by name, but he seemed to attack your opinions  
18 on the term website by saying: It's important from our  
19 point of view that you understand their theory, meaning  
20 VirnetX's theory, almost everything is a website, even a  
21 phone.

22                    Even a phone can be a website under their  
23 definition or an equivalent to a website, and I think  
24 that sort of argument tells you exactly what their  
25 position is.

1 Do you recall that?

2 A. Yes, sir, I do.

3 Q. Now, first of all, did Mr. Powers' statement  
4 to the jury that almost everything is a website  
5 accurately characterize VirnetX's position in this trial  
6 on what constitutes a website?

7 A. No, sir, it doesn't.

8 Q. Why not?

9 A. Well, the statements that were being referred  
10 to there were in regard to opinions given before we had  
11 a definition from the Judge as to what a website is and  
12 what we were to use in this case.

13 Q. Okay. And now you've gotten the definition  
14 from Judge Davis about website?

15 A. Yes, sir.

16 Q. And what are you doing with those definitions  
17 now that we know the Court's definitions of terms in the  
18 patent?

19 A. Well, that's the definition that I'm applying.

20 Q. Well, I'm still curious there, Dr. Jones.  
21 Microsoft's lawyers seemed to sort of make fun of the  
22 fact that even a cell phone can be a website. And I  
23 recall him holding up a phone, if memory serves, saying:  
24 A phone can be a website.

25 I snuck your phone into the Court today, and

1 my -- it's turned off, but I snuck your phone in. Can  
2 this phone -- this iPhone that you can go buy at Best  
3 Buy or wherever else, can this be a website?

4 A. Absolutely. I have a website on that phone.  
5 You can have web servers and websites in lots of  
6 devices. You can put them in printers. They're all  
7 over the place. It's very simple at this point to put a  
8 small web server in very small devices.

9 These cell phones and then other devices now  
10 have processors in them that are almost like computers  
11 20 years ago.

12 Q. Now, Dr. Jones, notwithstanding Microsoft's  
13 argument on that point, are we even talking about cell  
14 phones in this case?

15 A. No, sir.

16 Q. Well, let's get to what we are talking about.  
17 Next on our road map is, we want to talk about the  
18 accused products, the Microsoft '135 products, and how  
19 they -- how they operate.

20 Can you put those products back up?

21 A. Yes, I can.

22 Q. Thank you.

23 Now, we've heard Microsoft -- we've heard the  
24 '135 patent described as relating to a DNS-triggered  
25 virtual private network.

1           Do any of these Microsoft products include a  
2 DNS-triggered virtual private network?

3           A.    Yes.  That's what these products do, sir.

4           Q.    Do any of these products have the DNS proxy  
5 service?

6           A.    Yes.  The DNS proxy server is in the operating  
7 system products, Windows XP and Windows Vista.

8           Q.    Now, what part of Microsoft Windows XP and  
9 Vista has a DNS proxy server?

10          A.    The -- two things called -- and I apologize  
11 for more acronyms, but the RTC API and the UCC API.

12          Q.    Okay.  And that's -- I guess that's nine --  
13 nine new letters we add to our alphabet soup.  Can you  
14 break that down for us, what the RTC APIs and UCC APIs  
15 are?

16          A.    Yes.  Let me put up a slide for that.  
17 RTC is real-time communications.  And then the next one,  
18 UCC is unified communications client.  And then these  
19 are both APIs, which are application programming  
20 interfaces.

21          Q.    So the two that are listed on the left side,  
22 RTC, real-time communications, and unified  
23 communications client, is there a relationship between  
24 those two?

25          A.    Yes, sir.  The unified communications is a new

1 version of the real-time communications.

2 Q. Now, Professor Jones, is there a name by which  
3 we can refer to all of these so we don't have the -- all  
4 the letters, something that's not quite as much of a  
5 mouthful?

6 A. Yes, sir. I like to use the term RTC  
7 interfaces.

8 Q. Now, are these RTC interfaces standalone  
9 software products you buy from Microsoft?

10 A. No. They're part of the Windows XP and Vista  
11 operating systems.

12 Q. Do they come with Windows XP and Vista?

13 A. Well, they're built into Windows XP. They're  
14 not preinstalled in Windows Vista.

15 Q. So how do the interfaces get installed into  
16 Windows Vista then?

17 A. Well, a person could download them from the  
18 internet, or they could come with an application that's  
19 using them and be installed on the user's computer.

20 Q. And when you showed us all the Microsoft  
21 products that we were talking about, there were user  
22 applications in the lower left, correct?

23 A. Yes, sir.

24 Q. Do any of those come with the RTC interfaces?

25 A. Yes, they do.



1 Q. Is that the Office Communicator products?

2 A. Yes. The Office Communicator products come  
3 with them.

4 Q. All right. Well, let's just be clear, though,  
5 if you say that the RTC interfaces do not come  
6 preinstalled in Vista, why is it you say that they are a  
7 part of Vista?

8 A. Well, first, the RTC API, no one disagrees  
9 that that's part of Windows XP.

10 Q. The older one.

11 A. And this newer one called the UCC API is just  
12 a newer version of those RT -- or the RTC API.

13 Second, these APIs, their purpose is to  
14 enhance the functionality of Windows. So they're  
15 enhancing the functionality of Windows Vista and are a  
16 free product for that.

17 Q. All right. Now, the right-hand side of that  
18 last slide talked about application programming  
19 interfaces --

20 A. Yes, sir.

21 Q. -- sometimes called APIs.

22 A. Yes, sir.

23 Q. What do APIs do?

24 A. Well, an API is a way that an application or a  
25 program running on a computer could basically send

1 requests to the operating system to ask it to do things,  
2 a way to communicate with the operating system to  
3 perform tasks for it.

4 Q. So can you give us an example of an  
5 application programming interface?

6 A. Yes, sir. Let's say you had a word processing  
7 program running on your computer, and you want to open a  
8 file. And that program could use an application program  
9 interface to ask the operating system to open a file for  
10 it.

11 Q. All right. So why is it a good idea to have  
12 the word processing program, like Microsoft Word or Word  
13 Perfect, something like that, ask the operating system,  
14 Windows, to open the file on behalf of the word  
15 processor?

16 A. Well, basically, it makes it easier to write  
17 these applications. For example, lots of programs need  
18 to open files. We talked about the word processing  
19 program needing to open a file or a photograph-viewing  
20 program where I want to look at pictures of my kids,  
21 that needs to open a file.

22 Lots of programs do that. And instead of  
23 having that functionality in every single program, you  
24 can have that functionality in one place, in the  
25 operating system.

1 Q. Can you demonstrate that for us?

2 A. Yes, sir.

3 So here's the -- what I've described as each  
4 of these programs, a word processor, a spreadsheet  
5 program, say for doing taxes, and a picture-viewing  
6 program, we could have each one of them having the code  
7 to open files, or to make it simpler, we could have that  
8 code in the operating system, and the programs can use  
9 an API to access that underlying functionality for the  
10 API.

11 Q. So is it important to have these kind of  
12 interfaces in the operating system?

13 A. Yes, sir. It makes it much easier to develop  
14 programs. And basically, when it makes it easier to  
15 develop programs, that makes an operating system  
16 platform much more attractive to developers to write new  
17 programs. It's really the new programs that are the  
18 reason that people buy operating systems.

19 Q. So while we're discussing the Windows  
20 operating system, does Microsoft Windows software get  
21 updated from time to time?

22 A. Yes, sir, it does.

23 Q. And does that apply to the RTC interfaces as  
24 well?

25 A. Yes, sir. They receive several updates over

1 the course of time, including this transition to the UCC  
2 API.

3 Q. So what versions of the RTC or UCC interfaces  
4 are -- have you investigated and are pertinent to your  
5 opinions?

6 A. Well, I've looked at the Versions 1.2 and  
7 later of the RTC API, as well as the -- all versions of  
8 the UCC API.

9 Q. Do companies write programs to take advantage  
10 of these RTC interfaces?

11 A. Microsoft does. They have written those  
12 applications we saw on the lower left side, such as  
13 Office Communicator.

14 Q. What is Office Communicator used for?

15 A. It's used for large groups of people to  
16 communicate with one another. For example, employees in  
17 a large company send back and forth things like instant  
18 messages and get presence information on other  
19 employees.

20 Q. Can you give us examples of some of the  
21 features that are offered by Office Communicator?

22 A. Yes, sir. Let me show you -- this is a screen  
23 shot that I prepared.

24 Q. So you had a computer where you set it up to  
25 test the software?

1           A.    Yes.  I set up a few computers running Office  
2 Communicator and Office Communication Server, and this  
3 is essentially a picture I took of the operation of  
4 Office Communicator.

5           Q.    All right.  Now, I thought you mentioned --  
6 well, can you show us what we're seeing on the screen?

7                    I'm sorry.

8           A.    Yes, sir.

9                    On the left side, I want to show you a bit of  
10 the -- what's called that presence information.

11                   So you see a list of names there, and one of  
12 those, the first one, Rebecca Lazlow, is showing as  
13 being available.  That means that you could communicate  
14 with that person at this point, and the other people are  
15 offline.

16           Q.    And then what do we see on the right-hand  
17 side?

18           A.    On the right side are an example of some  
19 instant messages I sent back and forth between the  
20 computers.  For example, the first one from Andy Jacobs  
21 is:  How are your sales calls going today?

22           Q.    Now, were these sort of like the kind of  
23 messages we saw in Dr. Short's example where they sent a  
24 message saying, Cut our prices today, or something like  
25 that?

1           A.    Yes, sir, they are.

2           Q.    Now, does this messaging that you're showing  
3 us here in Office Communicator take place over a virtual  
4 private network in Microsoft's software?

5           A.    It does when those products are -- operate in  
6 the default mode, yes, sir.

7           Q.    Now, what is the significance of using a  
8 virtual private network for those communications?

9           A.    Well, the virtual private network allows those  
10 communications to be protected from someone trying to  
11 snoop them, for example, on the internet.

12          Q.    So if there's this presence information and  
13 instant messaging and whatnot, how does Office  
14 Communicator and the related products keep all that  
15 straight, all that information straight inside the  
16 virtual private network?

17          A.    It uses something called the session  
18 initiation protocol or SIP for short.

19          Q.    So what is a protocol?

20          A.    A protocol in a network is an agreement  
21 between computers of how they're going to talk to one  
22 another.  It's essentially a precise description of  
23 what's going to go back and forth, because computers  
24 are -- they're very literal.  They take what you mean.  
25 So that protocol needs to be very precise.

1 Q. So they generally indicate, for instance, who  
2 sent the message?

3 A. Yes, sir. The SIP protocol would indicate who  
4 sent the message and who received it.

5 Q. Protocols in general are going to -- are they  
6 going to generally indicate -- I guess networking  
7 protocols, are they generally going to indicate that  
8 sort of information?

9 A. Yes, sir. Many of them will.

10 Q. We've heard about internet protocol numbers,  
11 some of those strings of numbers that are used for  
12 addressing. Are internet protocol addresses the only  
13 kind of addresses you can use inside those VPNs?

14 A. No, sir. You can use these what are called  
15 SIP addresses inside the SIP protocol, is one example of  
16 another type of address.

17 Q. Now, sorry for the interruption about  
18 protocols, but can you please continue explaining how  
19 this Microsoft product forms a virtual private network?

20 A. Yes, sir, if I could show an example here.

21 Let me start --

22 Q. That's -- I noticed the title on this one  
23 says: Microsoft Office Communicator Unsecure Mode. So  
24 the products can be set up in a non-VPN mode?

25 A. Yes, sir. The user could configure the system

1 differently or could reconfigure the system in a way  
2 that would be not secure, if they chose to.

3 Q. So show us what we -- what we have here.

4 A. Okay. This is starting off with Dr. Short's  
5 example of sending a message. And for example, Cut our  
6 prices today, that could be put inside a sent message  
7 with a source and destination address.

8 Q. So instead of those numbers, like the IP  
9 address kind of addresses, we have a different form of  
10 address used with the SIP protocol?

11 A. Yes, sir.

12 Q. All right. What do we see next?

13 A. Next, that would be put into an IP packet, for  
14 example, with a source and destination address, and that  
15 would be sent over the internet.

16 Q. Okay. And in this instance, what happens if  
17 our trusty hacker that we've used a few times intercepts  
18 our message?

19 A. Well, at this point, the hacker would be able  
20 to read everything in that message, including the cut  
21 our prices today, as well as the source and destination  
22 SIP addresses.

23 Q. Okay. Now, is there a secure mode throughout  
24 this communicator?

25 A. Yes, sir, there is. We basically start off



1 again with the cut our prices today message --

2 Q. Okay.

3 A. -- and put that into the SIP package just as  
4 before. Now, this time the difference is, we're going  
5 to encrypt that, put it in this -- basically, at that  
6 point, it's not readable.

7 Q. Okay.

8 A. Put that into that IP packet and send it over  
9 the internet.

10 Q. I see.

11 And now, Dr. Jones, what happens if our hacker  
12 intercepts this message?

13 A. Well, if the hacker intercepts this message,  
14 the hacker won't be able to make any sense of what's  
15 inside there. That -- that -- all those scrambled  
16 characters, they will not be able to figure out what the  
17 message that's being sent is or look at those addresses.

18 Q. Is this communication private?

19 A. Yes, sir, it is.

20 Q. Now, if Office Communicator is in this mode,  
21 do you believe that it infringes?

22 A. Yes, I do. I believe it infringes the '135  
23 patent.

24 Q. And so how is it that you know that Windows XP  
25 and Vista and the other products -- the other Microsoft

1 '135 products operate like this?

2 A. Well, I know this from Microsoft's documents,  
3 but I also know it from experiments that I've done  
4 myself.

5 Q. So, I mean, we've looked at a lot of things  
6 through animations, because that definitely helps, I  
7 know, me understand what's going on better, but I want  
8 to get to some real -- sort of the hard evidence of what  
9 a hacker could see.

10 So I'm going to ask you to play hacker for us  
11 a little bit today. Do you have a way of showing us  
12 exactly what a hacker might see if they intercepted one  
13 of those messages going across the network?

14 A. Yes, sir. I can use a tool I downloaded from  
15 the internet.

16 Q. What's the name of that tool?

17 A. That tool is called Wireshark.

18 Q. Wireshark.

19 Can you tell us, first of all, what Wireshark  
20 is?

21 A. Wireshark is a program that can collect all  
22 the network traffic on a particular network link and  
23 store it and allow it to -- and record it.

24 Q. Did you save up a whole bunch of money to buy  
25 Wireshark?

1           A.    No, sir.  It's free.

2           Q.    And so this could be just a bored teenager who  
3 wants to see what's -- what's happening on the network?

4           A.    Yes, sir, or the students in my classes.

5           Q.    Okay.  So show us a screen of what Wireshark  
6 looks like.  I'm fairly confident I don't understand all  
7 of the stuff that's on here, so can you show us what we  
8 are seeing on the screen?

9           A.    Yes, sir.  This is going to be a collection of  
10 the packets that are going back and forth, and I  
11 highlighted a few places in there to explain what's  
12 going on.

13          Q.    Okay.  So tell us what we're seeing.

14          A.    All right.  Well, I blew those up a little  
15 bit.  In that packet, we're seeing the two outer IP  
16 addresses; for example, 192.168.0.81; and then some of  
17 the data within that packet is also shown there; for  
18 example, AJ@Fabrikam.com.

19          Q.    Okay.  Now, I'm going to try this little touch  
20 screen wizardry here, and I just see a bunch of seeming  
21 chaos down here.  What is all that?

22          A.    Well, that's just data that's sent in that  
23 packet.  Some of it is readable by humans, and other  
24 parts are not.

25          Q.    So does the Wireshark program translate it to

1 make it a little bit better?

2 A. Yes. It understands the -- how the packets  
3 are formatted and then can present that in a way that's  
4 a little easier to analyze.

5 Q. Now, Professor Jones, I know I recognize some  
6 words here. This is from some of those log-in screens  
7 you showed us. Excuse my really, really awful oval, but  
8 do you see where it's @Fabrikam.com?

9 A. Yes, sir.

10 Q. Now, am I supposed to be able to read that on  
11 this Wireshark?

12 A. Yes, you are. This is -- this packet isn't  
13 part of the VPN. This is other traffic that I  
14 collected. I'm collecting all the network traffic on  
15 the system.

16 Q. I see. Okay.

17 And you gave us an example earlier about how  
18 Office Communicator can be in the unsecure mode or in  
19 the secure mode.

20 Can you walk us through what you would see on  
21 Wireshark if Office Communicator is reconfigured to be  
22 in that unsecure mode?

23 A. Yes, sir.

24 So this is another screen shot of when I used  
25 Wireshark, and I was collecting this data when

1 Communicator was operating in the unsecure mode, and I'd  
2 like to show you a little bit of what I captured there.

3 Q. Okay.

4 A. So the first part I captured in this unsecure  
5 mode were the source and destination addresses.

6 Q. Now, you mentioned SIP addresses earlier. Is  
7 that what we're seeing?

8 A. Yes, sir.

9 Q. Okay. What else can you see?

10 A. Well, I can also see the message itself, that  
11 how is your work going message that we saw earlier, that  
12 shows up in plain and readable.

13 Q. This is the example of the hacker who sees cut  
14 our prices today, for example, or whatever it may be.

15 A. Yes, sir, whatever message is going across.

16 Q. All right. Now, what else do you see in the  
17 unsecure mode.

18 A. Well, so I can also -- well, let me show you  
19 where these fit into the packet --

20 Q. Okay.

21 A. -- then show you what else I can see.

22 Q. Fair enough.

23 A. So I can put in the two addresses, so I'll  
24 show you where those fit. Remember, this SIP packet  
25 sits inside another packet to go over the internet, and

1 that other packet is the IP packet.

2 Q. Right.

3 A. Okay.

4 Q. So what are we seeing here, Dr. Jones?

5 A. Well, those are the two IP addresses, the  
6 source and destination addresses that go in that outer  
7 packet, and I can see those as well.

8 Q. Okay. Thank you.

9 Now, I know this is sort of stylized, and  
10 there looks to be a bunch of other information on the  
11 screen, but can you explain to us why we're sort of  
12 simplifying this a little bit and what other kinds of  
13 information might be there?

14 A. Well, there would be information about the  
15 underlying network sending this, ethernet. There's all  
16 kinds of things in these packets that -- that I'm not  
17 showing.

18 Q. You're not -- you're not trying to suggest to  
19 the jury that there's nothing more than what you've put  
20 in the little add-on graphic or anything of that nature,  
21 are you?

22 A. No, sir. No, sir, there's not. And I put all  
23 this information and made it available to Microsoft as  
24 well.

25 Q. All right. Thank you.

1           Now, can you compare this to what we would see  
2 in secure mode?

3           A.    So this is a screen shot of Wireshark that I  
4 captured when operating Office Communicator in that  
5 secure mode.

6           Q.    Can we pop up that sort of stylized packet at  
7 the bottom, and let's see what we can see.

8                    Can we see these outer packet addresses, the  
9 source and destination?

10          A.    Yes, sir, we can still see those.  In fact,  
11 we'll always see those.

12          Q.    Okay.  Why do you always see those?

13          A.    Those are the addresses that are used to  
14 transport or to direct this packet over the internet.  
15 As Dr. Short showed, the packet making its way through  
16 all the computers on the internet, these are the  
17 addresses that will -- that will help do that.

18          Q.    I see.

19                    And so just because you can see the source and  
20 destination, does that mean it's not a virtual private  
21 network?

22          A.    No, sir.  That's not the test that we use.  We  
23 apply the Judge's construction.

24          Q.    I see.

25                    Now, looking at the remaining portion of the

1 information here, what can we see?

2 A. Well, let me show you. We see this indicator  
3 that says this is a SIP TLS connection. And that TLS --  
4 I think we heard this acronym before, but it's transport  
5 layer security, and it's a way to encrypt this data, do  
6 that scrambling of the information that we saw earlier.

7 Q. I see.

8 And now, what about the source SIP address and  
9 destination SIP address that we can see on the last  
10 message? Can we just go ahead and pop those up here?

11 A. Well, we're not going to be able to do that.  
12 All we're going to see is this encrypted application  
13 data, those scrambled letters. We can't make out  
14 anything inside that.

15 Q. I see.

16 And where would those go in the message?

17 A. Those would go into the lower right.

18 Q. Now, Dr. Jones, do you remember yesterday when  
19 Microsoft's lawyer told the jury during opening  
20 essentially that we can see the IP address numbers for  
21 computers using Office Communicator, so it's not  
22 anonymous --

23 A. Yes, I did.

24 Q. -- or private?

25 Was his conclusion presented to the jury there



1 correct in your opinion?

2 A. No, sir.

3 Q. And why is that?

4 A. Well, it -- that's not the definition of  
5 anonymity. We can -- we can always see these outer IP  
6 addresses.

7 Q. I mean, are there certain other kinds of tools  
8 you could use to make it where you could hide those IP  
9 addresses?

10 A. Yes. There are -- there are something called  
11 IP address hopping, which is really another claim that's  
12 not at issue in this case.

13 Q. I see.

14 So then in your opinion, in a VPN, would you  
15 expect those addresses to be visible?

16 A. Yes. I expect in a VPN on the internet to see  
17 these -- to see source and destination addresses.

18 Q. So, now, Dr. Jones, in your opinion, when  
19 Office Communicator is used in that secure mode, does it  
20 form a virtual private network as that term has been  
21 defined by Judge Davis?

22 A. Yes, it does.

23 Q. Now, Dr. Jones, I'm sorry to keep going back  
24 to opening statements, but there's one other thing,  
25 while we're on it, I'd like to clear up.

1           Do you recall Microsoft's lawyer very quickly  
2 flashed up a document, and it had some statement about  
3 don't need a VPN, something of that nature?

4           A.    Yes, sir, I believe I do.

5           Q.    I went back and I found that document, with  
6 their help, actually, and we looked at that, because I  
7 remembered it differently.

8                   MR. CALDWELL:  Mr. Moreno, can you put  
9 that document up?  I think it was 3111; is that right?  
10 This is -- this is it.  And I think it might have been  
11 about the eighth page.  Can you zoom in on the area  
12 there that's highlighted?

13           Q.    (By Mr. Caldwell) Now, what Microsoft's lawyer  
14 told the jury was, and I quote, do we say it's great  
15 because of the VPN, and therefore, it's secure?  Well,  
16 actually, we tell you the opposite.  It doesn't require  
17 a VPN, and it needs only an internet connection, so it's  
18 the opposite.

19                   Does this document say that Office  
20 Communicator and Office Communicator Server do not form  
21 a VPN?

22           A.    No, sir.  It says you won't -- you won't need  
23 a VPN or an additional VPN to provide the security.

24           Q.    So what does that mean?  Explain.

25           A.    Well, what it's saying is that you don't need

1 to use a separate VPN product, like PPTP, because this  
2 product is forming a VPN that will provide the security  
3 that you need.

4 Q. Thank you.

5 Now, Professor Jones, all this Wireshark data,  
6 did you provide all that to Microsoft?

7 A. Yes, sir, I did.

8 Q. The VPN that we saw for Office Communicator,  
9 is that triggered by a DNS, like we've talked about, for  
10 the '135 patent?

11 A. Yes, sir, it is.

12 Q. Excuse me. Can you explain to us how that  
13 works?

14 A. Yes, I'd like to do that.

15 Q. Now, what are we seeing here?

16 A. This is the screen you see when you start off  
17 Office Communicator and you sign into it. And you sign  
18 into it with a name like AJ@Fabrikam.com.

19 Q. So how -- is there a domain name there?

20 A. Yes, sir, that Fabrikam.com.

21 Q. How will that be used to set up a VPN?

22 A. Well, that is going to -- once the user types  
23 that into the application on the client computer, that  
24 domain name is going to be sent to the RTC interfaces  
25 acting as to proxy server.

1 Q. That's what I was going to ask you. Did you  
2 tell us earlier that those RTC interfaces that we looked  
3 at, RTC and UCC, that those are a DNS proxy server in  
4 your opinion?

5 A. Yes, sir.

6 Q. So can you walk us through how they are a DNS  
7 proxy server?

8 A. Yes, sir. They're going to receive that  
9 domain name. Then they'll examine the domain name and  
10 then look out on the internet to determine what  
11 connections are available for that domain name.

12 Q. Okay. So will they determine whether the user  
13 is requesting access to a secure site?

14 A. Yes, sir, they will.

15 Q. How do they make that determination?

16 A. Well, they do that by asking some questions  
17 over the internet to servers authorized by the company  
18 to determine what kind of connections are available for  
19 this domain name.

20 Q. I see the laptop, and I see the servers, so  
21 what do you mean what kind of connections? Is there not  
22 just a single kind of connection that it could make?

23 A. No, sir. We talked about the secure and  
24 unsecure conditions. There are also external and  
25 internal connections that are available.

1 Q. Okay. And so that using encryption or not --  
2 and what do you mean by internal or external?

3 A. The question is about whether or not the user  
4 is inside the company network or outside the company  
5 network.

6 Q. Why might not the connection differ if the  
7 user is connecting inside the company versus outside the  
8 company?

9 A. Well, in some situations, we might be much  
10 more concerned with security. So inside the company, we  
11 might be willing to send things that are unencrypted,  
12 but outside we would be more likely to send them in an  
13 encrypted mode.

14 Q. Now, by my count, that gives us four  
15 alternative ways of connecting. There's internal  
16 network with encryption, an internal work that doesn't  
17 use encryption, external with encryption, or an external  
18 network without; is that fair?

19 A. Yes, sir.

20 Q. So how did the RTC interfaces here from  
21 Windows, the RTC interfaces in Windows, determine which  
22 connection types should be used?

23 A. Well, they send out a question over the  
24 internet and ask servers associated with the company  
25 what kind of connections are available.

1 Q. And is this how the program normally operates?

2 A. Yes, sir, it is.

3 Q. Have you seen that in Microsoft's technical  
4 documents?

5 A. Yes. I'd like to show that to you.

6 Q. Please do.

7 Now, what are we seeing here? What's the --  
8 what's the title of this document first?

9 A. I believe this is --

10 THE COURT: Counsel, excuse me. Let me  
11 interrupt you. Before we get into that, I think we'll  
12 take our afternoon break at this time. We've been going  
13 for almost two hours now.

14 So we're going to be in recess until  
15 3:35. So remember the Court's instructions. Enjoy your  
16 afternoon break. We'll be in recess.

17 COURT SECURITY OFFICER: All rise.

18 (Jury out.)

19 (Recess.)

20 COURT SECURITY OFFICER: All rise.

21 (Jury in.)

22 THE COURT: Please be seated.

23 All right. You may proceed.

24 MR. CALDWELL: Your Honor, I forgot to  
25 tell you earlier, I believe that -- or we move that

1 Exhibits 567 and 606 from Plaintiffs be admitted.

2 I think there's agreement between the  
3 parties. I just forgot to tell, Your Honor.

4 THE COURT: All right. Be admitted.

5 Q. (By Mr. Caldwell) Okay. Professor Jones,  
6 let's resume where we were. I think I had asked you if  
7 we had seen in Microsoft's technical documents any proof  
8 that it really tries to decide which of these four  
9 configuration types --

10 A. Yes, sir.

11 Q. What are we looking at here?

12 A. This is a Microsoft design document talking  
13 about those four connections, and it reads, the  
14 highlighted portion: In automatic configuration mode,  
15 the client application will extract the domain name from  
16 the user URI and use this API to obtain SIP servers  
17 associated with the domain name.

18 Q. Now, I'm quite confident the court reporter is  
19 going to smack one of us upside the head for all these  
20 acronyms, but can we unpack those just a little bit and  
21 spell those out?

22 What is the URI referring to?

23 A. That's that information that the user typed in  
24 with the domain name. And so that aj@Fabrikam.com, and  
25 they'll take the Fabrikam.com information out of there

1 and use that to determine whether or not to make a  
2 secure connection.

3 Q. And now in order to perform this automatic  
4 configuration mode, do we know that the RTC interfaces  
5 are going to look for those four -- which of the four  
6 kinds of connections to make?

7 A. Yes, sir. I'd like to look at another page as  
8 part of that document.

9 Q. What are we seeing here?

10 A. Well, these are those four questions we talked  
11 about earlier. The first one is internal TLS; that's  
12 encrypted. Internal TCP; that's unsecure. External  
13 TLS; that's the encrypted connection. And then external  
14 TCP; that's the unencrypted one.

15 Q. So these are the four requests you mentioned?

16 A. Yes, sir.

17 Q. What happens to these requests?

18 A. These requests are sent over the internet to a  
19 server associated with the company that will provide  
20 answers as to what kind of connections are available for  
21 that domain name.

22 Q. Now, have you verified that all of this really  
23 happens?

24 A. Yes, sir. Using that same Wireshark program,  
25 I have prepared a screen shot.



1 Q. Okay. And what are we seeing here?

2 A. This is a record of what network traffic is  
3 going on while trying to determine whether or not to  
4 make a secure connection.

5 So you have the four questions that were  
6 identified in the Microsoft document. The first one is  
7 asking for that encrypted internal connection.

8 Q. Okay.

9 A. We've got another one for the unencrypted  
10 internal connection, the encrypted external connection,  
11 and the unencrypted external connection.

12 Q. I see. So can we go back to our animation to  
13 where all of this fits in?

14 A. Yes, sir.

15 Q. Now, we are trying to connect across the  
16 internet instead of inside Acme, so which kind of  
17 responses are we likely to get back in terms of  
18 identifying a server that's available?

19 A. We would like to get back responses for the  
20 external network.

21 Q. Okay. Just to be clear, could you set up a  
22 VPN on the internal network as well?

23 A. Yes, sir.

24 Q. Are internal connections sometimes public  
25 links?

1           A.    Yes, they can.  For example, Virginia Tech  
2 owns its links, but they wouldn't necessarily be secure  
3 links.  Lots of people can see the traffic on them.

4           Q.    Now, in our example, we decided that we would  
5 like to use an external connection; fair?

6           A.    Yes, sir.

7           Q.    Now, will I find a server that will allow me  
8 to connect encrypted and unencrypted?  Will I have two  
9 different options?

10          A.    You may have both options.  It depends to what  
11 policies that the company has established.

12          Q.    What do you mean?

13          A.    The company is going to determine for that  
14 domain name whether it will make secure and unsecure  
15 connections available.

16          Q.    I see.  And if I understand you correctly,  
17 you're saying that the company might choose not to allow  
18 unencrypted communications so that company business  
19 isn't sent on encrypted?

20          A.    Yes, sir.  Especially in the external case,  
21 the company might very well choose to only allow  
22 encrypted connections.

23          Q.    Well, in either case, when the Windows RTC  
24 interfaces pick a server name to choose to connect to,  
25 what do they do then?

1           A.    Well, once they determine, for example, in  
2 this case, to make an encrypted connection, they need to  
3 get an address for the server to talk to, an IP address.

4           Q.    What do they do with that address then?

5           A.    With that address, they will use that to  
6 establish -- or to send a request to set up the VPN. So  
7 they'll send that from -- once they have the address,  
8 they'll send that from the RTC interfaces in an IP  
9 packet to Office Communications Server down on the lower  
10 right.

11          Q.    I see. Now, if these RTC interfaces find out  
12 that the company allows both unencrypted or encrypted  
13 connections and they get back responses saying you can  
14 connect encrypted or you can connect unencrypted, how do  
15 the RTC interfaces determine which way the client is  
16 requesting to connect?

17          A.    Well, there's logic in the source code in  
18 these RTC interfaces that determines to pick the  
19 encrypted connection first, if that's available.

20          Q.    So when we started down this path talking  
21 about the choices and alternatives, we started by asking  
22 whether the RTC interfaces have a DNS-triggered virtual  
23 private network.

24                   Do you recall that?

25          A.    Yes, sir.

1 Q. So when do we set up our virtual private  
2 network?

3 A. Well, once we've made this determination, we  
4 send out this request to initiate the virtual private  
5 network. So it goes out over the network to Office  
6 Communications Server, which is the -- acting as  
7 gatekeeper computer.

8 Q. And at this point, will the Office  
9 Communications Server just let anybody connect because  
10 they sent a request to connect?

11 A. No, sir. Only users who are authorized to  
12 make that connection will be allowed to establish the  
13 secure connection.

14 Q. Now, I know we simplified things for the  
15 presentation here. But how many copies or instances of  
16 Office Communications Server or Live Communication  
17 Server might be running back at Acme, or whatever the  
18 company may be?

19 A. Well, there may be several copies or instances  
20 of that running on computers back there for -- in the  
21 case where there's a large number of employees of these  
22 companies, they might need several servers to make this  
23 happen.

24 Q. Why else might you need different servers set  
25 up?

1           A.     Different servers may play different roles.  
2 There may be different servers involved in external  
3 connections than there are in internal connections.

4           Q.     I see.  Now, when we looked through the claims  
5 of the '135 patent, one of the words that we talked  
6 about -- we talked about it with regard to the cell  
7 phone -- was websites.

8           A.     Yes, sir.

9           Q.     In the case of Office Communicator, is our  
10 user accessing a secure website?

11          A.     No, sir, they're not.

12          Q.     What is the user accessing?

13          A.     The user is accessing Office Communications  
14 Server, which doesn't literally -- which is not  
15 literally a website, and it doesn't literally send web  
16 pages back and forth.  Instead it does similar  
17 communications to a website between Office Communicator  
18 and Office Communications Server.

19          Q.     Does it work like a website?

20          A.     In many respects it does, yes.

21          Q.     In what ways does it work like a website, for  
22 example, just at a high level?

23          A.     At a high level, once the VPN is established,  
24 the kind of traffic that goes back and forth between the  
25 two is not material to what's happening in these claims.

1 Q. Now, in your example, I want to say that we  
2 saw a picture referring to Office Communicator 2007.

3 But how does this explanation correlate to the  
4 other versions of the Microsoft '135 products?

5 A. Well, this explanation is the same for each  
6 one of them. The only exception is Live Communications  
7 Server 2003, which just asks two of the four questions.

8 Q. Instead of internal secure, internal unsecure,  
9 external secure, and external unsecure, which two were  
10 asked in that older -- the very first generation of the  
11 product?

12 A. In the first version, it was -- just encrypted  
13 or unencrypted were the two questions.

14 Q. Was there still a determination made as to  
15 whether to connect in the secure VPN mode or the  
16 unsecure mode?

17 A. Yes, sir.

18 Q. Now, how do you know that all the different  
19 versions are consistent in this regard?

20 A. Well, I know that by reading, for example,  
21 deposition testimony from Microsoft employees.

22 Q. All right. Now, I think it's time for us to  
23 move to one of the next chunks of our road map here.

24 Let's go to that.

25 Okay. So now it's time for us to compare the

1 '135 patent to the Microsoft products.

2           What claims of the '135 patent are you going  
3 to talk with us about today?

4           A.    I'm going to talk about Claims 1, 10, and 12.

5           Q.    Now, remind us, do we need to show that every  
6 claim in the patent is infringed?

7           A.    No sir.  If one claim is infringed, the patent  
8 is infringed.

9           Q.    Now, the way I would suggest that we do this  
10 is, I'll sort of man the flip chart here, the easel, and  
11 then you can show us some different things and explain  
12 it to us.

13                  So I want to start with the preamble of the  
14 claim, which says:  A method of transparently creating a  
15 virtual private network between a client computer and a  
16 target computer.

17                  Is that what we do in Office Communicator and  
18 the remaining Microsoft '135 products?

19           A.    Yes, it is.  That's what happens when the  
20 remote computer establishes a VPN to the computers back  
21 at Acme.com.

22           Q.    Are there words in here that Judge Davis has  
23 defined for us?

24           A.    Yes, there are.

25                  As we saw earlier and the definition I read

1 was for virtual private network.

2 Q. And you've already read that definition to us.  
3 Did you apply it in analyzing these claims?

4 A. Yes, sir.

5 Q. Now, let's move to the first step, which is  
6 generating from the client computer a domain name  
7 service request that requests an IP address  
8 corresponding to a domain name associated with the  
9 target computer.

10 What is happening -- I'm sorry. Did Judge  
11 Davis provide us definitions for that term?

12 A. Yes, he did. For two of those terms.  
13 The first one is domain name service, and that is a  
14 lookup service that returns an IP address for a  
15 requested domain name. And the second one is the  
16 definition of domain name, which is a name corresponding  
17 to an IP address.

18 Q. So did you find that in the Microsoft '135  
19 product?

20 A. Yes, I did. That is when the -- for example,  
21 the application is sending that domain name to the RTC  
22 interfaces.

23 Q. Did you find that element met in all of the  
24 Microsoft '135 products?

25 A. Yes, sir, I did.



1 Q. Now, Professor Jones, we have check boxes  
2 here.

3 What I want to know is, can I check off that  
4 element as being met in the Microsoft '135 products?

5 A. Yes, sir.

6 Q. The second element of the claim says -- the  
7 second step -- excuse me -- says: Determining whether  
8 the domain name service, or DNS, request transmitted in  
9 Step 1 is requesting access to a secure website.

10 Has Judge Davis provided us definitions of  
11 some of the words there?

12 A. Yes, sir.

13 Secure website, and the definition for that is  
14 a website that requires authorization for access and  
15 that can communicate in a VPN.

16 For website, it's one or more related web  
17 pages at a location on the worldwide web.

18 Q. Now, in the Microsoft '135 products, did you  
19 find that the RTC interfaces determine whether the DNS  
20 request is requesting access to a secure site?

21 A. Yes, I did, as I described for the DNS proxy  
22 server with those four questions about available  
23 connections.

24 Q. Does the site require authorization for  
25 access?

1           A.    Yes, sir.  As discussed, the user has to be an  
2 authorized user or the gatekeeper computer will not  
3 allow the connection.

4           Q.    Now, more specifically, in the Microsoft '135  
5 products, did you find that the RTC interfaces determine  
6 whether the DNS request is requesting access to a secure  
7 website?

8           A.    No, sir, I did not.

9           Q.    Okay.  Why not?

10          A.    Well, as I mentioned earlier, the Office  
11 Communications Server is not literally a website.

12          Q.    Well, Professor Jones, if you found the  
13 Microsoft '135 products do not involve requesting access  
14 to a secure website, does that mean that this element of  
15 the claim is not met by the Microsoft '135 products?

16          A.    No, sir, it doesn't.

17                    Just making a small change does not mean that  
18 you don't infringe.  If -- if the product is  
19 insubstantially different from the claims, then it still  
20 infringes under this Doctrine of Equivalents that we  
21 talked about earlier.

22          Q.    Well, Professor Jones, did you determine this  
23 Office Communicator features offered over the virtual  
24 private network are not substantially different than a  
25 secure website?

1           A.    Yes, sir, I did.

2           Q.    For instance, would the virtual private  
3 network be triggered any differently, if it were to  
4 carry website traffic?

5           A.    No, sir, it wouldn't.

6                    The -- the triggering mechanism here would  
7 still be the same whether it was literally web pages or  
8 presence information or instant messaging. It wouldn't  
9 work any differently.

10          Q.    Would the virtual private network itself  
11 operate any differently in a significant way if the  
12 information sent across it were a web page instead of,  
13 say, an instant message?

14          A.    No, sir, it wouldn't.

15          Q.    Now, did you do anything -- rather than just  
16 deciding that you think the difference is not  
17 substantial, did you do anything to confirm your  
18 conclusion that Microsoft meets this element under the  
19 Doctrine of Equivalents?

20          A.    Yes, sir, I did. I applied by what's called  
21 by the courts the function-way-result test. And that  
22 test would test whether things perform substantially the  
23 same function in substantially the same way to achieve  
24 substantially the same result.

25          Q.    Now, let's be clear. Is this an analysis that

1 you came up with yourself?

2 A. No, sir. This is an analysis that the courts  
3 use.

4 Q. So were you able to determine if the Microsoft  
5 '135 products perform substantially the same function as  
6 a secure website?

7 A. Yes, sir, they do. They make use of computers  
8 to communicate in the VPN to present information to  
9 clients, and they require that the clients be authorized  
10 to access the servers.

11 Q. Were you able to determine if the Microsoft  
12 '135 products perform in substantially the same way as a  
13 secure website?

14 A. Yes, sir, they do.

15 They make use of computers to communicate in  
16 the VPN using protocols. They present information to  
17 clients through windows over the internet, and they do  
18 so in a way in which the client's and servers cooperate  
19 to ensure that the clients are authorized to connect.

20 Q. And finally, did you determine whether the  
21 Microsoft '135 products achieve substantially the same  
22 result as a secure website?

23 A. Yes, sir, I did.

24 I found that the result achieved was that the  
25 client is able to communicate with computers in a VPN.

1 It does so over a public network and in a way in which  
2 only clients that are registered are able to communicate  
3 in that network with those servers.

4 Q. And, Professor Jones, did you conclude that  
5 the Microsoft '135 products meet the element of  
6 determining whether the DNS request in Step 1 is  
7 requesting access to a secure website?

8 A. Yes, sir, I did under the Doctrine of  
9 Equivalents.

10 Q. May I check that element?

11 A. Please do.

12 Q. Let's look now at the last claim element,  
13 which reads: In response to determining that the domain  
14 name service request, or DNS request, in Step 2 is  
15 requesting access to a secure target website,  
16 automatically initiating the VPN between the client  
17 computer and the target computer.

18 What is happening in that claim element?

19 A. In that element, the DNS proxy server is  
20 sending a request to -- to initiate the VPN. And in the  
21 Microsoft products that happens when the RTC interfaces  
22 initiate the VPN with the gatekeeper computer.

23 Q. I think you touched on this earlier, but is  
24 that VPN just always going to be to a single Office  
25 Communications Server?

1           A.    No, sir.  As I mentioned earlier, that's a  
2 group of servers as well as other computers that form a  
3 network back at the company.

4           Q.    Now, has Judge Davis provided any additional  
5 definitions that help us with this claim element?

6           A.    Yes, sir.

7                        So for the claim term, automatically initiated  
8 in the VPN, we use the definition initiating the VPN  
9 without involvement of a user.

10          Q.    In the Microsoft products, after it is  
11 determined that the DNS request pertains to a secure  
12 site, do the products automatically initiate a VPN  
13 between the client computer and the target computer?

14          A.    Yes, sir, they do.  They send that request to  
15 the gatekeeper computer to -- or the RTC interfaces sent  
16 that request to the gatekeeper computer to initiate the  
17 VPN.

18          Q.    Will that gatekeeper computer make sure that  
19 the proper credentials are presented?

20          A.    Yes, sir, it will.

21          Q.    Now, remind us, really, what was the user's  
22 involvement here with all this information going back  
23 and forth?

24          A.    Well, the user, as we saw in the screen shot,  
25 types in that domain name and his log in.  And after

1 that, this all happens behind the scenes automatically.

2 Q. Professor Jones, did you find this last  
3 element met in the Microsoft '135 products?

4 A. Yes, sir, I did under the Doctrine of  
5 Equivalents.

6 Q. May I check that box?

7 A. Please do.

8 Q. Well, Professor Jones, we have checked all the  
9 boxes on Claim 1.

10 What does that mean?

11 A. Well, that means that the Microsoft '135 --  
12 '135 products infringe Claim 1 of the '135 patent, and,  
13 therefore, they infringe the '135 patent.

14 Q. Okay. We've talked about Claim 1, but did  
15 you -- did you find that the Microsoft '135 products  
16 infringe other claims of the '135 patent?

17 A. Yes, sir. Claims 10 and 12.

18 Q. May I pull those up now?

19 A. Yes, sir.

20 Q. Now, I put Claim 10 up here, and the preamble  
21 of Claim 10 begins with: A system that transparently  
22 creates a virtual private network between a client  
23 computer and a secure target computer.

24 Is that what we're seeing?

25 A. Yes, sir, it is. This is the same --

1 essentially the same as what we're seeing in Claim 1.

2 Q. Now, I want to ask you, if I remember  
3 correctly, Claim 1 starts with a method of  
4 transparently, whereas Claim 10 starts with a system of  
5 transparently.

6 Is that significant?

7 A. Yes, sir, it is.

8 When it starts with a method, that's  
9 describing a set of steps. And to infringe Claim 1, a  
10 set of steps has to be performed to infringe the claim.  
11 In Claim 10, it -- to infringe Claim 10, you would have  
12 to assemble the parts of Claim 10, basically assemble  
13 the system to infringe it.

14 Q. So did you find that the Microsoft '135  
15 products have a system that transparently creates a  
16 virtual private network between a client computer and a  
17 secure target computer?

18 A. Yes, sir, I do as we discussed for Claim 1.  
19 Same as Claim 1.

20 Q. Now, Professor Jones, in case the jury --  
21 excuse me; I'm sorry -- in case the jury is following  
22 along in the patent, I know that the Patent Office's  
23 printing of this claim, it looks a little bit different  
24 in that all of this information is kind of squished  
25 together in one really, really long block.



1           Now, will you explain to us why you've chosen  
2 to break it out into three pieces here?

3           A.    Yes, sir.  I thought that one big block was a  
4 pretty big mouthful, but also there are three basic  
5 requirements going on here.

6           One is that the proxy server is going to  
7 receive a request, and then in the next step, it's going  
8 to return an IP address.  And in the next, it's going to  
9 generate a request in these three different parts of it.  
10 And so I thought it would be much easier to analyze it  
11 piece by piece to make sure I didn't miss anything.

12          Q.    So the same words?

13          A.    Yes, sir.

14          Q.    Now, the first section that we have is a DNS  
15 proxy server that receives a request from the client  
16 computer to look up an IP address for a domain name.

17                Has Judge Davis provided us any definition for  
18 that?

19          A.    Yes, sir, he has.

20                For a DNS proxy server, we have a computer or  
21 program that responds to a domain name inquiry in place  
22 of a DNS.

23          Q.    What is the DNS proxy server that you've  
24 identified in the Microsoft '135 products?

25          A.    It is the RTC interfaces in Windows XP and

1 Vista.

2 Q. Now, let's be clear about something.

3 The RTC interfaces, those are software,  
4 correct?

5 A. Yes, sir.

6 Q. But this element says it's got to be a DNS  
7 proxy server.

8 A. Let me pull up the -- the construction and  
9 explain that.

10 We've been told that a DNS proxy server could  
11 be a computer or program, and it doesn't have to be one  
12 or the other. So it could be hardware or it could be  
13 software.

14 Q. But did you find that first piece of the claim  
15 met in the '135 products of Microsoft?

16 A. Yes, sir, I did.

17 Q. May I check that?

18 A. Please do.

19 Q. Professor Jones, the second set -- the second  
20 element is: Wherein the DNS proxy server returns the IP  
21 address for the requested domain name, if it is  
22 determined that access to a non-secure website has been  
23 requested.

24 What's happening in that step?

25 A. In that step, after the DNS proxy server has

1 made its determination, if it finds that a non-secure  
2 website has been requested, it's just going to return an  
3 IP address so that an unsecure connection could be  
4 formed.

5 Q. Did you find that element in the Microsoft  
6 '135 products?

7 A. Yes, I did and in the RTC interfaces.

8 Q. Now, I note that this element says -- it  
9 refers to a non-secure website, access to a non-secure  
10 website has been requested.

11 What about website?

12 A. Well, just as in Claim 1, the website is not  
13 literally present in the Microsoft products, but it's  
14 present under the Doctrine of Equivalents.

15 Q. The second way of infringing that was  
16 identified by Judge Davis?

17 A. Yes, sir.

18 Q. So what did you conclude for the second piece  
19 of Claim 10?

20 A. I concluded that the Microsoft '135 products  
21 meet this under the Doctrine of Equivalents.

22 Q. Now, Professor Jones, the third piece says:  
23 Wherein the DNS proxy server generates a request to  
24 create the VPN between the client computer and the  
25 secure target computer, if it is determined that access

1 to a secure website has been requested.

2           What's happened in that piece of the claim?

3           A.   Well, in this case, the DNS proxy server  
4 determines that access to a secure website has been  
5 requested and is going to send a request to create the  
6 VPN.

7           Q.   Now, candidly, I should have done this  
8 earlier. But we've seen this in the animation a couple  
9 of times.

10           And tell us where the pieces are. So we first  
11 got -- the DNS proxy server receives the request. Where  
12 was that in our animation?

13           A.   That's when -- the DNS proxy server is on the  
14 laptop computer, and it's receiving that from the  
15 application.

16           Q.   So that's when A.J. at Fabrikam.com moved down  
17 to the RTC interfaces?

18           A.   Yes, sir.

19           Q.   Then in the instance where, if you were trying  
20 to connect to an unsecure site, what would happen?

21           A.   Well, that, again, happens in the RTC  
22 interfaces on the user's computer where it determines  
23 that an unencrypted connection is going to be made and  
24 that IP address comes up, that number we saw appear  
25 there.

1 Q. Now, when we see this third part here, if  
2 you're trying to connect to a secure site, the DNS proxy  
3 server generates a request that the VPN keeps that up.

4 Where was that in the animation?

5 A. That is after the DNS proxy server has made  
6 its determination on the user's computer, on the client  
7 computer. That request is sent over the internet and  
8 will ultimately go to the gatekeeper computer.

9 Q. So that's when we had our laptop, and after  
10 the DNS proxy server figures out we want to connect  
11 encrypted and the message goes across the internet to  
12 the gatekeeper?

13 A. Yes, that -- that -- the computer is at the  
14 bottom -- in the basement of that Acme.com building.

15 Q. Did you find this third piece of Claim 10 met?

16 A. Yes, I did under the Doctrine of Equivalents.

17 Q. Now, the last element for this claim says: A  
18 gatekeeper computer that allocates resources for the VPN  
19 between the client computer and the secure web computer  
20 in response to the request by the DNS proxy server.

21 Did you find that in the Microsoft '135  
22 products?

23 A. Yes, I did.

24 That happens when the Office Communications  
25 Server, which is the gatekeeper computer, receives that

1 request from the DNS proxy server and makes, for  
2 example, allocates -- well, allocates resources for that  
3 VPN.

4 Q. So what do you mean by allocates resources for  
5 the VPN?

6 A. For example, the Office Communications Server  
7 will allocate connection records to make the connection  
8 for the VPN possible.

9 Q. And what is the secure web computer?

10 A. The secure web computer is one of those  
11 instances of Office Communications Server that were  
12 discussed, or another computer.

13 Q. Now, Office Communications Server is -- is  
14 software that comes on a DVD, right?

15 A. Yes, sir.

16 Q. All right. But do you see that this element  
17 requires a gatekeeper computer?

18 A. Yes, I do.

19 Q. Can that gatekeeper computer portion of the  
20 claim be met by Microsoft's software as opposed to only  
21 being met by hardware?

22 A. Yes, it can be met by the Microsoft software,  
23 the functionality of that in the Office Communications  
24 Server product.

25 Q. Is that kind of like when we looked at the DNS

1 proxy server?

2 A. Yes. As you recall, the DNS proxy server  
3 could be either a computer or program. And in this  
4 case, the gatekeeper computer is the Office  
5 Communications Server software.

6 Q. Well, does the expert retained by Microsoft  
7 agree with you on that point, that this element of a  
8 gatekeeper computer can be met by the software?

9 A. No, sir, he does not.

10 Q. What does he say?

11 A. Well, he says it has to be -- that the  
12 gatekeeper computer must be hardware.

13 Q. Well, Professor Jones, even if he's right that  
14 the gatekeeper computer has to be hardware, would that  
15 mean that Microsoft doesn't infringe the claim?

16 A. No, sir, it doesn't.

17 Well, first of all, that Office Communications  
18 Server software is meant to run in a computer. It  
19 doesn't have any other purpose.

20 Second, Microsoft itself puts that software on  
21 computers and infringes these claims.

22 Q. So, Professor Jones, did you find that the  
23 last element of Claim 10 is met by the Microsoft '135  
24 products?

25 A. Yes, sir, I did under the Doctrine of

1 Equivalents.

2 Q. And what have you concluded about Claim 10?

3 A. I have concluded that the Microsoft '135  
4 products infringe Claim 10 of the '135 patent.

5 Q. Now, let's look at Claim 12.

6 The entirety of Claim 12 is the system of  
7 Claim 10 wherein the gatekeeper computer determines  
8 whether the client computer has sufficient security  
9 privileges to create the VPN. And if the client  
10 computer lacks sufficient security privileges, rejecting  
11 the request to create the VPN.

12 Professor Jones, why is this claim so much  
13 shorter than the others?

14 A. This is one of the dependent claims, that type  
15 of claim that Judge Davis talked about that refers back  
16 to another claim.

17 This one refers back to Claim 10.

18 Q. Okay. And so what do you need to show in  
19 order to prove infringement of Claim 12?

20 A. You have to show that Claim 10 is -- that the  
21 elements in Claim 10 are met as well as the elements in  
22 Claim 12.

23 Q. And we've already shown Claim 10?

24 A. Yes, sir.

25 Q. So what more must be shown for Claim 12?



1           A.     We have to show that these terms here are  
2 present in the Microsoft '135 products.

3           Q.     And what are those terms?

4           A.     These are wherein the gatekeeper computer  
5 determines whether the client computer has sufficient  
6 security privileges to create the VPN.

7           Q.     Okay.  Let's start with that one.

8                     Does the gatekeeper computer that you've  
9 identified as the server software determine whether the  
10 client has sufficient security privileges to create the  
11 VPN?

12          A.     Yes, sir, it does.

13                     As we discussed, the user has to be authorized  
14 to connect to the VPN.

15          Q.     So can we check that box?

16          A.     Yes, sir.

17          Q.     Then if the client computer lacks sufficient  
18 security privileges, rejecting the request to create the  
19 VPN, does Office Communicator Server and Office  
20 Communications Server software from Microsoft do that?

21          A.     Yes, sir, if it does.

22                     If you're not authorized, the request to  
23 create that VPN, the connection will be terminated.

24          Q.     So do you have any proof of that you can show  
25 us?

1           A.    Yes, sir, I do.

2           Q.    What are we seeing here, Professor Jones?

3           A.    This is some of the deposition testimony that  
4 I talked about earlier. This is from Mr. Mu Han. He is  
5 a Microsoft engineer, a man who's programmed parts of  
6 this -- these products that we've been talking about.  
7 And he was designated by the company as someone who  
8 could answer these questions for us.

9           Q.    And what did he tell us?

10          A.    The question he was asked: So when the client  
11 cannot be authenticated, can you describe for me how the  
12 connection is terminated?

13                   And his answer -- and let me just go down to  
14 the highlighted portion -- is: If the access proxy does  
15 not see the valid success code, the access proxy would  
16 drop the connection.

17          Q.    I see.

18                   And just so nobody -- nobody thinks you're  
19 running from the first part of that answer, what is he  
20 explaining there? In fact, you can tell us if you --

21          A.    Sure. Let me go -- basically, what he -- let  
22 me go back and read it.

23                   So if the client is authenticated  
24 successfully, the server will return a success return  
25 code to the client. The access proxy would see this

1 success return message and keep the connection up.

2 Q. Then if the access proxy does not see that  
3 valid success code, it will drop the connection?

4 A. Yes, sir.

5 Q. What did you conclude about Claim 12,  
6 Professor Jones?

7 A. I concluded that the '135 Microsoft products  
8 infringe Claim 12 of the '135 patent.

9 Q. So one tiny piece of good news is I think  
10 that's our check marks for the '135 patent, but we have  
11 a little bit more to talk about on the '135 patent,  
12 which is you said that Microsoft infringes directly and  
13 indirectly.

14 A. Yes, sir.

15 Q. Can you tell us what you mean there?

16 A. Well, what I mean by that is that Microsoft  
17 itself infringes these claims as well as through the  
18 design of its products and how it advertises those and  
19 instructs its customers, it indirectly infringes the  
20 claim.

21 Q. Well, in what ways does Microsoft directly  
22 infringe the '135 patent?

23 A. They do that, for example, through the way --  
24 when they test their products, but they also do it when  
25 they -- when they use it internally themselves.

1 Q. Well, does Microsoft make, use, sell, or offer  
2 for sale products that include the DNS proxy server?

3 A. Yes, they do.

4 The products that include the DNS proxy server  
5 are Windows Vista and Windows XP, and those are things  
6 that they make, use, sell, and offer to sale.

7 Q. Do they make, use, sell, or offer for sale the  
8 gatekeeper computer of the asserted claims?

9 A. Yes, sir, they do.

10 That's Office Communications Server and Live  
11 Communications Server.

12 Q. Now, does Microsoft use the DNS-triggered  
13 virtual private networks internally at Microsoft?

14 A. Yes, they do.

15 They -- they run this system for communication  
16 among their own employees.

17 Q. So does Microsoft perform the method of Claim  
18 1 and make use of the build or make use of the systems  
19 of Claim 10 or 12?

20 A. Yes, they do. They do all of those things,  
21 sir.

22 Q. Now, how do you know that?

23 A. Well, I know that from Microsoft deposition  
24 testimony as well as internal Microsoft documents.

25 Q. How many employees at Microsoft are using the

1 '135 patent?

2 A. Well, it's my understanding that -- sorry;  
3 wrong one -- that Microsoft has over -- or approximately  
4 80,000 employees using this system, and some are --  
5 between 40 and 50,000 of those employees are in the  
6 United States.

7 Q. 80,000 with 40 or 50,000 in the U.S.?

8 A. Yes, sir.

9 Q. Where did you get those numbers?

10 A. I got that from the deposition testimony of  
11 Mr. Mu Han as well as documents from Microsoft that  
12 describe how to set up and run this system and the best  
13 ways to do it.

14 Q. Well, that's what I was going to ask you.

15 Do you know how Microsoft actually sets up  
16 their software?

17 A. Yes, sir, I do.

18 Q. And how do you know that?

19 A. I know that from deposition testimony and  
20 those same documents. I'd like to show you that  
21 deposition testimony.

22 Q. Okay.

23 A. So this is, again, deposition testimony from  
24 Mr. Mu Han, the Microsoft programmer. And he was asked:  
25 Did Microsoft always use the OCS product with the DNS

1 service record functionality for initiating SIP  
2 connections?

3 His answer: We always use the DNS record to  
4 discover the servers.

5 Q. They always?

6 A. Yes, sir.

7 Q. Do you have other evidence of how Microsoft  
8 configures their own Office Communicator products  
9 internally at Microsoft?

10 A. Yes, sir, I do.

11 MR. CALDWELL: Mr. Moreno, can you pull  
12 up Plaintiff's Exhibit 130?

13 Q. (By Mr. Caldwell) Now, what are we seeing in  
14 this document right here?

15 A. This is a document where Microsoft describes  
16 the -- basically recommended ways in which to set up the  
17 system. And as an example of that, they describe how  
18 Microsoft IT does that at Microsoft.

19 Q. And when Microsoft deployed it, did they use  
20 DNS service records to create a virtual private network?

21 A. Yes, sir, they did. I'd like to --

22 Q. So, Professor Jones, in your opinion, does  
23 Microsoft directly infringe Claims 1, 10, and 12?

24 A. Yes, sir, they do.

25 Q. Now, let's move on to indirect infringement.

1 You introduced us to indirect infringement briefly, but  
2 what did you -- what did you tell us indirect  
3 infringement was?

4 A. Essentially, Microsoft indirectly infringes by  
5 inducing or encouraging others to infringe the patent as  
6 well as contributing to the infringement of others.

7 Q. Let's talk about induced infringement.  
8 I understand that Judge Davis will instruct the jury on  
9 -- on the metes and bounds of the law, but did you have  
10 some understanding of induced infringement in order to  
11 form your opinions and analysis?

12 A. Yes, sir. Let me walk through that.

13 To -- to induce infringement, Microsoft would  
14 need to have knowledge of the patent. They would have  
15 to encourage or instruct others to perform acts that  
16 infringe. Others would have to infringe the claims.

17 And then Microsoft would have had to have  
18 known or should have known that encouragement or  
19 instruction would result in others infringing.

20 Q. So for the first element, did you find that  
21 Microsoft had -- did you find evidence that Microsoft  
22 had knowledge of the '135 patent?

23 A. Yes, sir, I did. I'd like to show that to  
24 you.

25 Q. Okay. This is Plaintiff's Exhibit 401.

1 What are we seeing here?

2 A. This is an information sent from the U.S.  
3 Patent & Trademark Office from -- well, from there to  
4 Microsoft representatives during the -- what's called  
5 the prosecution of a patent by Microsoft.

6 Q. So Microsoft was applying for a patent on some  
7 technology it wanted to patent?

8 A. Yes, sir.

9 Q. And this is correspondence from the United  
10 States Patent Office back to Microsoft?

11 A. Yes, it is, and it's dated September 26th,  
12 2003.

13 Q. Now, where does Mr. Munger and Dr. Short's  
14 '135 patent fit into this document?

15 A. Well, let me turn to a little bit later part  
16 of it.

17 So I've highlighted two portions of this  
18 document. The first one says, essentially, that the  
19 claims that Microsoft had submitted as part of the  
20 patent application were unpatentable in view of Munger.  
21 And they mention the '135 patent explicitly.

22 And a little lower down, we see as to  
23 Claim 12, Munger teaches the method of Claim 9 wherein  
24 the communication device is a proxy server.

25 Q. So does this mean that the patent claims that



1 Microsoft was trying to get, that in September of 2003,  
2 they were rejected because of the Munger '135 patent  
3 we've talked about?

4 A. Yes, sir.

5 And this is the record of the information or  
6 the discussion that the Patent Office sent back to  
7 Microsoft's representatives.

8 Q. So have you seen other evidence besides this  
9 patent document that indicates Microsoft had knowledge  
10 of the '135 patent?

11 A. Yes, sir.

12 This is -- I believe we've seen this letter  
13 before. This is a letter that -- from SAIC to Microsoft  
14 that was received, as we can see in the upper right-hand  
15 part, on May 2nd, 2006, in the Microsoft Legal  
16 Department.

17 And this is mentioned -- let me read the part  
18 below: We believe the '135 patent would be of interest  
19 to your company in connection with its Live  
20 Communications Server 2005 product with Service Pack 1  
21 and in connection with its Office -- Microsoft Office  
22 Communicator 2005 product.

23 Q. So, Professor Jones, have you found evidence  
24 that Microsoft knew of the '135 patent?

25 A. Yes, sir. It's my conclusion that Microsoft

1 had knowledge of the '135 patent.

2 Q. The second element is encouraged or instructed  
3 others to infringe.

4 Have you found evidence of that?

5 A. Yes, sir.

6 For example, in that deployment guide we saw a  
7 few pages ago, where Microsoft tells people how to  
8 install and operate its system.

9 Q. What about websites? Have you seen any  
10 information on websites?

11 A. Yes, sir.

12 I've examined many technical documents as well  
13 as information on Microsoft's website that describes how  
14 to use these products in the way that infringes.

15 Q. Now, does Microsoft allow software developers  
16 to download the code they need to use these ATIs?

17 A. Yes. It -- Microsoft has what's called a  
18 software development kit that you can download for these  
19 RTC interfaces that will allow you to develop  
20 applications and includes examples.

21 Q. It's sort of common sense, does Microsoft want  
22 people to buy Office Communicator Communications Service  
23 and use them?

24 A. Yes, sir. Definitely, they do. And they --  
25 they, obviously, encourage people to do that and use

1 those products and tell them how to do it.

2 Q. So can we check that element?

3 A. Yes, sir.

4 Q. Now, what about others infringing the claims?

5 Have you found that others -- or others have infringed  
6 the claims?

7 A. Yes, sir, I have.

8 For example, based on Microsoft deposition  
9 testimony, I understand that Intel and HP use the  
10 products in a manner that infringes.

11 Q. And are you telling us that only Intel and HP  
12 do?

13 A. No, sir. Those are just two examples that  
14 were cited in the Microsoft deposition testimony.  
15 But also, Microsoft basically sells these products, and  
16 they sell the software, and they expect you to use them.

17 Q. My understanding is that Mr. Reed is going to  
18 testify later more about the amount of sales that  
19 Microsoft has. That's not something that's been inside  
20 the scope of your investigation, correct?

21 A. That's correct, sir.

22 Q. And did we understand that Microsoft's own  
23 internal IT department installs the -- the products in  
24 these ways?

25 A. Yes, sir.

1           That was that deployment guide where we  
2 talked -- and -- and the discussion of 80,000 employees  
3 at Microsoft using it.

4           Q.    We saw a document earlier that referred to the  
5 four different kinds of connections you check for. It  
6 said checking for these four connections is the default  
7 case -- default case.

8           What does that mean?

9           A.    Well, a default operating mode is the way in  
10 which the product operates when you first get it. In  
11 this case, it's the recommended way to operate it.  
12 To operate it in a different way, you have reconfigure  
13 the product.

14          Q.    Is it your understanding that customers  
15 typically deploy software in the default mode?

16          A.    That's my understanding, yes, sir.

17          Q.    So how many different ways can Microsoft's  
18 customers infringe the '135 patent, for example, the  
19 method Claim 1 that we saw?

20          A.    Well, they can infringe Claim 1 by using the  
21 software, and they can infringe Claim 10 by assembling  
22 the system.

23          Q.    The same for Claim 12?

24          A.    Yes, sir.

25          Q.    What about using that system?

1           A.    Well, simply as a -- so if they were to use  
2 the system of Claim 10 or of Claim 12, that would also  
3 infringe.

4           Q.    So have you concluded that others have  
5 infringed the claim?

6           A.    Yes, sir.

7           Q.    All right. Now, can we look at the final  
8 element?

9                    Microsoft -- the final element to prove  
10 inducement is that Microsoft knew or should have known  
11 that their encouragement or instruction would result in  
12 others infringing the claim.

13                   Do you believe Microsoft should have known  
14 that the software they were selling and the way they  
15 were encouraging users to use the software would result  
16 in others infringing?

17                   MR. POWERS: Object, Your Honor. No  
18 foundation for the reasons and our earlier motion in  
19 limine on this subject.

20                   THE COURT: Overruled.

21           A.    It's my opinion that even Microsoft's own  
22 knowledge of the way its products operate, as well as  
23 their knowledge of the '135 patent, that as one of  
24 ordinary skill in the art would have understood, that  
25 using those products in the way that Microsoft describes

1 would have resulted in infringing the '135 patent.

2 Q. (By Mr. Caldwell) Did you find that last  
3 element met?

4 A. Yes, I did.

5 Q. Thank you.

6 Now, let's move to contributory infringement,  
7 which you've also mentioned.

8 There's a test for contributory infringement.  
9 Can you summarize that for us?

10 A. Yes, sir.

11 The -- there has to be -- Microsoft would have  
12 to have knowledge of the patent. Others would have to  
13 infringe the claims. Microsoft would have to sell a  
14 component or apparatus for use in practicing the claimed  
15 invention. And there would be no substantial  
16 non-infringing uses of the component or apparatus.

17 Q. Now, the first two are probably easy. I think  
18 we addressed that in the last test.

19 Have you found that Microsoft had -- evidence  
20 that Microsoft had knowledge of the patents?

21 A. Yes, sir.

22 Q. And did you determine that others are  
23 infringing?

24 A. Yes, sir.

25 Q. Okay. But now let's talk about this other new

1 part here: Sale of a component or apparatus that's for  
2 use in practicing the claimed invention.

3 Have you identified a component that Microsoft  
4 is selling for use in practicing the claimed invention?

5 A. Yes, sir.

6 This is the automatic connection feature or  
7 mode of the RTC interfaces, which are part of Microsoft  
8 Windows XP and Windows Vista.

9 Q. And does use of that component infringe method  
10 Claim 1?

11 A. Use of that component in combination with the  
12 applications infringes method Claim 1.

13 Q. Okay. What about system Claims 10 and 12?  
14 Does use of that component infringe the system Claims 10  
15 and 12?

16 A. Yes, it does.

17 Q. Did you find that element met?

18 A. Yes, sir.

19 Q. Now, the final -- final piece here: No  
20 substantial non-infringing uses of that component or  
21 apparatus.

22 Professor Jones, do you believe there is  
23 substantial non-infringing uses for that automatic  
24 connection mode component that you've identified?

25 A. No, sir. I don't find any other -- any

1 substantial non-infringing uses of it.

2 Q. Does Microsoft disagree with you on that  
3 point?

4 A. Yes, they do.

5 And they've identified, for example, what they  
6 call high-security mode as being a substantial  
7 non-infringing use, but I disagree with that.

8 Q. Okay. Are there other alternatives Microsoft  
9 has said, oh, we can use this component in a way that  
10 doesn't infringe?

11 A. Yes, they have, but I've identified those as  
12 just non-uses rather than non-infringing uses.

13 Q. Not using the component at all?

14 A. That's right.

15 Q. I see.

16 So as your final last item, you put  
17 contributory infringement, right?

18 A. Yes, sir, I did.

19 Q. Well, in summary, Dr. Jones, we have now  
20 discussed Claims 1, 10, and 12 of the '135 patent, and  
21 after all of your investigation, what have you concluded  
22 regarding those three claims?

23 A. I concluded that Microsoft directly and  
24 indirectly infringes Claims 1, 10, and 12 of the '135  
25 patent through the Microsoft '135 products.



1 Q. Thank you, Dr. Jones.

2 Now, can we see the next step of our road map?

3 Now, I want to kind of give a ray of hope  
4 here. My understanding is that this second portion will  
5 go a little faster than the part before now that we've  
6 been through it once.

7 A. Yes, sir. I believe we'll be able to complete  
8 this quite a bit faster.

9 Q. So let's move on to that second case with a  
10 case, to use your words.

11 Now, remind us generally what the '180 patent  
12 covers.

13 A. Well, the '180 patent is -- covers a secure  
14 domain name service that's used to facilitate the setup  
15 of VPNs.

16 Q. Is that an important idea?

17 A. Yes, sir, it was.

18 Q. Why is it important?

19 A. Well, it's important because there's a need  
20 when you're -- when you're forming a VPN or  
21 communicating with someone through a VPN, to be assured  
22 that you're talking to the correct party.

23 For example, if you were talking to the wrong  
24 person in a VPN, you might be sending all the  
25 information you thought was private to someone who's a

1 hacker.

2 Q. So we've seen slides like this before, but can  
3 you run through quickly some of the key parts of the  
4 '180 patent.

5 A. Yes, sir.

6 Q. Do you see the number?

7 A. Yes, sir. The number is the '180 patent. The  
8 date the patent was awarded to the inventors was March  
9 6th, 2007. And, again, the title, then the inventors,  
10 and again, some familiar names there, Dr. Short and Mr.  
11 Munger. And this patent was -- the rights for the  
12 patent are assigned to VirnetX.

13 Q. Now, we've already spent some time looking at  
14 the '135 patent. Is this '180 patent just a completely  
15 new, starting-from-scratch patent?

16 A. No, sir, it's not. It's what's called a  
17 continuation-in-part patent where the inventors add new  
18 material describing a new invention to their original  
19 application, as well as new claims.

20 Q. Do you remember when they added the new  
21 material and filed the continuation?

22 A. That was two months after the previous  
23 application. I believe that was in April of 2000.

24 MR. CALDWELL: Mr. Moreno, I want you to  
25 introduce us just a little bit to the new material. Can

1 you go to Plaintiff's Exhibit 4, Page 39?

2 Q. (By Mr. Caldwell) Okay. This is Figure 33 of  
3 the '180 patent. What do we see here?

4 A. This is one of the block diagrams that we  
5 talked about earlier. This is a new one for this  
6 patent, and this is in that figures and drawings section  
7 that was discussed.

8 Q. Well, to go along with the new figures, was  
9 there a new technical description added to the patent?

10 A. Yes, sir. There's a more detailed description  
11 of this figure, as well as the new invention in the  
12 detail description later on.

13 Q. Can we take a look at that real quick?

14 And what do we see here, Professor Jones?

15 A. Well, this is a new section that's entitled  
16 One-Click Secure Online Communications and Secure Domain  
17 Name Service.

18 Q. The present invention provides a technique for  
19 establishing a secure communication link between a first  
20 computer and a second computer over a computer network.

21 Is that the '180 patent description that  
22 Dr. Short gave us earlier?

23 A. Yes, sir, it is.

24 Q. Okay. Now, I'm going to pull up Claim 1 of  
25 the '180 patent.

1           Professor Jones, I'd like to quickly run  
2 through how Claim 1 defines a property right for the  
3 '180 invention that Dr. Short described.

4           So let's look at the claim here. I see a  
5 whole bunch of words, but can you boil this down for us  
6 a little bit; just give us the high-level overview of  
7 what's happening in this claim?

8           A. Yes, sir. This is a method for a client  
9 computer to find an address for VPN communications and  
10 to use that address to set up a VPN link where it will  
11 ultimately make a request for information over that VPN  
12 link.

13          Q. Now, the preamble of this claim at the top  
14 says: A method for accessing a secure computer network  
15 address comprising the following steps.

16           And the first step is receiving a secure  
17 domain name. Can you show us what that is?

18          A. Yes, sir.

19           So here we have a computer with an application  
20 that has a secure domain name, and that domain name in  
21 this example is john.acme.scom, as Dr. Short showed us  
22 earlier.

23          Q. Is that received into the computer?

24          A. Yes. That will be received on to the user's  
25 computer, and then we'll move on to the next step of the

1 claim.

2 Q. And the next step of the claim is sending a  
3 query message to the secure domain name service  
4 requesting from that secure domain name service a secure  
5 computer network address corresponding to the secure  
6 domain name.

7 What is that?

8 A. In that step, that query message gets sent out  
9 to the secure domain name service saying, I'd like an  
10 address to use to make this connection.

11 Q. Now, let's be clear. Where is this secure  
12 domain name service?

13 A. Well, the secure domain name service could be  
14 on the client computer, or it could be on another  
15 computer out on the internet.

16 Q. Does it -- I mean, does it really matter where  
17 the secure domain name service is?

18 A. No, sir. The claims don't specify where the  
19 secure domain name service is. They're flexible on  
20 that.

21 Q. All right. Thank you.

22 And so then did you say we send a query  
23 message to the secure domain name service?

24 A. Yes, sir. So -- yes. A query message goes  
25 out, and it's received by the secure domain name

1 service.

2 Q. So then the next step is receiving from that  
3 secure domain name service a response message containing  
4 the secure computer network address corresponding to the  
5 secure domain name.

6 Now, what happens there?

7 A. Well, what happens there is, the secure domain  
8 name service responds with an address that goes back to  
9 the user's computer.

10 Q. Now, Professor Jones, I mean, I hate to  
11 interrupt the animation here for a second, but I want to  
12 dig into one thing in the claim.

13 I know we have this element where the name was  
14 put into the computer, and then the query message was  
15 sent out in this element, correct?

16 A. Correct.

17 Q. The response came back in this element.

18 What I don't see between those elements is  
19 some particular explanation of how that number, that  
20 address, must be computed by the secure domain name  
21 server.

22 Why is that?

23 A. Well, the claims are flexible with respect to  
24 how the secure domain name service determines what the  
25 answer should be, and the patent gives different

1 examples of how that can happen.

2 Q. I see.

3 But even the examples in the patent, are those  
4 the only way that the secure domain name service can  
5 come up with the address?

6 A. No, sir. The claims don't specify how that  
7 must happen.

8 Q. So at this point, we've got our address back.  
9 Can we set up our VPN?

10 A. Yes, we can.

11 Q. All right. And now I see that the very last  
12 step here is sending an access request message to the  
13 secure computer network address using a virtual private  
14 network communication link.

15 What happens there, Professor Jones?

16 A. Well, in that step, the access request message  
17 is going to go from the user's computer over on to a  
18 computer at acme.com asking for information. And that  
19 all happens over the VPN.

20 Q. Now, Professor Jones, do you recall that in  
21 the last patent, it had the word website, talking about  
22 secure target website, things like that?

23 A. Yes, sir, I do.

24 Q. All right. Is there any requirement in the  
25 '180 patent, any requirement at all in these claims,

1 that what is being accessed is a website of any sort?

2 A. No, sir. The claims don't -- aren't  
3 restricted to a website or any other kind of specialized  
4 or special server.

5 Q. And then do you also recall back when we were  
6 talking about the other patent, that Claim 10 required a  
7 gatekeeper computer?

8 A. Yes, sir, I do.

9 Q. Do these '180 patent claims require any kind  
10 of traditional, dedicated server at all?

11 A. No, sir, they don't. They're very flexible.  
12 There's no specified gatekeeper computer here, for  
13 example.

14 Q. So what alternatives could you have to a  
15 traditional server?

16 A. Well, for example, we could remove that  
17 server, and this could just include the normal network  
18 at acme.com without the need for a specialized server.

19 Q. Well, thank you for that introduction to the  
20 patents. What's next on our road map?

21 A. If I can get it upright. There we go.

22 The next thing we'll talk about are the  
23 operation of Microsoft products that are related to the  
24 '180 patent.

25 Q. In your opinion, are there Microsoft products



1 that have this secure domain name server?

2 A. Yes, sir. The Microsoft Windows XP and  
3 Windows Vista products that we talked about earlier have  
4 a secure domain name service.

5 Q. Same operating systems as for the other  
6 patent?

7 A. Yes, sir.

8 Q. What is the name of that secure domain name  
9 service in Windows XP and Vista?

10 A. That's the peer name resolution protocol  
11 service that lies on there, and the short for that is  
12 PNRP.

13 Q. What kinds of software would use the peer name  
14 resolution protocol?

15 A. That would be something like -- peer-to-peer  
16 applications would use that.

17 Q. Well, peer-to-peer, that's a relatively new  
18 term for us. What does it mean? What is peer-to-peer  
19 networking?

20 A. Well, peer-to-peer networking is essentially  
21 networking computers together without the use of a  
22 centralized server. You know, traditionally, as we saw  
23 before, we had the client and we had a server. Well,  
24 peer-to-peer doesn't require that there be a centralized  
25 server.

1 Q. Have you seen any documents from Microsoft  
2 that describe how a peer-to-peer network differs from a  
3 more traditional client server model?

4 A. Yes, sir, I have.

5 Q. Can you show those for us?

6 Now, what is this document that we're seeing?

7 A. This is a Microsoft document that described --  
8 it's basically an introduction to Windows peer-to-peer  
9 networking, and it reads: The typical computing model  
10 for many applications is a client/server model. A  
11 server computer typically has vast resources and  
12 responds to requests for resources and data from client  
13 computers.

14 Q. Can you give us a practical -- oh, I'm sorry.  
15 Did I -- I cut you off, didn't I?

16 Is there -- is there a description in this  
17 document of how peer-to-peer differs from that  
18 traditional model?

19 A. Yes, sir. Actually --

20 Q. These aren't consecutive locations in the  
21 document, right? I think the graphic is, by accident, a  
22 little bit misleading there.

23 A. Yeah.

24 Q. The second paragraph you're pointing to is --  
25 the first one was from Page 6. The second one is from

1 Page 10. I just didn't want anyone to be confused about  
2 that.

3 A. Right.

4 Q. But what does this document -- how does it  
5 summarize peer-to-peer networking?

6 A. So as it says -- well, I --

7 Q. You know what? Actually, that's not -- that  
8 it is from Page 10, isn't it? I misspoke.

9 So how does this document describe  
10 peer-to-peer networking?

11 A. Well, essentially, peer-to-peer networking,  
12 the peers don't rely on a centralized server. They  
13 share resources with one another without the need for  
14 that centralized server.

15 Q. I see.

16 So can you give us a practical example of  
17 peer-to-peer networking, how that might actually get  
18 used?

19 A. Yes, sir.

20 Consider an example where we might have a  
21 group of students working on a term paper together at  
22 the UT-Tyler library, and they bring their laptops, and  
23 they are going to work together to turn this thing in as  
24 a group project.

25 And their laptops could communicate with one

1 another. They could all see and work on the same  
2 document without setting up a single centralized server.

3 Q. I see.

4 And is this an important technology for  
5 Microsoft?

6 A. Yes, sir, it is. This technology is  
7 something -- they're building what's called a  
8 peer-to-peer platform.

9 Q. Well, what kinds of data could someone share  
10 on a peer-to-peer network?

11 A. Well, we talked about that term paper, but --  
12 or documents, but you could also share music. You could  
13 share video files. You could share pictures of family  
14 and friends. It's also possible to share software over  
15 a peer-to-peer network.

16 Q. If you want to have one of these peer-to-peer  
17 groups, peer-to-peer meetings, do all of the  
18 participants need to be sitting at that same library or  
19 sitting around the same conference table?

20 A. No, sir. There's no need for that.

21 For example, in our -- with the students in  
22 the UT library working on the term paper, perhaps one of  
23 them is actually, instead of being at the library, home  
24 celebrating a family member's birthday and logged in  
25 from home.

1           Another family member could be -- or I'm  
2 sorry -- another group member could be on a job  
3 interview and working remotely from a coffee shop.

4           Q.    Are there any unique challenges that are  
5 presented by peer-to-peer networks as opposed to the  
6 traditional client/server model?

7           A.    Yes, sir.  One of those is trying to find the  
8 right name for the people that you are -- or people or  
9 computers that you want to talk with.

10           In the client/server model, it's very easy to  
11 remember names like Amazon.com, and those names are  
12 essentially going to remain unchanged and have addresses  
13 that change very, very infrequently.

14           If I'm talking to people in a group, say a  
15 group of students, well, I may not know -- or it's  
16 unlikely I know the names of their computers.  In  
17 addition, those -- their addresses for their computers  
18 are likely to change frequently.

19           Q.    Well, in the peer-to-peer setting, is it  
20 important to be able to know that the computer you're  
21 connecting to is the right computer if you're going to  
22 share data?

23           A.    Yes, sir.  And this gets back to that naming  
24 issue.  I need to know that I'm talking to the person  
25 I'm talking to and that I have some guarantee of that.

1           If I'm -- think I'm talking to someone I  
2 trust, but instead I'm talking to someone, say a hacker,  
3 I could give them important information, information I'd  
4 like to keep private.

5           Q.    So is this an important problem for Microsoft  
6 to be able to address?

7           A.    Yes, sir, it is.

8           Q.    Have you seen documents that confirm how  
9 important this is to Microsoft?

10          A.    Yes, sir.

11                   MR. CALDWELL:  Mr. Moreno, can you pull  
12 up Plaintiff's Exhibit 151?

13          Q.    (By Mr. Caldwell) What are we seeing in this  
14 document right here, Plaintiff's Exhibit 151, Professor  
15 Jones?

16          A.    This is a slide presentation describing this  
17 name resolution, this naming problem we've talked about.

18                   This is written by a man named Christian  
19 Huitema, and he is an architect, a software architect at  
20 Microsoft, who designs these protocols and designs these  
21 systems.

22          Q.    So, I mean, does -- a software architect, does  
23 that mean that he's sort of a high-up programmer or  
24 something of that ilk?

25          A.    Yes, sir.  He's a person who is designing the

1 systems rather -- he might not be the person who's  
2 implementing every last bit of the code. He's a higher  
3 level designer.

4 MR. CALDWELL: So can we flip to Page 3  
5 of this document?

6 Q. (By Mr. Caldwell) What is Microsoft saying on  
7 this page of this presentation?

8 A. Well, they're describing their goal, which is  
9 making Windows a great platform for P2P, and P2P means  
10 peer-to-peer.

11 Q. Something just occurred to me. I just -- that  
12 we might want to point out. I know this date down here  
13 says January 4th, 2008. Is that an accurate date from  
14 when this presentation was created?

15 A. No, sir, it's not.

16 Q. What -- why are we seeing that date?

17 A. I believe that's the date it was printed out  
18 on.

19 Q. I see. Okay. Just didn't want that to be  
20 hanging over our heads here.

21 Now, what is the key to making Windows a great  
22 platform for peer-to-peer like Microsoft wanted?

23 A. Well, the key to that is this naming issue I  
24 discussed earlier. You have to be able to find the  
25 computers you want to talk to and know that they're the

1 right ones.

2 Q. Can we see that on Page 4?

3 A. Yes, sir.

4 Q. Explain what we're seeing here, Professor  
5 Jones.

6 A. Well, this is a slide entitled Naming: The  
7 Key to P2P Development. And it explains that names have  
8 to be stable and that it be possible to find addresses  
9 for those names and locate members of a group.

10 MR. CALDWELL: Now, could we flip to Page  
11 6?

12 Q. (By Mr. Caldwell) Tell us what Microsoft has  
13 figured out about this problem, at least as of this  
14 presentation.

15 A. Well, they figured out that the Number One  
16 design goal is security; that the names have to resolve  
17 to the intended addresses so that another person, a  
18 hacker, can't fake and give you fake -- fake that  
19 identifier; basically, give you the wrong address so you  
20 talk to them instead of who you wanted to talk to.

21 Q. Well, is being able to find somebody's address  
22 a really big time deal. I mean, is it a one-time shot  
23 problem, in other words? Like if you find somebody's  
24 address, are you all set; forevermore, you've got their  
25 address?



1           A.     Well, in something like the client/server  
2 model, the address of somebody like Amazon.com is not  
3 going to frequently change.

4                     But in peer-to-peer, take our example in the  
5 library. Those student laptops are not going to be as  
6 stable as Micro -- or sorry -- as, say, Amazon servers,  
7 but also we talked about those students moving from one  
8 place to another.

9                     In those situations, their IP addresses  
10 change. There are other reasons for IP addresses to  
11 change as well. So they won't have stable addresses.

12                    MR. CALDWELL: Now, can we pull up  
13 PowerPoint Slide 54?

14           Q.     (By Mr. Caldwell) Has Microsoft recognized  
15 this problem with addresses changing?

16           A.     Yes, sir. They call it transient  
17 connectivity. Let me read the highlighted portions.

18                     Many client computers have transient  
19 connectivity. They connect for unpredictable amounts of  
20 time and can be assigned a new IP address for each  
21 connection.

22           Q.     And then it goes on to talk about -- it was  
23 comparing some of the more traditional computers, but  
24 what does it say about peer computers specifically in  
25 the lower highlight?

1           A.     Well, it explains that peer computers, on the  
2 other hand, have resources to share.  However, they  
3 still have transient connectivity.

4           Q.     And what is that telling you?

5           A.     Well, that's telling us that essentially those  
6 peer -- the addresses for those peers are going to  
7 change, and they could change in unpredictable ways  
8 resulting in new IP addresses, but that that's a problem  
9 that needs to be addressed.

10          Q.     Well, before I ask you whether it was  
11 important or not, you were telling us about the peer  
12 name resolution protocol in Windows XP and Vista.  Where  
13 does the peer name resolution protocol fit into  
14 Microsoft Windows?

15          A.     Well, the peer name resolution protocol is  
16 part of the -- what's called the PeerNet interfaces or  
17 the PeerNet API.

18                   MR. CALDWELL:  Thank you, Mr. Moreno.

19          Q.     (By Mr. Caldwell)  So can you use those PeerNet  
20 interfaces built into Microsoft Windows to set up a  
21 virtual private network?

22          A.     Yes.  You can make use of the PeerNet  
23 interfaces to find the address of a computer that you  
24 wish to talk to.  And that virtual private network in  
25 the PeerNet interface is what's called a group.

1 Q. In what ways are the communications in a  
2 PeerNet group private?

3 A. Well, first of all, all communications in the  
4 PeerNet group are encrypted.

5 Second, in the PeerNet group, you cannot  
6 see -- you cannot determine who the sender of an  
7 address -- or sorry -- the sender of a message is.

8 Further, if you're observing the group, you  
9 cannot tell which applications on which computers will  
10 receive information sent over the VPN.

11 Q. So, in your opinion, are the transmissions  
12 within that group anonymous?

13 A. Yes, sir.

14 Q. Are they private?

15 A. Yes, sir.

16 Q. Have you seen additional documents or  
17 presentations confirming the privacy of communications  
18 in the group?

19 A. Yes, I have.

20 MR. CALDWELL: Okay. For the record, we  
21 identify also Plaintiff's Exhibits 151 and 245.

22 Q. (By Mr. Caldwell) How does the peer name  
23 resolution protocol fit into the formation of a secure  
24 group?

25 A. Well, the peer name resolution protocol can be

1 used to find a member of the group, to find the address  
2 with whom the computer wants to speak.

3 Q. So at a high level, how does that work?

4 A. Well, let me show you.

5 Q. I think -- I think the part you're thinking of  
6 is going to come later.

7 A. Okay.

8 Q. So just give us an overview and --

9 A. Yeah.

10 So the basic -- basically, the idea is that a  
11 computer or an application will want to become a member  
12 of the group. That application will -- will have a  
13 domain -- secure domain name to contact, and it will  
14 need to get an address from the -- from PRNP, from the  
15 secure domain name service, to make a connection in the  
16 VPN.

17 Q. Has Microsoft released any applications that  
18 use these PeerNet interfaces to create groups?

19 A. Yes, they have. They've released an  
20 applications called Windows Meeting Space.

21 Q. Can you show us that?

22 A. Yes, sir.

23 Q. What are we seeing here, Professor Jones?

24 A. This is a screen shot of a test I ran using a  
25 couple of computers running Windows Meeting Space.

1           On the right side are two participants in the  
2 meeting. I just gave them the names Admin 1 and Admin  
3 2.

4           And then on the left side is what their -- is  
5 a desktop that they're sharing between them.

6           Q.    And let's talk about that a little bit.

7           You say they're sharing a desktop. Are you  
8 saying -- there's, basically, two computers here?

9           A.    Yes, sir.

10          Q.    And one computer is called what?

11          A.    Admin 1, and another is Admin 2.

12          Q.    And what are we seeing in the big slide here?  
13 Not the part in the red box, but what is the whole big  
14 slide?

15          A.    All right. The -- the entire slide is  
16 what's -- the picture of Windows Meeting Space where  
17 basically the computers screen on Admin 1.

18          Q.    Okay. And what are we looking at inside the  
19 screen on Admin 1?

20          A.    We're seeing the -- actually, I should restate  
21 that. The entire screen is for Admin 1, but -- I'm  
22 sorry. The entire screen is for -- let me see if  
23 there's a right way to say this. This is the entire  
24 screen of -- I believe it's Admin 2.

25          Q.    Okay.

1           A.    And then what's showing inside of the little  
2 red -- or the smaller red box is for -- is the desktop,  
3 the screen of the computer, Admin 1.

4           Q.    So on one of the computers, we could work on a  
5 word processing document, we could type a term paper,  
6 and then the other folks on their computer screen could  
7 see it?

8           A.    Yes, sir.  Everybody will see -- whatever's  
9 running on the screen of Admin 1 will be seen by all the  
10 other computers in the group.

11                   MR. CALDWELL:  So can we go to the next  
12 slide here?

13           A.    Yes, sir.

14           Q.    (By Mr. Caldwell) And now, tell us where all  
15 the parts fit together.

16           A.    Okay.  The Windows PeerNet interfaces are on  
17 the laptop computer, that remote user.  The secure  
18 domain name service, which is the peer name resolution  
19 protocol, can be running on another computer on the  
20 internet.

21                   And those can -- I'm sorry.  And those -- I  
22 should say that that peer name resolution protocol could  
23 be running on other computers as well.

24           Q.    Can you -- you say that there's a secure group  
25 name that's used to find the group.  Can you give us an

1 example of what the secure group name looks like?

2 A. Sure. The secure group name -- one example of  
3 this is given on this slide. This is a long string of  
4 characters on the left side followed by a dot and then a  
5 classifier associated with an application.

6 Q. I see.

7 And now -- now, did the user have to type this  
8 secure group name into the program in order to use it?

9 A. It's unlikely that they would have done so.

10 It's much more likely that they would have  
11 gotten this in an e-mail to use to connect to the group  
12 with. That way they could just click on a link, for  
13 example, rather than having to type all this in.

14 Q. So can you give us an example of what the name  
15 would look like if it were an unsecure group name?

16 A. Yes, sir.

17 So -- and -- well, or an unsecure peer name in  
18 Windows PeerNet interfaces is something like 0.PeerNet.  
19 It's much simpler.

20 Q. Does Windows refer to -- I'm sorry -- does  
21 Microsoft refer to secure group names as secure group  
22 names?

23 A. Yes, sir, I believe they do. I believe I've  
24 seen documents that say that. But it falls into the  
25 class of names called secure peer names.

1 Q. Okay. Well, Professor Jones, though, are you  
2 calling a secure group name a secure domain name for  
3 purposes of these patents just because they both say the  
4 word secure?

5 A. No. I'm not calling it just because they use  
6 that name secure. I analyzed these and matched them to  
7 the claim elements rather than just say, well, they say  
8 it's a secure name, so it must meet the claim terms.

9 Q. So why does the secure group name look like  
10 that, all that crazy chaos, the 5fe531661, et cetera?

11 A. Well, it looks like that so that you can have  
12 some assurance that it's the right name. They use that  
13 kind of name, because it's difficult to fake that name.

14 It's hard for someone -- or almost impossible  
15 for someone to fake the correct secure group name.

16 Q. So my computer knows I want to join a group by  
17 that name?

18 A. Yes, sir.

19 Q. What does it do with that name?

20 A. Well, it uses that name, sends it to the  
21 PeerNet interfaces, and the PeerNet interfaces would  
22 send those to PNRP.

23 Q. Now, can we just take that name and send it to  
24 the ordinary domain name server that Dr. Short told us  
25 about?



1           A.    No.  If we send that name to the ordinary  
2 domain name service, all we'll get back is an answer  
3 that says something like error, not found.

4           Q.    Have you verified that?

5           A.    Yes, sir, I have.

6           Q.    Have you seen testimony from Microsoft's  
7 engineers to that effect?

8           A.    Yes.  Let me show that to you.

9           Q.    Okay.

10          A.    This is deposition testimony, sworn testimony  
11 from Mr. Christian Huitema.  He was asked:  Can you tell  
12 by looking at a secure peer name, that it must be  
13 resolved by PNRP rather than DNS?

14                  His answer:  Oh, yes.  They have a very  
15 different syntax, APN.  A DNS name will be something  
16 like www.microsoft.com, whereas a peer name, a secure  
17 peer name, in particular, will include a sequence of 32  
18 hexadecimal digits.

19          Q.    Well, so we've got a crazy secure group name.  
20 How can the PeerNet interfaces in the Windows I'm  
21 running -- and I'm assuming the user doesn't have to  
22 deal with that crazy name, correct?

23          A.    That's correct.

24          Q.    So how do the Windows PeerNet interfaces find  
25 the right secure computer network address for that group

1 name?

2 A. Well, they can -- they do that by asking other  
3 computers around them for a secure computer network  
4 address associated with that name.

5 Q. Well, let me back up a little bit, because I  
6 did -- I did a bad job of introducing something earlier.

7 Let's say we have our students that are at the  
8 library, and they want to have a meeting, but I'm at  
9 home, and I want to be part of the meeting.

10 Does somebody tell me, send me some message,  
11 something to say: Hey, it's time to join our group  
12 meeting and work on a paper together?

13 A. Yes. That's essentially what happens.

14 For example, you can receive -- if you're --  
15 if somebody wants to make you a part of the group, you  
16 could receive an invitation file to allow you to join  
17 that group. And that invitation file would have, for  
18 example, the secure group name.

19 Q. Well, if they're sending me an invitation  
20 file, why don't they just go ahead and send me the  
21 address I'm going to need in order to connect to the  
22 group?

23 A. Well, at times, they actually -- they do send  
24 you that IP address, and you could use that to connect  
25 to the group in some cases.

1 Q. So what's the problem?

2 A. Well, it's this transient connectivity  
3 problem. There will be times where that address is  
4 going to work just fine. There will be other times,  
5 however, where that address will no longer be functional  
6 and you won't be able to join the group if you just had  
7 the address.

8 Q. Are there other ways that my computer might  
9 already know the addresses it needs to connect to a  
10 group?

11 A. Yes, sir. There's another method called  
12 People Near Me so that if -- for computers near you, you  
13 may be able to easily know the addresses for the people  
14 near you.

15 Q. Well, so People Near Me, somebody could just  
16 e-mail me the -- or e-mail me a file that has the  
17 addresses I need.

18 Will those ways of getting the address I need  
19 to join the VPN always work?

20 A. No, sir, they work. Like this transient  
21 connectivity problem, it may be the case that the  
22 address is no longer the right one for that person, or  
23 the person who sent you the invitation may no longer be  
24 part of the group.

25 Q. Well, then if we don't have an address for

1 somebody that's on the group that we want to connect to,  
2 can we join the group?

3 A. No. You won't be able to join the group if  
4 you don't know how to reach anyone in it, and that would  
5 be pretty frustrating, so...

6 Q. So has Microsoft built in a failsafe way of  
7 getting the address you need in order to connect to one  
8 of these secure groups?

9 A. Yes, they have. That's that peer name  
10 resolution protocol. That will find the name of a group  
11 member if it can be found.

12 THE COURT: Counsel, let me ask you, it's  
13 almost 5:00 o'clock. Are you at a good stopping place  
14 or close to one?

15 MR. CALDWELL: I guess I could stop now.  
16 I could probably finish in 30, 35 minutes.

17 THE COURT: I think we'll go ahead and  
18 quit for the day today. We'll come back in the morning  
19 at 9:00 o'clock, at which time we'll start back up and  
20 finish with this witness and then cross-examination.  
21 So I know it's been a long, hard day, Ladies of the  
22 Jury. Thank you for your careful attention. I've  
23 looked over there several times, and you've been really  
24 paying good attention.

25 So remember my instructions. Have a safe

1 drive home. We'll see you back here in the morning  
2 ready to go at 9:00 o'clock. The jury is excused.

3 COURT SECURITY OFFICER: All rise for the  
4 jury.

5 (Jury out.)

6 THE COURT: Please be seated.

7 MR. CALDWELL: Your Honor, I don't know  
8 if this is an appropriate time, but can I mark these as  
9 Demonstrative Exhibits 6, 7, and 8, the three -- the  
10 three claim charts that have been checked?

11 THE COURT: Sure. You can mark them and  
12 offer them in the morning.

13 MR. CALDWELL: Okay. Thank you.

14 THE COURT: All right. We're going to  
15 adjourn for the evening.

16 Is there anything the Plaintiff wishes to  
17 bring up?

18 MR. CAWLEY: No, Your Honor.

19 THE COURT: Defendants?

20 MR. POWERS: No, Your Honor.

21 THE COURT: All right. Let me just  
22 comment, I've looked at the objections to the exhibits  
23 of Dr. Reed, and I think what I'm going to do with those  
24 is, I've reviewed the briefing again, and I think I can  
25 pretty well submit it on the briefs without a lot of

1 argument.

2                   But what I would like to do is just,  
3 whenever we get to that point in the testimony, approach  
4 the bench or let me know, and I'll take it up at that  
5 time.

6                   MR. SAYLES: Your Honor, are you asking  
7 that I approach each time, or shall I approach --

8                   THE COURT: No.

9                   MR. SAYLES: -- at the appropriate time?

10                  THE COURT: At the appropriate time.

11                  We'll try to deal with all of them or  
12 groups of them.

13                  MR. SAYLES: All right.

14                  THE COURT: All right.

15                  MR. CASSADY: Your Honor, just so we're  
16 clear, what you're asking us to do is, we can still  
17 en masse let those exhibits in at the beginning of  
18 Mr. Reed's testimony, and then we'll discuss the  
19 objections at the bench.

20                  THE COURT: Well, no. They won't come in  
21 until you offer them. And if they're objecting to them,  
22 I need to rule on that first.

23                  Do you need those in at the very  
24 beginning of his testimony or --

25                  MR. CASSADY: The reason I asked, Your

1 Honor, is that there are 80 of them.

2 THE COURT: How many?

3 MR. CASSADY: I think there's 80 plus.

4 THE COURT: Okay.

5 MR. CASSADY: I can go through the  
6 process of identifying them through the testimony, but,  
7 obviously, we're not going to put 80 documents up.

8 THE COURT: No. I don't -- I don't think  
9 that will be necessary. What I'm getting at is, is  
10 there some introductory predicate before you get to  
11 needing to rely on those documents with regard to his  
12 opinions, or do you get to those very promptly into --  
13 or very quickly into his testimony?

14 MR. CASSADY: I think the first set or  
15 first group is pretty quickly, at the beginning of his  
16 testimony, and then there's two other groups that happen  
17 maybe 30 minutes into his testimony.

18 THE COURT: And what are the three groups  
19 that you're referring to?

20 MR. CASSADY: I think, actually,  
21 Mr. Sayles identified them as groups in his list of  
22 documents that they're objecting to.

23 I don't know where the cutoff is, but the  
24 first group, I believe, is financial data, Microsoft  
25 financial data.

1                   And then the second group, if you see the  
2 sequence start over?

3                   THE COURT: Yes.

4                   MR. CASSADY: The second group, I  
5 believe, is the summaries.

6                   MR. SAYLES: Correct.

7                   MR. CASSADY: And the third group would  
8 be the licenses that Microsoft has an issue with.

9                   THE COURT: All right. I go down  
10 through -- well, wait a minute.

11                   Yeah. Financial data goes down through  
12 the top of Page 6, first item, right? And then you get  
13 into the licenses.

14                   MR. CASSADY: Top of Page 6, and that's  
15 where the -- I believe that's when the -- yeah, correct.  
16 That's the licenses.

17                   No. Actually, Your Honor, I apologize.  
18 It says licenses, but that's actually -- I apologize,  
19 Your Honor. Yes, that's the licenses. You got that  
20 correct.

21                   And then --

22                   THE COURT: Then there's a bunch of  
23 summaries of -- irrelevant financial data is the  
24 objection, right?

25                   MR. CASSADY: Yes.



1 THE COURT: And maybe you can help us  
2 here, Mr. Sayles. I'm just trying to get -- are there  
3 some groupings here that it would be logical to take up?

4 MR. SAYLES: There are groupings. Let me  
5 get my notes, if I may, Your Honor.

6 THE COURT: Well, y'all look at them, and  
7 we'll take them up in the morning. Y'all try to get  
8 together and see if you can get me some way to manage  
9 them.

10 MR. SAYLES: We will, and they do follow  
11 the three groups.

12 THE COURT: Okay. Very well.

13 Anything further?

14 MR. POWERS: No, Your Honor.

15 THE COURT: All right. We'll be  
16 adjourned. See you in the morning.

17 COURT SECURITY OFFICER: All rise.

18 (Court adjourned.)

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CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/ \_\_\_\_\_  
SUSAN SIMMONS, CSR  
Official Court Reporter  
State of Texas No.: 267  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date

/s/ \_\_\_\_\_  
JUDITH WERLINGER, CSR  
Deputy Official Court Reporter  
State of Texas No.: 731  
Expiration Date: 12/31/10

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Date

EXHIBIT F5

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION

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2			
3	VIRNETX	*	Civil Docket No.
4		*	6:07-CV-80
5	VS.	*	Tyler, Texas
6		*	March 10, 2010
7	MICROSOFT CORPORATION	*	9:00 A.M.

TRANSCRIPT OF JURY TRIAL  
BEFORE THE HONORABLE JUDGE LEONARD DAVIS  
UNITED STATES DISTRICT JUDGE

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(Proceedings recorded by mechanical stenography,  
transcript produced on CAT system.)

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\* \* \* \* \*

P R O C E E D I N G S

COURT SECURITY OFFICER: All rise.

THE COURT: Please be seated.

(Jury in.)

THE COURT: All right. Good morning.

1 All right. Are y'all ready to go?

2 Okay. All right. Counsel, you may  
3 proceed.

4 MR. POWERS: Your Honor, do you wish to  
5 handle exhibits before we begin?

6 THE COURT: Yes. Uh-huh.

7 MR. McLEROY: May I approach, Your Honor,  
8 with our list of exhibits?

9 THE COURT: Yes, you may.

10 All right. You've given Plaintiff's list  
11 of exhibits admitted on March 9.

12 Any objection to that?

13 MR. POWERS: No, Your Honor.

14 THE COURT: All right. That will be  
15 marked as Plaintiff's Exhibit No. -- whatever it is --  
16 2, okay?

17 MR. POWERS: We have a similar list, Your  
18 Honor. And I believe it was one exhibit from yesterday  
19 that we need to formally move into evidence. That is  
20 DX3578, and that was the Gabriel user's guide, in  
21 addition to the four that are listed on the list.

22 THE COURT: Any objection?

23 MR. McLEROY: No objection, Your Honor.

24 THE COURT: Be admitted.

25 This will be Defendant's Exhibit List No.

1 2. Any objection to it, as far as what was admitted  
2 yesterday?

3 MR. McLEROY: No, Your Honor.

4 THE COURT: Be admitted.

5 All right. Anything else before we  
6 begin?

7 MR. POWERS: Not from Microsoft, Your  
8 Honor.

9 THE COURT: Okay.

10 MR. CALDWELL: Are we ready, Your Honor?  
11 May we proceed?

12 MARK T. JONES, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

13 DIRECT EXAMINATION

14 BY MR. CALDWELL:

15 Q. Professor Jones, let's remind everybody where  
16 we were very briefly just to get our context back.

17 Could we look at the road map you provided us?

18 A. Yes, sir.

19 Q. Okay. So yesterday we talked about the '135  
20 patent, and can you refresh us which products are at  
21 issue in the '135 patent?

22 A. Yes, sir. Up at the top, you see the two  
23 operating systems, Windows XP and Vista. On the left  
24 are the client applications, and the right bottom side  
25 are the server applications, such as Live Communications

1 Server and Office Communications Server.

2 Q. Professor Jones, how do those products fit  
3 into your infringement analysis for the '135?

4 A. So the application running on the user's  
5 computer would be one of those applications on the  
6 bottom left, such as Office Communicator or Windows  
7 Messenger or Live Meeting Console.

8 The operating system and specifically the  
9 Windows RTC interfaces would be the DNS proxy on the  
10 user's computer. And then back in the basement of  
11 acme.com was the gatekeeper computer, which is Office  
12 Communications Server.

13 Q. The Live Communications Server?

14 A. Yes, sir.

15 Q. And what did you conclude about the '135  
16 patent?

17 A. I concluded that when these applications use  
18 the automatic connection feature of the Windows RTC  
19 interfaces to form a VPN, including the Office  
20 Communications Server as the gatekeeper computer, they  
21 infringe Claims 1, 10, and 12 of the '135 patent.

22 Q. Then we moved on to the '180 patent. And  
23 you've already discussed the description of the '180  
24 patent. You provided that yesterday. And we were  
25 talking about the operations of Microsoft's products



1 related to the '180 patent.

2 A. Yes, sir.

3 Q. What products do you believe infringe the '180  
4 patent?

5 A. These are the Microsoft operating systems that  
6 we saw on the -- a couple of slides ago, Windows XP and  
7 Windows Vista and specifically in those -- the PeerNet  
8 interfaces.

9 Q. And what kind of networks do you create with  
10 the PeerNet interfaces?

11 A. Those are peer-to-peer networks that form --  
12 through grouping, form VPNs.

13 Q. Can you remind us what peer-to-peer networks  
14 are like?

15 A. Those are networks like we saw, the -- the  
16 example I talked about of the students working on a  
17 project together in the UT-Tyler library.

18 Q. Can you show us that picture?

19 A. Yes, sir.

20 Q. Now, did we hear that the '180 patent involved  
21 a secure domain name service that's used to find an  
22 address?

23 A. Yes, we did. And that secure domain name  
24 service we see in the center there is the peer name  
25 resolution protocol running on a computer, say on the

1 internet or on the user's computer.

2 Q. Professor Jones, when did this functionality  
3 get added to Microsoft Windows?

4 A. This was added, for example, in 2003 in the --  
5 when -- when Microsoft released the advanced networking  
6 pack.

7 Q. Was the advanced networking pack an update for  
8 Microsoft Windows?

9 A. Yes, it was.

10 Q. So that was in 2003? Is that what you said?

11 A. Yes, sir.

12 Q. When was that in relation to when Dr. Short,  
13 Mr. Munger, and their colleagues filed their application  
14 that became the '180 patent?

15 A. That was three years after they filed the  
16 application. They filed the application in 2000.

17 Q. All right. So Microsoft released these  
18 PeerNet interfaces as part of the advanced networking  
19 pack in '03, but was the advanced networking pack the  
20 only way to get these PeerNet interfaces into XP?

21 A. No. They were part of, for example, Service  
22 Pack 2 and other updates for Windows.

23 Q. What is a service pack for Windows?

24 A. Well, a service pack, for example, is a set of  
25 updates that may be new functionality or repairs to old

1 functionality that can update something like Windows XP.

2 Q. Professor Jones, how does an update like  
3 Service Pack 2 get into Windows?

4 A. Updates into Windows can come by the user  
5 going to the Microsoft website and downloading those,  
6 or, for example, Microsoft recommends you set up your  
7 computer so that they can automatically be downloaded  
8 into your computer and installed.

9 Q. Now, on my work computer, sometimes I see this  
10 little bubble that pops up that says updates are  
11 installed; we need to restart; or updates need to be  
12 installed, that sort of thing. Is that what you're  
13 talking about?

14 A. Yes, sir.

15 Q. Okay. But would it always have to come in  
16 through an update?

17 In other words, could the Service Pack 2 and  
18 all these PeerNet interfaces be preinstalled in your  
19 copy of Windows?

20 A. Yes, they could.

21 For example, a manufacturer, like Dell, could  
22 have them installed on a new computer. You could also  
23 get them from retail copies.

24 Q. That's what I was going to ask. Let's say I  
25 cruised into Best Buy a couple of years ago, and I want

1 to go in and buy Windows XP, even before Windows Vista  
2 came out, but Windows XP. If I were to buy a copy of  
3 the disk, would it have the PeerNet interfaces on it?

4 A. Yes, it would, for when the Microsoft began to  
5 sell Windows XP with Service Pack 2 in it.

6 Q. Now, Professor Jones, I'm holding up retail  
7 copies of Microsoft Windows. This is a box that could  
8 have -- you could have bought this at Best Buy?

9 A. Yes, sir.

10 Q. This is Plaintiff's Exhibit 830. I note right  
11 here it promotes right across the top Service Pack 2  
12 with Advanced Security Technologies.

13 Does this include the PeerNet interfaces?

14 A. Yes, it does.

15 Q. And do you know what the significance of the  
16 green box is?

17 A. I believe that's a -- if I read properly,  
18 that's a different edition. That may be the home  
19 edition of Windows XP.

20 Q. Your eyesight is -- checks out fine.

21 Now we have the blue box, but it also says  
22 Service Pack 2 with Advanced Security Technologies.

23 What is this?

24 A. That's another version of Windows XP. I  
25 believe that may be the professional version, which has

1 some additional features.

2 Q. Yes, sir, it is, and that's Plaintiff's 947.

3 Do both of those have the PeerNet interfaces  
4 built right in on the disc?

5 A. Yes, sir.

6 Q. Now, those are the XP products. Let's talk  
7 about Vista. Whoa, I thought I was dropping something.

8 Let's talk about Vista.

9 This one doesn't say it's a later version with  
10 a service pack or anything. Does Windows Vista have the  
11 PeerNet interfaces on it?

12 A. Yes. Windows Vista had the PeerNet interfaces  
13 from its inception.

14 Q. Now, did you test these products to make sure  
15 they had the PeerNet interfaces in them?

16 A. Yes, sir. I did those installations on my own  
17 computer to ensure that they did have the PeerNet  
18 interfaces on them.

19 Q. Now, did you also just test how the PeerNet  
20 interfaces operate?

21 A. Yes, I did.

22 Q. Can we look back at your slide?

23 I note here in the top, you have the Windows  
24 PeerNet interfaces, and you have a box there identified  
25 as a secure group name?

1 A. Yes, sir.

2 Q. Have you identified a secure domain name?

3 A. Yes. That's the secure group name.

4 Q. Will you refresh our memory on what the secure  
5 group name looks like?

6 A. Yes, sir. This is that long string of digits  
7 and numbers and letters followed by a dot and then that  
8 string at the end.

9 Q. Professor Jones, is it fair to say the secure  
10 group name looks different than a standard domain name?

11 A. Yes, it does. It's designed to be a secure  
12 name, a name that can't be faked by someone trying to  
13 get you to talk to the wrong person.

14 Q. And will an ordinary domain name server  
15 provide an address for that name?

16 A. No, it won't. An ordinary domain name server  
17 would return something like: Error, not found.

18 Q. So how do we get an address for that secure  
19 domain name you've identified?

20 A. We would have to use the peer name resolution  
21 protocol to resolve that address.

22 Q. And if the peer name resolution protocol  
23 resolves that and gives us an address, can we establish  
24 a VPN connection using the PeerNet interfaces?

25 A. Yes, sir.

1 Q. Now, will you please walk us through how the  
2 PeerNet interfaces setup a VPN using secure domain names  
3 and the peer name resolution protocol?

4 A. Yes, sir.

5 So starting off, we see that the PeerNet  
6 interfaces are running on the user's computer, and they  
7 have a secure group name that we talked about earlier,  
8 a -- in that case, the -- an application could be  
9 running on the user's computer, such as Windows Meeting  
10 Space, and it would have that secure group name.

11 Q. Okay. So Windows Meeting Space, was that the  
12 screen we looked at yesterday where you would set up two  
13 computers and, basically, looking at the screen of one  
14 computer, you could really see what the person over here  
15 on the other computer was doing?

16 A. Yes, sir. When they're sharing -- for  
17 example, a group of people sharing a desktop working on  
18 a document.

19 Q. So if that's the application that's running,  
20 how do we kick off the process of joining that group?

21 A. Well, the user, for example, would press a key  
22 or click their mouse, and that would result in a request  
23 to join the group. That would result in that secure  
24 group name going to the PeerNet interfaces.

25 Q. Okay. And now, there might be some

1 circumstances where the PeerNet interfaces already know  
2 the correct address; is that fair?

3 A. Yes, there would be. For example, it could  
4 come in an invitation file, and they might already have  
5 an address to which to connect.

6 Q. Will that always work?

7 A. No, sir, it won't. There will be cases, like  
8 we talked about, where a student might have moved their  
9 computer and have a new address, or they might have  
10 closed their computer and left the library.

11 Q. So if the PeerNet interfaces do not know the  
12 correct address they need and they need to find the  
13 address, how does that work?

14 A. Well, they need to send a request to PNRP, a  
15 request for an address.

16 Q. All right. So will you show us what the  
17 PeerNet interfaces do with the name?

18 A. Well, they send out a request message that  
19 goes from the user's computer over the internet to  
20 another computer on the internet.

21 Q. Now, how is it that there are other computers  
22 on the internet that would be able to receive that name  
23 and know what to do with it?

24 A. Well, there would be other computers on the  
25 internet running Windows. They would also be running



1 the PeerNet resolution protocol. And they cooperate  
2 with one another and, basically, agree to help one  
3 another find the address.

4 And so the PeerNet interface that's running on  
5 this user's computer would send out a request to another  
6 one of those computers asking, do you know where I can  
7 find this address?

8 Q. And might the same thing happen if we weren't  
9 talking about the context of the internet, but it was  
10 a -- another -- a new student that walked into the  
11 library?

12 A. Yes, sir.

13 Q. Okay. Now, we've -- we've sent a request  
14 message to another computer that's connected to the  
15 internet, fair?

16 A. Yes, sir.

17 Q. What happens if that computer does not know  
18 the address that we need?

19 A. Well, if it doesn't know the address, it may  
20 point us in the direction of another computer that does.

21 Q. Well, what happens if it thinks it does have  
22 the address we need?

23 A. Well, if it thinks it has the address, like a  
24 possible address, then it will send that in a message  
25 back to the PeerNet interfaces on the user's computer.

1 Q. All right. So our -- our user, who we're  
2 calling a remote user, receives back that address on  
3 their computer -- but at that point, do they know they  
4 have a secure computer network address?

5 A. No, they don't know that. As we talked about  
6 earlier, there could be someone faking the address.  
7 They're not certain yet that this is the right address.

8 Q. Well, does the user's computer, then, take any  
9 additional steps to make certain that it has found an  
10 address that's corresponding to the secure domain name?

11 A. Yes, sir. They would send out a request to  
12 that address to verify or for verification information  
13 on whether this is the correct address.

14 Q. Now -- so we send it to one -- to one of the  
15 group members over here in the library that we would  
16 like to connect to?

17 A. Yes, sir.

18 Q. Is that peer or that group member going to  
19 send us something back to tell us, here's your  
20 legitimate address; you found it?

21 A. Yes. They're going to send -- send back  
22 proof. They're going to send what's called a certified  
23 peer address.

24 Q. And let's talk about a certified peer address  
25 for a little bit. What is -- or what all is inside a

1 certified peer address?

2 A. Well, the certified peer address has an IP  
3 address in it. It has a port number. It has a  
4 protocol, as well as information that can be used to  
5 verify the address.

6 Q. Now, what's going to happen -- this whole  
7 thing is the certified peer address that we're seeing on  
8 the screen right here?

9 A. Yes, sir.

10 Q. And, again, I'm not very good at drawing  
11 ovals.

12 What's going to happen with that certified  
13 peer address?

14 A. That's going to be sent back in a message to  
15 the user's computer, and there the PeerNet interfaces  
16 will receive it and use that verification information to  
17 ensure that this is the correct address.

18 Q. Okay. So at that point, do we know then that  
19 we have a secure computer network address?

20 A. Yes, we do.

21 Q. So now that we have the address back at our  
22 computer, what does our computer do?

23 A. At that point, the computer will set up the  
24 VPN connection to the group.

25 Q. Okay. And now what does our computer do upon

1 joining the VPN?

2 A. After becoming part of the group, part of the  
3 VPN is going to send a request to a computer --  
4 actually, that same computer asking it for information,  
5 for records.

6 Q. So does our user get any further information  
7 indicating that it is now certified as a member of the  
8 group?

9 A. Well, it will begin to -- it will get that  
10 information and see what's going on in the group at that  
11 point.

12 Q. Okay. Now, you've described several details.  
13 What does the user really have to do here?

14 A. Well, the user had to press a key or click on  
15 an invitation file, something along those lines. And  
16 after that, everything else happens behind the scenes.

17 Q. Well, Professor Jones, you have described  
18 using the peer name resolution protocol to find an  
19 address and newly join a virtual private network, but is  
20 that the only time the client computer will use PNRP?

21 A. No, it's not. The -- for example, the client  
22 computer may need to make new connections to the group,  
23 and that will happen whenever that -- whenever it needs  
24 to make those new connections, it will use PNRP.

25 Q. Well, Professor Jones, if you already have a

1 connection to the VPN, why would you want to make  
2 additional connections to that VPN?

3 A. Well, remember, we talked about -- earlier  
4 about this transient connectivity problem where  
5 computers may leave the group, a user may leave the  
6 library, close their laptop, or an address may change,  
7 and by having additional connections, we can have a more  
8 reliable operation. That way we don't get -- we don't  
9 lose the connection to the group just because someone  
10 left the group.

11 Q. And what does Microsoft call this process of  
12 making extra connection?

13 A. That's called graph maintenance.

14 Q. Does this process of forming additional  
15 connections during maintenance happen automatically?

16 A. Yes, it does. It happens -- they check every  
17 few minutes.

18 Q. Now, is it illustrated in Microsoft documents?

19 A. Yes, it is.

20 MR. CALDWELL: Mr. Moreno, can you pull  
21 up Plaintiff's Exhibit 938?

22 Q. (By Mr. Caldwell) All right. What is the --  
23 what are we seeing here?

24 A. This is the -- one of the Microsoft internal  
25 documents -- confidential documents that we talked

1 about. This one describes how peer-to-peer grouping  
2 works.

3 MR. CALDWELL: Mr. Moreno, can I have you  
4 flip to Page 23? And make that as big as you can for  
5 us.

6 Q. (By Mr. Caldwell) Will you tell us what's  
7 illustrated here, Professor Jones?

8 A. Well, what we're seeing in this illustration  
9 is that a node in the graph, a computer in the graph or  
10 this -- when we're talking about a group, has multiple  
11 connections, more than one connection to other group  
12 members in some cases.

13 Q. I see.

14 And now, I'm going to point at one of these  
15 new members, hopefully. Okay. The one that's -- the  
16 one that's up ahead of that arrow, and I'm going to try  
17 and count here. It appears that that group member has  
18 one, two, three, four, five different connections?

19 A. Yes, sir.

20 Q. Now, are there also specifications for  
21 graphing and grouping that explain this process?

22 A. Yes, there are.

23 MR. CALDWELL: We'll identify Plaintiff's  
24 Exhibit 811 and 288.

25 Your Honor, we also identify Plaintiff's

1 Exhibits 1027 and 1028 and move those into evidence.

2 THE COURT: Any objection?

3 MR. POWERS: No objection, Your Honor.

4 THE COURT: Be admitted.

5 Q. (By Mr. Caldwell) Does the client computer  
6 send another request for those records that you  
7 mentioned if it connects to a second peer or a third  
8 peer?

9 A. Yes, sir, it does.

10 Q. Each time?

11 A. Every time.

12 Q. Okay. So now, if we can go back to our  
13 presentation, and I'll clear the screen.

14 It's time for us to -- for me to make some  
15 checkmarks maybe. We're going to talk about the  
16 comparison of the '180 patent to the Microsoft products.

17 Will you tell us which claims that we're  
18 talking about today?

19 A. Yes, sir. We're talking about Claims 1, 4,  
20 and 15, and then Claims 17, 20, and 31.

21 Remember, 4 and 15 are these dependent claims  
22 that we'll see depend on Claim 1; 20 and 31 depend on  
23 17; and 35 depends on 33.

24 Q. Well, Professor Jones, I see a fair number of  
25 claims there. I mean, is the list there, one, two,

1 three, four, five, six, seven, eight on there, is it  
2 really sort of starting from scratch eight times?

3 A. No, sir. There -- there's quite a bit of  
4 similarity between these claims, and I think it will  
5 move pretty quickly.

6 Q. Okay. Well, let's start with Claim 1, if  
7 you're okay with that.

8 A. Yes, sir.

9 Q. Now, Claim 1 is on the foam board. I'm going  
10 to start with the preamble to Claim 1.

11 The preamble of Claim 1 says: A method for  
12 accessing a secure computer network address comprising  
13 the steps of.

14 Has Judge Davis given us any definitions that  
15 help with that term?

16 A. Yes, sir, he has.

17 Q. And what has he defined?

18 A. For secure computer network address, it means  
19 a network address that requires authorization for access  
20 and is associated with a computer capable of virtual  
21 private network communications.

22 Q. Did you apply that construction?

23 A. Yes, sir, I did.

24 Q. So what is the secure computer network address  
25 in the Windows PeerNet system?



1           A.     That's the address of the group member that  
2 you're -- to which you're connecting that we described  
3 in that animation.

4           Q.     Does it require authorization for access?

5           A.     Yes, it does.

6                     The -- when the client computer is connecting  
7 to that group member, the client computer has to prove  
8 that it should be part of the group by giving either a  
9 password or a group membership certificate.

10          Q.     Now, do the Windows PeerNet interfaces perform  
11 a method for accessing a secure computer network  
12 address?

13          A.     Yes, they do, just -- just as I described in  
14 that animation.

15          Q.     All right. Professor Jones, I want to start  
16 with the first element now of the claim: Receiving a  
17 secure domain name.

18                     Has Judge Davis provided us any definitions in  
19 that first part of the patent?

20          A.     Yes, sir, he has.

21                     For secure domain name, we have a domain name  
22 that corresponds to a secure computer network address.

23          Q.     Do the Windows PeerNet interfaces receive a  
24 secure domain name?

25          A.     Yes, sir, they do; for example, when they

1 receive it from an application like Windows Meeting  
2 Space.

3 Q. Was that the secure group name you pointed to?

4 A. Yes, sir.

5 Q. Do we need a secure computer network address  
6 in order to join the group?

7 A. Yes, we do. We have to find a way to connect  
8 to that group securely and form a VPN.

9 Q. Well, what did you find, then, for this claim  
10 element?

11 A. I found that the -- that this is -- this claim  
12 element is met by the Windows PeerNet interfaces.

13 Q. May I check the element?

14 A. Yes, sir.

15 Q. Now, the second claim element, Professor  
16 Jones, says: Sending a query message to a secure domain  
17 name service, the query message requesting from the  
18 secure domain name service a secure computer network  
19 address corresponding to the secure domain name.

20 Now, has Judge Davis provided any  
21 additional -- I mean, some of the same words that we  
22 used, but has Judge Davis provided any additional new  
23 definitions in that term?

24 A. Yes, sir, he has.

25 For secure domain name service, we have a

1 lookup service that returns a secure network address for  
2 a requested secure domain name.

3 Q. Now, do the Windows PeerNet interfaces send a  
4 query message to a secure domain name service?

5 A. Yes, they do, when the -- when the PeerNet  
6 interfaces require an address for that secure domain  
7 name.

8 Q. Do they send -- did you say they send query  
9 message to -- to what?

10 A. To PNRP.

11 Q. Now, what is this -- what is that secure  
12 domain name service?

13 A. That secure domain name service is the peer  
14 name resolution protocol running as part of the PeerNet  
15 interfaces.

16 Q. All right. Now, I want to dig into that a  
17 little bit.

18 Professor Jones, you call the peer name  
19 resolution protocol a form of domain name service or  
20 DNS, right?

21 A. Yes, sir.

22 Q. Does Microsoft acknowledge that PNRP is a  
23 special form of DNS?

24 A. Yes, sir, they do.

25 Q. Have you seen that on their web page, for

1 example?

2 A. Yes. I've seen it on their web pages.

3 Q. Can we take a look at that?

4 A. Yes, sir.

5 MR. CALDWELL: Mr. Moreno, I'd like to  
6 pull up Plaintiff's Exhibit 148.

7 And can you pull us in on the first  
8 couple of sentences there?

9 Q. (By Mr. Caldwell) What is this page, first of  
10 all?

11 A. This is a Microsoft web page that describes a  
12 PNRP, the peer name resolution protocol.

13 Q. Okay. Now, what does this website say about  
14 PNRP?

15 A. It says: The peer name resolution protocol,  
16 PNRP, name space provider, NSP, is a serverless DNS  
17 technology.

18 Q. So if Mr. Cawley gives me a few minutes to  
19 play around on the internet this evening, and I were to  
20 go to Microsoft's website and find this page, I assume I  
21 would see that it says the peer name resolution protocol  
22 name space provider is a serviceless DNS technology,  
23 right?

24 A. No, sir, you wouldn't see that.

25 Q. Why is that?

1 A. Well, during the -- last spring, during the  
2 course of the litigation, this web page was changed.

3 Q. Okay. What does it say now? Can we look at  
4 that?

5 A. Yes.

6 MR. CALDWELL: Can we pull up 507,  
7 Mr. Moreno?

8 Q. (By Mr. Caldwell) And what does it say where  
9 it used to say serviceless domain service?

10 A. Well, now it says serviceless name resolution  
11 technology.

12 Q. The words DNS were removed?

13 A. Yes, sir.

14 Q. But were you able to print it off before it  
15 got changed?

16 A. Yes, I was.

17 Q. All right. Professor Jones, regardless of  
18 what changes have been made to Microsoft's website, have  
19 you seen other internal Microsoft documents confirming  
20 that PNRP is a form of DNS?

21 A. Yes, sir, I have.

22 MR. CALDWELL: Can we pull up Plaintiff's  
23 Exhibit 812?

24 Q. (By Mr. Caldwell) At a high level, what is  
25 this document?

1 A. This is a document where Microsoft --

2 THE COURT: Let me interrupt you for a  
3 moment. Let me just ask the juror, are you okay, or do  
4 we need to take a short break, or --

5 JUROR: Take a break.

6 THE COURT: Okay. Let's -- we'll take  
7 about a 10-minute break, until 25 till.

8 COURT SECURITY OFFICER: All rise for the  
9 jury.

10 THE COURT: And if you're not feeling  
11 well, tell the court security officer, and I'll visit  
12 with you.

13 (Jury out.)

14 (Recess.)

15 COURT SECURITY OFFICER: All rise.

16 (Jury in.)

17 THE COURT: Please be seated.

18 All right. That's very frustrating when  
19 you -- if you need another break, just let us know, or  
20 if anybody on the jury does for any reason, just raise  
21 your hand or get someone's attention, and we'll be glad  
22 to take it.

23 Mr. Powers?

24 MR. POWERS: Yes, Your Honor.

25 Ms. Ferguson has reminded us of a

1 housekeeping matter, that DX3339 has not been formally  
2 offered. There is no objection.

3 THE COURT: Okay. Is that correct?

4 MR. McLEROY: I believe that's right,  
5 Your Honor.

6 THE COURT: All right. It will be  
7 admitted.

8 All right. You may proceed.

9 MR. CALDWELL: Thank you, Your Honor.

10 So can we put Plaintiff's Exhibit 148  
11 back?

12 Q. (By Mr. Caldwell) Now, Professor Jones, we had  
13 seen here that on Microsoft's website, they used to call  
14 the peer name resolution protocol a serverless DNS?

15 A. Yes, sir.

16 Q. And what has happened to that?

17 A. That page has since been changed during the  
18 course of this lawsuit.

19 Q. Now, can we look at other technical documents  
20 to get the same message from Microsoft?

21 A. Yes, sir.

22 MR. CALDWELL: Can we pull up Plaintiff's  
23 Exhibit 812?

24 Q. (By Mr. Caldwell) What does this mean, the P2P  
25 Group API?

1           A.     This is an internal Microsoft document  
2 describing the -- the grouping aspect of these PeerNet  
3 interfaces.

4                     MR. CALDWELL:   Can we go to Page 5,  
5 Mr. Moreno?

6                     And will you zoom in on -- yes, sir.

7                     Thank you.

8           Q.     (By Mr. Caldwell) What do we see here,  
9 Dr. Jones?

10           A.     This is another description of how they -- how  
11 PNRP is a serverless DNS technology.  It reads:  Peer  
12 networking is providing a serverless DNS technology  
13 entitled PNRP.

14           Q.     Now, is this the only other document Microsoft  
15 has referring to PNRP as a form -- a special form of  
16 DNS?

17           A.     No, sir, it's not.

18                     MR. CALDWELL:   Can we take a look at  
19 Plaintiff's Exhibit 938?

20           Q.     (By Mr. Caldwell) And now, we've seen this  
21 before, but can we look at Page 12?

22                     And what does Microsoft say in its  
23 confidential presentation on peer-to-peer networking,  
24 Professor Jones?

25           A.     They say that PNRP, peer name resolution



1 protocol, and they describe that as a distributed DNS.

2 Q. So these are some of the confidential  
3 documents you've been telling us about?

4 A. Yes, sir.

5 Q. All right. Now, back to applying the claim,  
6 Professor Jones, is the query message requesting from  
7 the secure domain name service a secure computer network  
8 address corresponding to the secure domain name?

9 A. Yes, sir. That's the message to PNRP.

10 Q. And what did you conclude with regard to this  
11 claim element?

12 A. I concluded that the Microsoft PeerNet  
13 interfaces meet this element of the claim.

14 Q. We talked about this briefly yesterday, but  
15 before we get to the receiving step, do we need to talk  
16 about the specific nitty-gritty details of how the  
17 secure domain name service comes up with the address?

18 A. No, sir. These claims are flexible, and they  
19 don't place -- they don't describe a specific  
20 requirement on how it resolves that address.

21 Q. So the next thing is the receiving back step,  
22 correct?

23 A. Yes.

24 Q. And that element says: Receiving from the  
25 secure domain name service a response message containing

1 the secure computer network address corresponding to the  
2 secure domain name.

3 Do the Windows PeerNet interfaces receive from  
4 the secure domain name service a response message  
5 containing the secure computer network address?

6 A. Yes, they do. That happens when the certified  
7 peer address, as we saw in that animation, is returned  
8 to the user's computer.

9 Q. And what's in that certified peer address?

10 A. That has, for example, an IP address, port,  
11 number, it has protocol, as well as verification  
12 information.

13 Q. And is that secure computer network address  
14 corresponding to the secure domain name?

15 A. Yes, sir, it is.

16 Q. Okay. Dr. Jones, does it matter which one of  
17 the peers out there running the PeerNet interfaces is  
18 the one who sends back the certified peer address in  
19 terms of analyzing the claim?

20 A. No. In terms of the claim, the claim says  
21 that it's a -- it's a receiving step. So it matters  
22 that the -- that it receive the message.

23 Q. What did you conclude for this claim element,  
24 Professor Jones?

25 A. I concluded this claim element is met by the

1 PeerNet interfaces.

2 Q. Now, the final element of this claim says:  
3 Sending an access request message to the secure computer  
4 network address using a virtual private network  
5 communication link.

6 Did you find this element met in the Windows  
7 XP and Vista products?

8 A. Yes, I did. As I described in that animation,  
9 this happens when the client is sending the access  
10 request message that's the message asking for records or  
11 information from the group.

12 Q. Does that occur if the connection made to the  
13 VPN is the client computer's first connection to the  
14 VPN?

15 A. Yes, sir, it does.

16 Q. What about if one of those supplemental  
17 maintenance connections is made?

18 A. It also occurs then as well.

19 Q. So what did you conclude for this final  
20 element?

21 A. I concluded this element is met by the PeerNet  
22 interfaces.

23 Q. All right. Professor Jones, we've checked all  
24 the elements of Claim 1. Can you tell us what that  
25 means?

1           A.     Well, that means that the Microsoft PeerNet  
2 interfaces, part of the Windows XP and Vista operating  
3 systems, infringe Claim 1 of the '180 patent, and  
4 therefore, infringe the '180 patent.

5           Q.     Thank you, Professor.

6                     Now, we're going to get two for one on this  
7 foam board here with a couple of those short dependent  
8 claims.

9                     The first one we see is Claim 4. That's that  
10 same method from Claim 1 wherein the response message  
11 contains provisioning information for the virtual  
12 private network.

13                    Do the PeerNet interfaces receive a response  
14 message that also includes provisioning information?

15           A.     Yes, sir. That's the certified peer address  
16 that contains, for example, the port number, protocol,  
17 and verification information.

18           Q.     Did you conclude that Claim 4 was infringed?

19           A.     Yes, I did.

20           Q.     All right. And then Claim 15. Claim 15 is  
21 the method of Claim 1 performed by a client computer.  
22 Was that method of Claim 1 performed by a client  
23 computer for the accused products?

24           A.     Yes, it was. All of those steps took place on  
25 the client computer in the explanation that I gave.

1 Q. Can I check these two boxes for these two  
2 claims?

3 A. Yes, sir, please do.

4 Q. All right, Professor Jones. We have another  
5 long independent claim, but, I mean, is this going to  
6 take us quite as long as it appears?

7 A. No, sir. We'll see that the bottom portion of  
8 it is similar to Claim 1.

9 Q. Well, at a high level, how does this claim  
10 differ from Claim 1?

11 A. Well, this is a computer-readable storage  
12 medium claim. It requires a computer-readable storage  
13 medium, which would be like a storage area, as well as  
14 computer instructions for performing the steps that we  
15 just discussed for Claim 1.

16 Q. So are the Microsoft Windows XP and Vista,  
17 therefore, the PeerNet interfaces, distributed on  
18 computer-readable storage media?

19 A. Yes, they are. For example, they can be  
20 distributed on Microsoft's servers, which contain a  
21 storage area. They could also be distributed on  
22 computer DVDs and CDs containing these instructions.

23 Q. Okay. And for example, in this box, what's in  
24 here?

25 A. That would contain a CD or DVD that has

1 computer-readable -- it has a storage area, and it's a  
2 computer-readable storage medium.

3 Q. Now, have you -- I mean, that may sound  
4 trivial, but have you checked if this is a  
5 computer-readable media in this box, and it has a  
6 storage area?

7 A. Yes, sir, I've done exactly that.

8 Q. So remind us, what other kinds of media does  
9 Microsoft use just besides the DVDs?

10 A. Well, for example, they have a master disk  
11 that they give to manufacturers like Dell to allow them  
12 to install this on their computers.

13 They also have the storage media on their web  
14 servers. It would also be on computers that Microsoft  
15 itself uses.

16 Q. Now, remember when you discussed updates, like  
17 the Advanced Networking Pack and Service Pack for XP 2  
18 (sic)?

19 A. Yes, sir.

20 Q. Were those on computer-readable media?

21 A. They would be. They could be, for example, on  
22 Microsoft's web servers that contain storage disks to --  
23 that have -- that are computer-readable.

24 Q. Now, does that media, in all cases, contain a  
25 storage area?

1 A. Yes, sir, it does.

2 Q. And then -- so may I check the storage area  
3 off?

4 A. Please do.

5 Q. Now, on the storage area -- on a  
6 computer-readable storage media -- excuse me -- are  
7 there computer-readable instructions for a method for  
8 accessing a secure computer network address?

9 A. Yes. They contain the PeerNet interfaces,  
10 which the computer can read those, and those perform the  
11 method that we just talked about as in Claim 1.

12 Q. Can we be fairly confident that the DVD that's  
13 in this Windows Vista box is computer-readable?

14 A. Yes, sir.

15 Q. Same for the versions?

16 A. Yes.

17 Q. Have you found this element met?

18 A. Yes, I have.

19 Q. Now, I notice here -- I notice here, Professor  
20 Jones, that from this point on (indicates), there's --  
21 it's, basically, the same words as what we've seen in --  
22 in the '180 patent, Claim 1.

23 A. Yes, sir.

24 Q. Okay. So first, did you find that the accused  
25 products have -- they receive a secure domain name?

1 A. Yes, I did, just as explained for Claim 1.

2 Q. And did you find that they send a query  
3 message to a secure domain name service, the query  
4 message requesting from the domain name service a secure  
5 computer network address corresponding to the secure  
6 domain name?

7 A. Yes, I did, as explained for Claim 1.

8 Q. Did you find that then the software receives  
9 from the domain name service a response message  
10 containing the secure computer network address  
11 corresponding to the secure domain name?

12 A. Yes, I did, as explained for Claim 1.

13 Q. And finally, did you find sending an access  
14 request message to the secure computer network address  
15 using a virtual private network communication link?

16 A. Yes, sir, I did, as explained for Claim 1.

17 Q. Professor Jones, what have you concluded about  
18 Claim 17?

19 A. I concluded that Microsoft infringes Claim 17  
20 of the '180 patent.

21 Q. So we're rolling now, Professor Jones.  
22 Computer readable medium, according to Claim 17 -- I  
23 think we've seen this before -- wherein the response  
24 message contains provisioning information for the  
25 virtual private network.



1 Did you find that element met?

2 A. Yes, sir, I did, as explained for Claim 4.

3 Q. What did you conclude about Claim 20?

4 A. That Microsoft infringes Claim 20.

5 Q. Now, 31. A computer-readable medium, again  
6 from Claim 17, wherein the method is performed by a  
7 client computer.

8 Did you find that, Professor Jones?

9 A. Yes, I did, just as explained for Claim 15,  
10 and I find that Microsoft infringes Claim 31 of the '180  
11 patent.

12 Q. Now, Claim 33 is a data processing apparatus.  
13 Can you give us an example of what that might be?

14 A. That would be a computer.

15 Q. Do they comprise a processor?

16 A. Yes. A computer would have a processor, and  
17 it would have a memory to store those instructions.

18 Q. So I can check the processor part of it?

19 A. Yes, sir.

20 Q. I'm going to ask you about this: A memory  
21 storing computer-executable instructions, which when  
22 executed by the processor cause the apparatus to perform  
23 a method for accessing a secure computer network  
24 address.

25 Did you find that element met?

1           A.    Yes, sir, I did.  When the PeerNet interfaces  
2 are on a computer, they'll be stored in memory, and they  
3 are computer-executable instructions that will cause  
4 those steps to be performed.

5           Q.    May I check this box?

6           A.    Yes, sir.

7           Q.    Now, back to our familiar steps.

8                   First, did you find receiving a secure domain  
9 name?

10          A.    Yes, sir, I did, as explained for Claim 1.

11          Q.    Did you find sending a query message to a  
12 secure domain name service, the query message requesting  
13 from the secure domain name service a secure computer  
14 network address corresponding to the secure domain name?

15          A.    Yes, sir, I did, as explained for Claim 1.

16          Q.    Professor, did you find receiving from the  
17 secure domain name service a response message containing  
18 the secure computer network address corresponding to the  
19 secure domain name?

20          A.    Yes, sir, I did, for the same reasons as given  
21 in Claim 1.

22          Q.    And did you find sending an access request  
23 message to the secure computer network address using a  
24 virtual private network communication link?

25          A.    Yes, sir, I did, as explained for Claim 1.

1 Q. Professor Jones, what did you conclude about  
2 Claim 33 of the '180 patent?

3 A. I concluded that Microsoft infringes this when  
4 they, for example, put the PeerNet interfaces on  
5 computers.

6 Q. And finally, Claim 35, the apparatus of that  
7 Claim 33, wherein the response message contains  
8 provisioning information for the virtual private  
9 network.

10 Did you find that claim met?

11 A. Yes, sir, I did, as explained for Claim 4, the  
12 same reasons.

13 Q. What did you conclude about Claim 35?

14 A. That Microsoft infringes Claim 35 of the '180  
15 patent.

16 Q. All right. Professor Jones, can we see the  
17 next slide in your presentation?

18 This is the last -- the last stop on our road  
19 map here, how Microsoft infringes the '180 patent  
20 directly and indirectly.

21 Does Microsoft use the secure domain name  
22 service internally?

23 A. Yes, they do.

24 Q. How do you know?

25 A. I know from deposition testimony from

1 Microsoft employees that they use Windows Meeting Space  
2 with grouping, and that uses PNRP.

3 Q. Have you been able to tell -- have you been  
4 able to find evidence that Microsoft used it internally?

5 A. Yes, I have, from -- from deposition  
6 testimony.

7 Q. Did you find that Microsoft directly infringes  
8 the '180 patent in other ways?

9 A. Yes, I did.

10 For example, when they put the updates or  
11 essentially put the PeerNet interfaces on computers to  
12 allow people to download them, they would infringe the  
13 claims of the '180 patent.

14 They would also do so when they sell -- like  
15 make, use, sell, or offer to sell these disks that we've  
16 been talking about for Windows XP and Microsoft Windows  
17 Vista.

18 Q. Now, finally, the computer -- the data  
19 processing apparatus claims of 33 and 35, did you find  
20 that Microsoft directly infringes those, too?

21 A. Yes, sir. They do that also when they put it  
22 on the update servers, for example, put the PeerNet  
23 interfaces there and put them on servers and make them  
24 available for download.

25 Q. Did you find that Microsoft directly infringes

1 each of the claims of the '180 patent you've gone  
2 through today?

3 A. Yes, sir.

4 Q. Now, can we talk about induced infringement?

5 A. Yes, sir.

6 Q. We went through this -- I guess we're actually  
7 going to the next slide. We went through this yesterday  
8 on induced infringement, inducing infringement by  
9 others.

10 First of all, did you find that Microsoft had  
11 knowledge of the patents?

12 A. Yes, sir. This patent issued shortly after  
13 the lawsuit was initiated, and Microsoft was made aware  
14 of the patent at that time.

15 Q. And that's because the '180 patent is the more  
16 recently issued of the two, fair?

17 A. Yes, sir.

18 Q. Now, can we check that element?

19 A. Yes, sir.

20 Q. The second element, encouraged or instructed  
21 others to perform acts that infringe, did Microsoft --  
22 did you find evidence that Microsoft encouraged or  
23 instructed others to perform acts that infringed?

24 A. Yes, sir, I did.

25 For example, Microsoft describes how to

1 connect to a group on their -- and how to use the  
2 PeerNet APIs on their website.

3 Q. Do they also work with developers to teach  
4 them how to use the peer name resolution protocol?

5 A. Yes, sir. They provide example codes showing  
6 them how to use the PeerNet resolution protocol, as well  
7 as the PeerNet interfaces and make that available for  
8 download.

9 Q. What do you mean that they provide example  
10 code?

11 A. Well, they have a software development kit  
12 that they describe for the PeerNet interfaces.

13 Q. Can we check that element?

14 A. Yes, sir.

15 Q. Did you find evidence that others have  
16 infringed?

17 A. Yes, sir, I did.

18 Q. And how -- how -- let's start with the method  
19 claims.

20 What is your -- what kind of evidence have you  
21 seen that others are performing the methods?

22 A. The evidence I found for that would be, for  
23 example, what's called Microsoft -- Microsoft employees  
24 describing SQM data. That's short for S-Q-M or a way of  
25 saying S-Q-M.

1           That's data that Microsoft collects from  
2 users' computers -- selected users' computers that  
3 indicates what actions those users are taking.

4           Q.    Does Microsoft collect the data from every  
5 single copy of Windows that's out there being used?

6           A.    No, sir, they don't do that.

7           Q.    Is it -- do you know how big of a subset it  
8 is?

9           A.    I believe it's, according to the deposition  
10 testimony, somewhere between 8 and 12 percent perhaps.

11          Q.    Now, what about the computer-readable medium  
12 claims of 17, 20, and 31 and the system claims of 33 and  
13 35? Have you found evidence that others infringe?

14          A.    Yes, sir.

15                For example, when Microsoft gives -- or sells  
16 those disks to people, and they put them and install  
17 them on their computers, they'll be putting them on  
18 computer-readable media, and they will also be,  
19 obviously, putting them on a computer, which mean the  
20 data processing apparatus.

21          Q.    Can we check that element, sir?

22          A.    Yes, sir.

23          Q.    And now, finally, the last element is that  
24 Microsoft either knew or should have known that the  
25 encouragement or instructions would result in others

1 infringing.

2           What did you find with regard to that piece of  
3 the inducement analysis?

4           A.    Well, I found that given Microsoft's knowledge  
5 of how its own products operate, as well as the fact  
6 that they knew about the '180 patent and were notified  
7 of it, that one of ordinary skill in the art, examining  
8 those products and examining the claims of the '180  
9 patent, would have known that they were infringing  
10 the -- or encouraging others to infringe the '180  
11 patent.

12                   MR. CALDWELL:  Your Honor, Plaintiff  
13 offers Demonstrative Exhibits 6 through 14 into  
14 evidence.

15                   THE COURT:  All right.  Any objection?

16                   MR. POWERS:  No objection as  
17 demonstratives.

18                   THE COURT:  All right.  Be admitted.

19           Q.    (By Mr. Caldwell) Professor Jones, we are now  
20 at the end of our presentation.  Will you please turn to  
21 the jury and explain to the jury what you have concluded  
22 with regard to infringement by Microsoft?

23           A.    Yes.  I have concluded that Microsoft  
24 infringes the claims of the '135 and '180 patent  
25 patents.



1 MR. CALDWELL: Pass the witness.

2 THE COURT: Okay. Cross-examination.

3 MR. POWERS: May I approach, Your Honor?

4 THE COURT: Yes, you may.

5 THE WITNESS: Thank you.

6 MR. POWERS: May I proceed, Your Honor?

7 THE COURT: Yes, you may.

8 CROSS-EXAMINATION

9 BY MR. POWERS:

10 Q. Good morning, Dr. Jones.

11 A. Good morning.

12 Q. Now, you're here as an expert in network  
13 security, correct?

14 A. Yes, sir.

15 Q. And you've followed developments closely in  
16 that field over the last several years, haven't you?

17 A. Yes, sir, I would say so.

18 Q. Probably at least since the late 1990s?

19 A. Yes, sir, at least since then.

20 Q. Now, you testified here that you thought the  
21 patents-in-suit were important inventions.

22 Do you recall that?

23 A. Yes, sir. I believe that.

24 Q. In fact, you had never heard of them before  
25 this lawsuit; isn't that true?

1           A.    I -- yeah, I had not seen these patents before  
2 the lawsuit, yes, sir.

3           Q.    And never heard of them either.

4           A.    That's correct, sir.

5           Q.    And you had never heard of any of the work,  
6 the underlying work or software or anything else  
7 relating to those patents done by Mr. Munger or  
8 Dr. Short?

9           A.    Yes, sir.

10          Q.    Now, you -- you testified a couple of times  
11 that Judge Davis issued an order that allowed you to see  
12 confidential documents.

13                   Do you recall that?

14          A.    Yes, sir.

15          Q.    Now, you've done this expert witness job  
16 enough to know that that's not a special order just for  
17 you, right? That's a general order that's applicable in  
18 these cases, generally.

19          A.    That's my understanding, yes, sir.

20          Q.    Okay. Now, let's turn to the '135 patent and  
21 start there.

22                   In order to infringe the '135 patent, the  
23 operating systems alone aren't enough. That's true,  
24 isn't it?

25          A.    That's correct, sir.

1 Q. You need the applications as well.

2 A. You need an application. And in the case of,  
3 say, Windows XP, that could be Microsoft Windows  
4 Messenger.

5 Q. Now, the -- let's start with Vista. And let's  
6 put up your Slide 5.

7 MR. POWERS: If we could, Chris.

8 Q. (By Mr. Powers) This was your slide that you  
9 showed to the jury about the products that you thought  
10 infringed the '135 patent, right?

11 A. Yes, sir.

12 Q. Now, starting with Vista, it was your opinion  
13 that you needed those interfaces, those APIs, in order  
14 to infringe, right?

15 A. Yes, sir.

16 Q. And Vista doesn't come with those APIs, does  
17 it?

18 A. Not -- not installed, no, sir.

19 Q. So for every copy of Vista that was shipped  
20 out and the APIs were never added to it in some way, all  
21 those copies of Vista never infringe, even under your  
22 opinion, right?

23 A. Yes, sir.

24 Q. And as far as you know, that's millions and  
25 millions and millions of copies of Vista.

1 A. I don't know the numbers, sir.

2 Q. You have no idea?

3 A. That's correct.

4 Q. Now -- so Vista can't infringe any of the  
5 claims of the '135 patent as shipped, correct?

6 A. I believe that's correct, sir.

7 Q. Now, with respect to XP, that does ship, as I  
8 understand your opinion, with the APIs that you're  
9 accusing in this case; is that fair?

10 A. Yes, sir, once those updates are part -- once  
11 the updates have been applied.

12 Q. But even XP won't infringe until it's used  
13 with one of the applications that you've listed on  
14 Slide 5; isn't that true?

15 A. I wouldn't agree with that, sir.

16 Q. XP, I believe you said earlier, has to be used  
17 with an application in order to infringe, true?

18 A. I believe I said that for Claim 1, sir.

19 Q. Okay. So let's take Claim 1.

20 Claim 1's a method claim.

21 A. Yes, sir.

22 Q. It's not infringed by anybody until somebody  
23 uses that method described in the patent, right?

24 A. That's my understanding.

25 Q. So for every copy of XP shipped by Microsoft,

1 there's zero infringement of Claim 1 of the '135 patent  
2 unless somebody actually uses the method.

3 A. Yes, sir.

4 Q. And for them to use the method, they have to  
5 use one of the applications that you've listed on  
6 Slide 5.

7 A. Or an application they develop themselves, or  
8 something like Live Meeting Console, I believe is not  
9 listed there.

10 Q. And you have not testified about any  
11 applications that someone has developed by themselves,  
12 have you?

13 A. That's right, sir.

14 Q. All right. Now -- and for Claim 10 of the  
15 '135 patent, XP, as shipped, doesn't infringe that  
16 either, does it?

17 A. No, sir, it doesn't.

18 Q. All right. Now, looking at your Slide 5 --

19 MR. POWERS: And, Chris, if we can  
20 highlight a couple of these.

21 Q. (By Mr. Powers) -- you've listed as some of  
22 the applications that you think infringe the '135 patent  
23 Office Communicator 2005 and Live Communications Server  
24 2005, correct?

25 A. Yes, sir.

1 Q. Now, you testified that you reviewed a lot of  
2 documents and deposition testimony in preparation for  
3 your opinions, fair?

4 A. Yes, sir.

5 Q. Did you select all of that information, or was  
6 it selected for you by VirnetX's counsel?

7 A. I believe I selected all of it. They may have  
8 indicated some of interest, but I was able to search all  
9 of those documents myself.

10 Q. So I assume, then, that you read closely the  
11 deposition testimony of Kendall Larsen, VirnetX's CEO  
12 and Chairman of the Board?

13 A. I believe I read his testimony. I don't think  
14 I concentrated on his testimony, no, sir, I didn't.

15 Q. But you think you read it?

16 A. I read parts of it. I don't believe I read  
17 every -- every aspect of his testimony, no, sir.

18 Q. Well, did you read the part of it where he  
19 said that in 19 -- that in 2006, he was trying -- he  
20 spent over a million dollars of VirnetX's very scarce  
21 money trying to modify Office Communicator 2005 and Live  
22 Communications Server 2005 in order to use the VirnetX  
23 patent?

24 A. No, sir, I didn't read that.

25 Q. And that wasn't shown to you by VirnetX's

1 lawyers either, was it?

2 A. I don't believe so, no, sir.

3 Q. So the very same products that you're now here  
4 saying do use VirnetX's patents are the same ones that,  
5 if I'm right about Kendall Larsen's testimony, are the  
6 ones that he was spending a lot of money trying to  
7 modify in order to use the patents.

8 They're the same products, right?

9 A. I would really have to look at his testimony.  
10 I haven't -- I haven't seen that, so I don't know, sir.

11 Q. Well, okay. Then let's look at it.

12 Did you look -- are you aware of a company  
13 called Magenic?

14 A. No, sir. I'm not familiar with them. I've  
15 heard that name during this -- the course of this  
16 lawsuit.

17 Q. But that's not one of the subjects that you  
18 studied when you were coming up with your opinions about  
19 infringement.

20 A. I did not study that, sir, that's correct.

21 Q. Were you even aware that Kendall Larsen, the  
22 CEO of VirnetX, as one of the first things he did in  
23 spending the scarce money he had was hire Magenic in  
24 order to modify Office Communicator and Live  
25 Communications Server, the two products you now accuse?

1           Are you aware of that?

2           A.    No, sir, I'm not aware of that.

3           Q.    Let's look at DX3536.  It should be in the  
4 binder in front of you, but we'll also put it up on the  
5 screen.

6                       MR. POWERS:  Chris, let's just pull up  
7 the first half of it or so, if you would, and see if we  
8 can make that legible.

9           Q.    (By Mr. Powers) Dr. Jones, have you seen this  
10 document before?

11          A.    Not -- not in my examination, sir.  I think  
12 it's -- something like this might have been presented in  
13 some of the other testimony during the lawsuit.

14          Q.    I'm sorry.  Let me rephrase the question.

15          A.    Yeah.

16          Q.    When you were doing your preparations, either  
17 using the material that you thought -- that you asked  
18 for or the material that VirnetX's lawyers gave you, did  
19 you see this document?

20          A.    No, sir.

21          Q.    All right.  This document is a February 23rd,  
22 2006, work order between VirnetX and Magenic.

23                       Do you see that?

24          A.    Yes, sir, I do.

25          Q.    And if you turn to the next page --



1 MR. POWERS: And actually, Chris, let's  
2 bring up --

3 Q. (By Mr. Powers) It's the page, Dr. Jones, that  
4 at the bottom right has .004.

5 A. I have that, sir.

6 Q. And -- I'm sorry. It's Page 002. Wrong page.  
7 And there's that section called Project Goal about one  
8 third of the way down.

9 Do you see that?

10 A. Yes, sir, I do.

11 MR. POWERS: Let's bring that up, if you  
12 would, Chris, from Project Goal all the way down to  
13 deliverables before that. Just a little bit more.  
14 Right there.

15 All right. That's not going to be easy  
16 to read, is it?

17 All right. Now, that helps.

18 Can everybody on the jury read that or  
19 not? Okay.

20 Q. (By Mr. Powers) So you see in this February  
21 9th, 2006, work order between VirnetX and Magenic -- oh,  
22 and by the way, let's go to the back end just so we can  
23 see it -- you see that Kendall Larsen is the signatory  
24 for VirnetX? The very last page.

25 MR. POWERS: You don't need to go there,

1 Chris. I just want to get that from Dr. Jones.

2 A. Is that on Page 005?

3 Q. (By Mr. Powers) Exactly.

4 A. I see the name. My copy doesn't have the  
5 signatures, sir.

6 Q. But you see Kendall Larsen, President and CEO  
7 of VirnetX?

8 A. Yes, sir, I do.

9 Q. All right. So let's go back to Page 2 where  
10 we were, Project Goal. And I'll just read it to make  
11 sure we're all on the same page here.

12 The goal of the project, in short, is to come  
13 up with a solution for encrypted secure communication  
14 streaming between multiple messaging end points. This  
15 will be accomplished by implementing a first phase of a  
16 wheel and spoke architecture with VirnetX at the center  
17 connecting differing corporate architectures.

18 This needs to be accomplished using as simple  
19 a method as possible while utilizing VirnetX's patents,  
20 specifically -- and then it goes on to list the '135  
21 patent.

22 You see that?

23 A. Yes, sir, I do.

24 Q. All right. Now --

25 MR. POWERS: Chris, if you could bring --

1 let's try to make it bigger. So let's just start at the  
2 deliverables and platform target section down below, and  
3 bring that -- just that paragraph up to the bullets.  
4 That should do it.

5                   Can we stretch that out to make it a  
6 little more legible?

7           Q.     (By Mr. Powers) And you notice that the  
8 initial target -- it says, quote, the initial target  
9 will be Microsoft Office Communicator 2005, Live  
10 Communications Server 2005, SPI.

11                   Do you see that?

12           A.     Yes, sir, I do.

13           Q.     Now, those are the exact same two products  
14 that were on your Slide 5 that you said do use the  
15 VirnetX patents; is that correct?

16           A.     Yes, sir.

17           Q.     Now, does that help you recall reading any  
18 testimony -- deposition testimony from Kendall Larsen,  
19 the CEO of VirnetX?

20           A.     No, sir.

21           Q.     Do you recall any discussion by Mr. Larsen,  
22 the CEO of VirnetX, regarding his attempt to modify  
23 those two Microsoft products in order to use the VirnetX  
24 patented technology?

25           A.     No, sir.

1 Q. Let's see if I can show you some to refresh  
2 your recollection.

3 MR. POWERS: Chris, could you please  
4 bring up Kendall Larsen's deposition testimony?

5 And, Your Honor, it's from the July 21  
6 transcript at Pages -- Page 299, Lines 15 to 19.

7 And let's blow that up so we can all see  
8 it.

9 Q. (By Mr. Powers) Question: One of Magenic's  
10 objectives -- now, Magenic is that company that this  
11 work order is with?

12 A. Yes, sir.

13 Q. One of Magenic's objectives, in attempting to  
14 modify Microsoft's products, was the goal of utilizing  
15 VirnetX's patented technology in Microsoft products,  
16 right?

17 Answer: That's correct.

18 Do you see that testimony from Kendall Larsen,  
19 VirnetX's CEO?

20 A. I see that, yes, sir.

21 Q. Had you read that exact deposition, or had you  
22 been shown that testimony?

23 A. No, sir.

24 Q. All right. Now, let's talk about the '180  
25 products just for a minute at a high level. Let's just

1 switch gears.

2 MR. POWERS: And could we put up, Chris,  
3 his slide with the '180 patent, which I believe is the  
4 very next slide? Slide 7.

5 Q. (By Mr. Powers) Now, the '180 products that  
6 you listed, Dr. Jones, were the two operating systems  
7 alone, XP and Windows Vista, true?

8 A. Yes, sir.

9 Q. Now, switching our heads to the '180 patent,  
10 away from the '135, Claim 1 of the '180 patent is a  
11 method claim just the way Claim 1 of the '135 patent  
12 was, right?

13 A. Yes, sir.

14 Q. So, again, shipping Windows Vista or shipping  
15 Windows XP doesn't infringe those claims; they have to  
16 be used, fair?

17 A. Yes, sir.

18 Q. All right. Now, you testified about Claim 17,  
19 which was the storage medium claim.

20 Do you remember that?

21 A. Yes, sir.

22 Q. And you testified that when Microsoft ships or  
23 a customer buys a box of either XP or Vista, that's  
24 going to have a disk in it that's a storage medium.

25 Do you remember that?

1 A. Yes, sir.

2 Q. Now, you know that a lot of people get XP or  
3 Vista by means other than buying a box at Best Buy. You  
4 know that, don't you?

5 A. Yes, sir.

6 Q. And you didn't testify about those means, did  
7 you?

8 A. I don't believe I did -- I believe I did. I  
9 thought I testified that this happens, for example, when  
10 Microsoft gives a master disk to a computer  
11 manufacturer.

12 Q. So when -- when Microsoft -- when Microsoft  
13 software is preloaded on a Dell computer, which I think  
14 is one example you talked about, and a consumer buys the  
15 Dell computer, Microsoft didn't give that disk to that  
16 consumer, did it?

17 A. I -- I think in many of those cases, they do  
18 include a disk with that from Microsoft. I believe they  
19 do.

20 Q. Have you done any analysis to determine  
21 whether that's true and how often?

22 A. I do not know how often it occurs, sir.

23 Q. All right. And in the situation where XP or  
24 Vista is downloaded directly off of a website or some  
25 other form, in that case, there's no storage medium

1 either, true?

2 A. That's not correct, sir. It would -- on the  
3 website, there would be a storage medium to store what's  
4 to be downloaded.

5 Q. But in terms of providing XP or Vista to the  
6 consumer; it's coming down -- not on a disk but over the  
7 wires from the internet. That's true, isn't it?

8 A. Yes, sir.

9 Q. Now, Claim 33 of the '180 patent --

10 MR. POWERS: And, Chris, let's put that  
11 up, if we could. I think their copy is PX6.

12 Q. (By Mr. Powers) -- that's a data processing  
13 apparatus. Do you recall testifying that that's a  
14 computer?

15 A. Yes, sir.

16 Q. Now, Microsoft doesn't sell computers, does  
17 it?

18 A. It does sell computers, sir, but I don't think  
19 that's what you're referring to here.

20 Q. With -- putting aside the XBOX and things like  
21 that, talking about the use of XP and Vista, in that  
22 context, Microsoft is selling the software, not the  
23 computer, right?

24 A. Yes, sir. They're -- they're -- I don't  
25 believe they sell what we're talking about here at all.

1 Q. All right. So in the proper context of what  
2 we are talking about, Microsoft does not sell or offer  
3 to sell anything that is claimed in Claim 33 as a whole.

4 A. Yes, sir, I believe that's correct.

5 Q. All right. Now, yesterday you testified a bit  
6 about the interfaces.

7 Do you recall that?

8 A. Yes, sir.

9 Q. And you called them a couple of names, and I  
10 just want to make sure we're all talking about the same  
11 thing.

12 MR. POWERS: Chris, could you bring up  
13 Slide 17, please?

14 Q. (By Mr. Powers) These are the interfaces that  
15 you were referring to in your testimony with regard to  
16 the '135 patent?

17 A. Yes, sir.

18 Q. And you were asked whether companies write  
19 programs or applications using these interfaces.

20 Do you recall that question?

21 A. Yes, sir.

22 Q. And your answer was that Microsoft has, right?

23 A. Yes, sir.

24 Q. You have no opinion and didn't offer one on  
25 direct testimony about whether any third parties, not



1 Microsoft, have written application using these APIs,  
2 have you?

3 A. That's correct, sir.

4 MR. POWERS: Now, let's turn back to the  
5 '135 patent.

6 And, Chris, could you bring up just Claim  
7 1, please?

8 Q. (By Mr. Powers) Dr. Jones, Claim 1 of the '135  
9 patent requires a VPN or virtual private network, true?

10 A. Yes, sir.

11 Q. And in fact, every claim of the '135 patent  
12 that's at issue in this case requires a virtual private  
13 network or VPN.

14 A. Yes, sir.

15 Q. And every claim of the '180 patent requires --  
16 that's asserted in this case requires a virtual private  
17 network or VPN.

18 A. Yes, sir.

19 Q. Now, you understand that Microsoft can't  
20 infringe these claims if even one element is missing of  
21 the claims, right?

22 A. Yes, sir.

23 Q. So if -- if the VPN limitation is missing or  
24 not satisfied by Microsoft's products, you'd agree with  
25 me that Microsoft doesn't infringe.

1 A. Yes, sir.

2 Q. And if even just the VPN limitation is missing  
3 from Microsoft's product, in your view, then the jury  
4 should find for Microsoft of no infringement.

5 A. Yes, sir.

6 Q. Now, on this particular limitation, the issue  
7 of the VPN, you didn't provide any opinion in your  
8 direct testimony about whether there's an equivalent to  
9 a VPN, did you?

10 A. That's correct, sir.

11 Q. So we're talking about whether one is  
12 literally there, and if it isn't, then there's no  
13 infringement.

14 Do you agree?

15 A. That's what I testified to, sir. Yes, sir.

16 Q. For all claims?

17 A. Yes, sir.

18 Q. All right. Now, you put up Judge Davis' order  
19 construing VPN, and it requires that the communication  
20 be private.

21 Do you recall that?

22 A. Yes, sir.

23 Q. And you know that the privacy in Judge Davis'  
24 order requires anonymity. You know that, don't you?

25 A. Yes, sir.

1 Q. And as to anonymity, that means that you can't  
2 determine the identity of the computers that are talking  
3 to each other, either the identity of the computer  
4 that's sending the message or the one that's receiving;  
5 is that right?

6 A. I would generally agree with that, sir.

7 Q. All right. So let's go to your Slide 24. And  
8 it's a little busy, but -- do you see that in front of  
9 you, Dr. Jones?

10 A. Yes, sir.

11 Q. This -- do you recall showing this slide to  
12 show the jury what you could see in unsecure mode when  
13 Microsoft's Office Communicator product is being used  
14 using your Wireshark tool?

15 A. Yes, sir.

16 Q. And let's go through what it is you can see  
17 and talk about that.

18 The first thing you can see -- and it's -- I  
19 know you're not going to be able to see where I'm  
20 putting the laser pointer, but I'll try to direct you to  
21 it.

22 In the middle of -- of the slide, there's a  
23 from and a to, and it says sip:rl@Fabrikam.com, and then  
24 to sip:AJ@Fabrikam.com. Do you see that?

25 A. Yes, sir.

1 Q. So in unsecure mode, one of the things you can  
2 see, according to your testimony yesterday, was those  
3 two -- I believe you called them SIP addresses?

4 A. Yes, sir.

5 Q. And those SIP addresses correspond to those  
6 two people at Fabrikam, whoever RL and AJ are.

7 A. Yes, sir.

8 Q. And you can also see -- and this is up at the  
9 top. It's labeled source of destination, and then  
10 there's these four numbers separated by dots that you  
11 called IP addresses, right?

12 A. Yes, sir.

13 Q. And so this -- where it says source, and then  
14 it says 192168 -- well, 192.168.0.80, that's the IP  
15 address of the computer where RL happens to be sitting  
16 at that time.

17 A. That's -- that's my recollection, sir. I  
18 believe that's correct.

19 Q. All right. And the destination is the  
20 destination of the OC server at that point, which is  
21 that 192.168.0.20, right?

22 A. I believe that's correct, sir.

23 Q. And then in unsecure mode, you can also see  
24 the actual message: How is your work going?

25 And down here, you've got, at the very, very

1 bottom of the slide --

2 MR. POWERS: And, Your Honor, we're going  
3 to label this slide as Defendant's Illustrative Exhibit  
4 6 and later ask all these be admitted in the same manner  
5 we've done in the past.

6 Q. (By Mr. Powers) You can see all that  
7 information. You can see the message; you can see the  
8 two SIP addresses and the two IP addresses of source and  
9 destination, true?

10 A. Yes, sir.

11 Q. And all of that is in the unsecure mode?

12 A. Yes, sir.

13 Q. All right. Now, let's go, then, to secure  
14 mode, which is Slide -- your Slide 25.

15 And this was an animation that you did, and  
16 we've got a capture of the things that you were doing in  
17 the animation, but you were actually moving it around;  
18 is that fair?

19 A. Yes, sir.

20 Q. All right. Now, the secure mode -- this is  
21 Office Communicator that's one of the products that  
22 you're saying from Microsoft satisfies the requirements  
23 of a VPN, correct?

24 A. Yes, sir.

25 Q. And so you're taking the position that it

1 satisfies this anonymity requirement, right?

2 A. Yes, sir.

3 Q. And I take it you believe that Office  
4 Communicator is representative of all the other products  
5 you accused, but this is really the only one you put up;  
6 is that fair?

7 A. Yes, sir.

8 Q. All right. Now, in secure mode, you don't see  
9 those two SIP addresses that correspond to RL and AJ,  
10 the two people, right?

11 A. That's correct, sir.

12 Q. And you also don't see the content of the  
13 message, how's your work going, true?

14 A. Yes, sir.

15 Q. But you do still see, down here at the bottom,  
16 the IP addresses of that original computer that RL was  
17 at and the OC server that we saw before?

18 A. Yes, sir.

19 Q. Now -- so if -- if the purpose of anonymity is  
20 to protect those IP addresses, you'll agree with me that  
21 Office Communicator, even in secure mode, doesn't  
22 protect them?

23 A. Sir, I wouldn't agree with you that the  
24 anonymity is about protecting those outer IP addresses.

25 Q. I understand. But I'm ask -- that's why I put

1 the word if at the front.

2 A. Okay. Sorry.

3 Q. We'll get there, trust me.

4 If the purpose of the anonymity, as required  
5 by the Court in every claim, if the purpose of the  
6 anonymity is to protect those IP addresses, you'll agree  
7 with me that what you've accused doesn't do that.

8 A. Yes, sir.

9 Q. So if the purpose of anonymity, as required by  
10 the Court, is to protect those IP addresses, there's no  
11 infringement.

12 You would agree with that?

13 A. And we're referring to these outer IP  
14 addresses, sir?

15 Q. Yes.

16 A. Yes, sir. Then I'll agree with that.

17 Q. And these outer IP addresses, it's the same  
18 address you had before in unsecure mode. That's the  
19 address of the computer at which RL was sitting. That's  
20 what you just testified to.

21 A. Yes, sir.

22 Q. And the destination was the address of the OC  
23 server that RL is sending something to?

24 A. Yes, sir.

25 Q. All right. Now, as I understand your opinion

1 from your testimony yesterday, you thought that as to  
2 Office Communicator that the anony -- anonymity  
3 requirement of the Court was satisfied because you  
4 couldn't see the SIP addresses, right?

5 A. That -- that's -- yes, sir, that's essentially  
6 it.

7 Q. All right. And you told us earlier, just a  
8 few minutes ago, that those SIP addresses corresponded  
9 to the people who were sitting at those machines, RL and  
10 AJ.

11 A. Yes, sir.

12 Q. Now, those SIP addresses don't actually  
13 identify a machine, do they?

14 A. No, sir, not directly.

15 Q. All right. Now, you will agree that in order  
16 to accomplish anonymity with regard to the Court's  
17 construction, that it has to be anonymous both as to the  
18 people and the machine.

19 You agree with that, don't you?

20 A. Yes, sir, I agree it has to be anonymous with  
21 respect to those, and I can explain a bit, if you'd  
22 like.

23 Q. Well, let's -- for now, let's just stick with  
24 the questions I ask, and we'll move forward.

25 A. Yes, sir.



1 Q. And in your demonstration of how, under your  
2 opinion, Office Communicator works in secure mode, the  
3 SIP address corresponding to the people is scrambled and  
4 secure, true?

5 A. Yes, sir.

6 Q. But the IP address corresponding to the  
7 machine is not scrambled and is visible to an  
8 eavesdropper, right?

9 A. Yes, sir, it is.

10 Q. In fact, you saw it right here in your  
11 Wireshark data.

12 A. Yes, sir.

13 Q. So if I'm an eavesdropper and I'm watching  
14 Office Communicator work in what you call secure VPN  
15 mode, I can see the IP address of the sending machine.

16 A. Yes, sir, you can.

17 Q. And I can see the IP address of the receiving  
18 machine?

19 A. You can see the IP address of the server, but  
20 that's not the ultimate destination.

21 Q. I didn't ask about the ultimate destination.  
22 I asked about the receiving machine.

23 A. Yes, sir.

24 Q. All right. So it's true that I can see both  
25 the IP address of the sending machine and the receiving

1 machine, as shown on Slide 25.

2 A. Yes, sir.

3 Q. All right. Now, I take it you'd agree with me  
4 that the CIA wouldn't be too happy with the IP addresses  
5 corresponding to its agent sitting somewhere being  
6 visible to an eavesdropper.

7 A. I would think, in certain scenarios, they  
8 would be unhappy with that, yes, sir.

9 Q. Because you could -- from an IP address, you  
10 can learn information about where that machine is and  
11 what's going on, can't you?

12 A. Yes, sir.

13 Q. All right. So let's talk about sort of a  
14 typical VPN. We're not talking now about anything in  
15 relation to this case and exactly how it works, just  
16 your understanding, typically, of how a -- many VPNs  
17 work.

18 And the way that a -- that a typical VPN would  
19 work is that you would have a tunnel created -- not all  
20 VPNs -- but a tunnel created between the sending machine  
21 and the receiving machine, right?

22 A. Let me make sure I'm clear, sir. Are we  
23 talking about a -- like a -- something like a VPN  
24 that's -- let me make sure I'm clear. We're not talking  
25 about the Court's construction here for a VPN; we're

1 talking about specific technology?

2 Q. That's exactly what I just said, exactly,  
3 precisely.

4 A. Okay.

5 Q. And one way of implementing a VPN is to have  
6 what's called a tunnel, right?

7 A. Yes, sir.

8 Q. And that tunnel would obscure both the IP  
9 address of the source and the destination as you've  
10 shown it here on Slide 25, wouldn't it?

11 A. That would depend on the situation, sir.

12 Q. But in a typical tunnel VPN, the IP address of  
13 the sending machine is not visible to outside user,  
14 because it's wrapped in another IP address, isn't it?

15 A. No, sir. It -- the other IP address would be  
16 visible.

17 Q. Of the original sending machine, of RL  
18 Fabrikam?

19 A. Yes, sir, in that situation.

20 Q. All right. So let's -- in that case, let's  
21 move to Dr. Short's presentation.

22 Are you familiar with Dr. Short's presentation  
23 when he showed the typical VPN?

24 A. Yes, sir, I was here for that.

25 Q. You were here for that, and you also saw it

1 outside the courtroom, didn't you?

2 A. I don't think I saw that, no, sir.

3 Q. You never watched it yourself?

4 A. No, sir, I don't believe I've ever seen that  
5 typical VPN slide, no.

6 MR. POWERS: Chris, would you bring up  
7 Plaintiff's Illustrative Exhibit No. 3?

8 Q. (By Mr. Powers) We just pulled this straight  
9 off of Dr. Short's slide that he showed us, I guess,  
10 yesterday?

11 A. Yeah, if that's what you are referring to I  
12 did see that, yes, sir.

13 Q. Okay. Good. And you recall him describing  
14 this as a typical, generic VPN?

15 A. I believe so, yes, sir.

16 Q. All right. And so let's just walk through  
17 how that typical, generic VPN would work according to  
18 Dr. Short's presentation from yesterday?

19 A. Yes, sir.

20 Q. Now, we had our remote user up in the far  
21 left trying to communicate back with somebody at Acme  
22 over on the right. Do you recall that?

23 A. Yes, sir.

24 Q. And the person on the left what's called a  
25 private source address and a private destination

1 address?

2 A. Yes, sir.

3 Q. And the private source address is the IP  
4 address of that user's computer sitting right there?

5 A. It is an IP address of it, sir.

6 Q. Right. And the private destination address  
7 is the IP address of the computer he's trying to talk to  
8 over at Acme, right?

9 A. Yes, sir.

10 Q. All right. And the message that Dr. Short  
11 used was, cut our prices today?

12 A. Yes, sir.

13 Q. And then he demonstrated how a typical,  
14 generic VPN would protect that information as it went  
15 across the internet, right?

16 A. Yes, sir.

17 Q. All right.

18 MR. POWERS: So, Chris, let's put up  
19 Defendant's illustrative Slide 4, please.

20 Q. (By Mr. Powers) And you recall this  
21 portion --

22 MR. POWERS: Chris, could you please up  
23 the part in the middle left so we can see it a little  
24 better? Well, that's a little better.

25 Q. (By Mr. Powers) You recall this portion from

1 Dr. Short's presentation where he showed how that  
2 information is protected?

3 A. Yes, sir.

4 Q. And let's just make sure we all understand  
5 where we are. This far right -- there's something in  
6 yellow in the background -- there's three boxes in the  
7 yellow background. Do you see that?

8 A. Yes, sir.

9 Q. Those three boxes correspond exactly to the  
10 three boxes that we had in the prior slide.

11 MR. POWERS: Chris, let's go back to that,  
12 if we could.

13 Q. (By Mr. Powers) Cut our prices today in the  
14 source and destination address?

15 A. Yes, sir.

16 Q. All right. So now let's go back to the next  
17 one.

18 MR. POWERS: Bring it up.

19 Q. (By Mr. Powers) So the source destination,  
20 which is that IP address of the remote user's computer  
21 and the destination address, those are scrambled in the  
22 typical, generic VPN that Dr. Short demonstrated,  
23 right?

24 A. The private ones are, but the outer two are  
25 not, sir.

1 Q. I haven't started talking about those two  
2 yet. I'm just talking about the three that were on the  
3 prior slide.

4 A. Yes, sir.

5 Q. So the first two boxes in the yellow  
6 section, those correspond to the IP address of the  
7 remote user's computer and the IP address of the  
8 computer he's trying to reach back at Acme, right?

9 A. Yes, sir.

10 Q. And those are scrambled?

11 A. Yes, sir.

12 Q. And the text of the message was also  
13 scrambled?

14 A. Yes, sir.

15 Q. Now, on the left, far left in bigger boxes  
16 not the in yellow we have something called a source  
17 address and a destination address, right?

18 A. Yes, sir.

19 Q. And those are also IP addresses, right?

20 A. Yes, sir.

21 Q. But they're not the IP addresses of either  
22 the remote user or Bob over at Acme, are they?

23 A. I wouldn't agree with that, sir.

24 Q. It's the exact same number?

25 A. It's an IP -- the source address would be an

1 IP address for the remote computer.

2 Q. Well, let's ask about the number. There was  
3 a number over here in the box that's scrambled, right?

4 A. Yes, sir.

5 Q. That number corresponded to the computer  
6 that our remote user was sending it from, right?

7 A. Yes, sir.

8 Q. That number that's scrambled here is not the  
9 same number that is sitting here in the source address  
10 that is physical is it?

11 A. Generally it wouldn't be.

12 Q. The same with the destination address,  
13 that's not the same number, is it?

14 A. Generally not, no, sir.

15 Q. All right. And, in fact, generally those  
16 numbers would be the numbers of a router or some other  
17 machine in between the computer -- the computer that our  
18 remote user was sitting at and the internet, right?

19 A. Not for the source address in this example,  
20 sir, it wouldn't be. For the destination address it  
21 would be, for example, that computer in the bottom  
22 right, acme.com.

23 Q. All right. You're familiar with a book  
24 called

25 Internetworking With TCP/IP by a man



1 named Comer, right? In fact, you used that book  
2 in your class at the University of Tennessee, didn't  
3 you?

4 A. Yes, sir.

5 Q. You used it as the basis for teaching your  
6 students?

7 A. I think I used it as a basis for forming the  
8 class. I don't usually use a book for class.

9 Q. But you would agree since you used it with  
10 the class that it's reliable and accurate, wouldn't  
11 you?

12 A. I think it generally is, yes, sir.

13 Q. You're not trying to mislead the engineering  
14 students at the University of Tennessee?

15 A. I hope not, sir.

16 Q. All right. Now, it's a large book and I  
17 don't want us to go through all of it, but there is a  
18 portion of it that I do want to talk about. And you  
19 should have DX-3544 in front of you. That's a copy of  
20 the book.

21 A. Yes, sir, I have that.

22 Q. Now, if you go to Page 426 of the document,  
23 it won't correspond exactly to four -- actually Page  
24 425.

25 Sorry.

1 A. I have that, sir.

2 Q. There's a title called "Private Network  
3 Interconnection, VPN." Do you see that?

4 A. Yes, sir.

5 Q. And this is the chapter in the book that you  
6 used, at least a part with your class at the University  
7 of Tennessee about VPNs, the subject of this case?

8 A. Yes, sir.

9 Q. And this book addresses the issue that we  
10 were just discussing; i.e., or, in other words, what IP  
11 address is visible in a VPN, whether it's the sending  
12 machine or some router in between. It does address that  
13 issue directly, doesn't it?

14 A. I'm sorry, can you ask that question again?

15 Q. Sure. Let's -- in fact, I will just make it  
16 easier.

17 Can you turn to Page 391 of the  
18 book. And it's dot 427 at the bottom.

19 MR. POWERS: Chris, let's just bring up  
20 the bottom half of that page, if we could.

21 Can everybody read that? It may be tough  
22 for a book like this.

23 Q. (By Mr. Powers) Do you have that in front of  
24 you, Dr. Jones?

25 A. Yes, I do.

1 Q. Now, this is a description of exactly what  
2 we were just talking about, which is which addresses are  
3 visible and which ones aren't in a VPN, right?

4 A. I believe it's describing a mechanism called  
5 tunneling and generally describes this idea of putting  
6 one IP packet within another like we just talked about,  
7 yes, sir.

8 Q. Right. And that tunneling is what Dr. Short  
9 had described has the sort of typical, generic VPN that  
10 we were just describing, right? It is the same  
11 encapsulation in a separate tunnel, right?

12 A. Generally, yes, sir.

13 Q. All right. Now, if you go to the last two  
14 sentences --

15 MR. POWERS: And, Chris, let's highlight  
16 that and bring it up if we could. Maybe we can make  
17 that even bigger. It starts with "furthermore."

18 Q. (By Mr. Powers) It says, "Furthermore, even  
19 the identity of the original source and destination are  
20 hidden because the header of the inner datagram is  
21 encrypted, as well."

22 That's describing what we just saw in Dr.  
23 Short's figure where the original IP address was  
24 encrypted and it was inside this what's called encrypted  
25 inner datagram, right?

1           A.           No, sir this is describing a different  
2 configuration than what Dr. Short was showing us.

3           Q.           Let me finish reading. "Even the identity  
4 of the original source and destination are hidden  
5 because the header of the inner datagram is encrypted as  
6 well."

7                        You would agree that's an accurate statement  
8 as to typical VPNs?

9           A.           No, sir. It depends on the configuration.

10          Q.           And this is the configuration being  
11 described in the VPN chapter of the book you use,  
12 true?

13          A.           Yes, sir, this is one of them. I haven't  
14 looked at rest of it.

15          Q.           Now, the next sentence says, "Thus, only  
16 addresses in the outer datagram header are visible. The  
17 source address is the IP address of the router at one  
18 end of the tunnel, and the destination address is the IP  
19 address of the router at the other end of the tunnel."

20                        That's saying what I just said to you earlier  
21 about the routers on either end of the tunnel, right?

22          A.           Yes, sir.

23          Q.           So now let's go back to this IP address for  
24 SIP address.

25                        MR. POWERS: Chris, could you bring up --

1 back up, Slide 25.

2 MR. CALDWELL: Your Honor, may we  
3 approach?

4 THE COURT: Yes, you may.

5 (Bench conference.)

6 MR. CALDWELL: It seems Mr. Powers is  
7 cross-examining the witness and attacking him on what is  
8 or isn't a VPN on the grounds of whether it complies  
9 with the tunneling taught in this book. Tunneling and  
10 encapsulation, they lost that construction on Markman.  
11 Then when we argued anonymity in front of Your Honor at  
12 the pretrial conference when I raised that again, I  
13 said, Your Honor, the problem is I think we are just  
14 going to use this to boot back into encapsulation and  
15 tunneling. And Mr. Powers stood right there and said,  
16 no, sir, that's not what we're going to do, we are not  
17 going to argue tunneling. And here they are putting up  
18 a book pointing to IP tunneling and saying, hey, now  
19 there's no.

20 infringement. You know --

21 MR. POWERS: I am explicitly not doing  
22 that. What I said was I'm not talking about the Court's  
23 construction. I am just talking about a typical VPN and  
24 not all VPNs. And that's specifically what Short said  
25 was a typical VPN or generic VPN, and I'm not saying

1 it's required by the Court or anything else. I'm  
2 talking about how one could implement it in order to  
3 hide it. My point isn't --

4 THE COURT: And what's the relevance of  
5 that?

6 MR. POWERS: Well, the relevance of that  
7 is that if you want to -- if there is a way to do it, we  
8 just don't do it that way.

9 THE COURT: If you don't do it that way,  
10 then what's the relevance of talking about it?

11 MR. POWERS: I'm happy to end this part of  
12 the discussion.

13 THE COURT: Let's do so.

14 (End of Bench Conference.)

15 (Pause in proceedings.)

16 MR. POWERS: Can we have the lights down,  
17 please.

18 Q. (By Mr. Powers) When we broke we were back  
19 at Slide 25, which is your slide, Dr. Jones, about what  
20 you can see and what you can't see in Office  
21 Communicator in secure mode. True?

22 A. Yes, sir.

23 Q. Okay. Now, and just to reorient ourselves,  
24 you can see down here the IP address of RL's computer  
25 that he sent that message from?

1 A. Yes, sir.

2 Q. And you can see the IP address of the OC  
3 server he's sending it to?

4 A. Yes, sir.

5 Q. And what you can't see are those SIP  
6 addresses that correspond to the people sitting at those  
7 machines?

8 A. Yes, sir.

9 Q. All right. Now, the claims of the '135  
10 patent are talking about computers not people, right?

11 A. Yes, sir.

12 Q. And the IP addresses we are talking about  
13 here that are visible in Microsoft's products, those  
14 correspond to the computers?

15 A. Yes, sir.

16 Q. And the SIP addresses that are hidden, those  
17 correspond to the people, right?

18 A. Yes, sir, they do.

19 Q. All right.

20 MR. POWERS: So let's bring up Claim 1,  
21 please, Chris, of the '135 patent.

22 Q. (By Mr. Powers) Now, what Claim 1 talks  
23 about is the VPN between the client computer and a  
24 target computer, right?

25 A. Yes, sir.

1 Q. And that client computer is identified with  
2 that IP address that we've already identified, right?

3 A. Yes, sir.

4 Q. And the target computer is identified with  
5 that IP address that is visible also, right?

6 A. It's one of the target computers, yes,  
7 sir.

8 Q. All right. Now, and if you go down in  
9 Section 1 in that communication of the claim, there is a  
10 discussion explicitly of IP addresses associated with  
11 the target computer, right?

12 A. Yes, sir.

13 Q. It's not talking about SIP addresses  
14 anywhere, is it?

15 A. No, sir, it's not.

16 Q. And it's not talking about the people  
17 sitting there, is it?

18 A. No, sir.

19 Q. All right. So now let's go to the '135  
20 specification.

21 MR. POWERS: Chris, can you bring up  
22 Column 1, Lines 25 through 27.

23 Q. (By Mr. Powers) You've read this portion of  
24 the specification, Dr. Jones?

25 A. Yes, sir.



1 Q. Probably many, many times?

2 A. Yes, sir.

3 Q. This is a portion that's specifically  
4 talking about the anonymity requirement that the Court  
5 has held exists. True?

6 A. Let me read it a second.

7 Q. Of course.

8 A. Yes, sir, it's discussing anonymity.

9 Q. And when it is discussing anonymity in this  
10 very first column of the patent, it says, "It may be  
11 desired to prevent an eavesdropper from discovering that  
12 terminal 100 is in communication with terminal 110."

13

14 Right?

15 A. Yes, sir.

16 Q. And that's talking about the sending machine  
17 and the machine it's sending it to?

18 A. I -- I believe so. I think that's from --  
19 that may be from Figure 1 where that's the sender and  
20 the ultimate destination is my recollection.

21 Q. I think it's talking about the sentence  
22 immediately above it where it says, "Terminal 100 may  
23 transmit secret information to terminal 110 over the  
24 internet."

25 A. Yes, sir.

1 Q. So in the actual '135 patent when it's  
2 talking about anonymity, it's saying you want to prevent  
3 an eavesdropper from knowing that computer is in  
4 communication occasion with that computer, correct?

5 A. Yes, sir.

6 Q. And if we go back to your Slide 25 real  
7 quick on -- Office Communicator in secure mode, you  
8 would agree our eavesdropper, "hacker" as you called  
9 him, would know that this computer, which is the  
10 computer we are talking about, is in communication with  
11 that computer?

12 A. Yes, sir.

13 Q. Now, and you will agree that the '135  
14 patent, several places, talks about trying to hide the  
15 IP address of the sending machine, right?

16 A. I believe it does so, yes, sir.

17 Q. All right. And the Office Communicator  
18 product does not hide that IP address, does it? It's  
19 right there in plain view for an eavesdropper?

20 A. I can't see it. Can you show me what you  
21 are pointing to?

22 Q. Your Slide 25, it should be up in front of  
23 you.

24 A. Yes, sir.

25 Q. And over on the far left it says, Source

1 192, 168, the same one we have already gone through  
2 several times.

3 A. Yes, sir.

4 Q. That IP address of that machine is visible  
5 to any eavesdropper?

6 A. Yes, sir.

7 Q. Not at all hidden?

8 A. No, sir.

9 Q. So if I'm right that anonymity, as the Court  
10 has said is a requirement, requires hiding the IP  
11 address of the sending machine, you will agree we don't  
12 infringe because it's right there for people to see?

13 A. If we're talking about that outer IP  
14 address, yes, sir.

15 Q. And that outer IP address in this case is the  
16 actual IP address of our sending machine of, RL  
17 Fabrikam's machine?

18 A. Yes. If that's never hidden and you're  
19 correct about that, yes, sir.

20 Q. Okay. That is also true of Live  
21 Communication Server and the other products that you  
22 have listed as accused products here. In all of them  
23 this IP address of the sending and receiving machine,  
24 the actual IP address is visible, isn't it?

25 A. They operate in the same way as this one for

1 this purpose, yes, sir.

2 Q. Now, let's talk about some marketing  
3 materials that you talked about in direct examination.

4 Do you recall being asked by your lawyer that  
5 when Office Communicator is being marketed, it's  
6 marketed that you don't need an additional VPN because  
7 one is already created?

8 A. I think the document doesn't say that  
9 explicitly. I think that's my interpretation of that  
10 document, yes, sir.

11 Q. So you will agree with me that that document  
12 actually doesn't say you don't need an additional VPN?  
13 It says you don't need a VPN, correct?

14 A. That is what it's saying, yes, sir.

15 Q. I'm not sure that the record is going to be  
16 clear. Which -- which is it saying?

17 A. I said it explicitly -- I believe it says  
18 that you don't need a -- to set up a VPN or something  
19 along those lines.

20 Q. Now, and let's just -- so there's no magic  
21 about it. Let's bring up the actual exhibit.

22 A. Yes.

23 Q. It is DX-3111. It should be in the binder  
24 in front of you.

25 MR. POWERS: And, Chris, I think we can

1 bring it up.

2 Q. (By Mr. Powers) This is the document you  
3 were testifying about on direct examination, Dr. Jones.

4 A. I believe that's correct.

5 Q. And you were shown, I believe, Page 8,  
6 again, referring to the .00s at the bottom.

7 MR. POWERS: Chris, if we can bring up that  
8 first bullet in the middle. Nope, first bullet in the  
9 middle. There we go.

10 Q. (By Mr. Powers) That's the portion you were  
11 testifying about in your direct examination,  
12 Dr. Jones?

13 A. Yes, sir.

14 Q. Now, this says you don't need a VPN,  
15 right?

16 A. Yes, sir.

17 Q. And the products that you're accusing of  
18 being VPNs are specifically saying in their promotional  
19 materials that a benefit of them is that you don't need  
20 a VPN, right?

21 A. Yes, sir.

22 Q. All right. But you're still saying they're  
23 a VPN even though they're saying they're not?

24 A. Yes, sir.

25 Q. Now, there is a lot of other documents --

1 you will agree with me that you reviewed a lot of office  
2 communication promotional materials, right?

3 A. Yes, sir.

4 Q. And those materials consistently refer to  
5 Office Communicator as not needing any VPN at all and  
6 that that's a benefit of them, right?

7 A. I believe so. I think the language is  
8 similar to this.

9 Q. That no VPN at all is needed, and that's a  
10 benefit. Is that fair?

11 A. I -- like I say, I think that's a fair  
12 characterization of what's here, yes, sir.

13 Q. Okay.

14 MR. POWERS: Let's bring up PX-130.

15 Q. (By Mr. Powers) This is one more example.  
16 This is one of the exhibits you had actually looked at  
17 and had originally listed as something you were going to  
18 refer to, wasn't it?

19 A. Yes, sir.

20 MR. POWERS: And could we go to Page 4 of  
21 that, Chris.

22 Q. (By Mr. Powers) Do you see, Dr. Jones, on  
23 Page 4 in the very first bullet when they're talking  
24 about the benefits of it, it is internet access without  
25 a VPN connection?

1 A. Yes, sir.

2 Q. And then if you go forward to Page 11,  
3 again, using the pages at the bottom. You see at the  
4 very bottom it says reduced use the next to the last  
5 paragraph, it says, "Reduced use of VPN services reduces  
6 hardware, software, and operating costs. More  
7 importantly accessing real-time presence information  
8 without requiring a VPN provides true real-time  
9 indication of availability."

10 A. Yes, sir, I see that.

11 Q. Does that -- those are just other examples  
12 where the products you're accusing of being a VPN are  
13 saying one of the reasons we're good is we're not a VPN,  
14 fair?

15 A. I don't believe that's what they're saying  
16 here, sir. I believe they are saying that you don't  
17 need an additional VPN software.

18 Q. It doesn't say that, does it? It just says  
19 you don't need a VPN?

20 A. Yes, sir.

21 Q. And if you turn to Page 44, finally, in this  
22 document, the one that you referred to --

23 MR. POWERS: About two-thirds of the way  
24 down, Chris, there is a heading that says, "Remote user  
25 access from the Internet with no VPN connections."

1 Q. (By Mr. Powers) That doesn't say no  
2 additional VPN connections, right, Dr. Jones?

3 A. That's correct, sir.

4 Q. It says "no VPN connections"?

5 A. Yes, sir.

6 Q. All right. So while we're on this topic,  
7 lets just stay here but move to the '180 patent  
8 briefly --

9 A. Yes, sir.

10 Q. -- while we're on this concept of anonymity.  
11 In the '180 patent, the application that you say is a  
12 VPN is the one that's called "Meeting Space"?

13 A. It's an application that uses a VPN that's  
14 formed by the PeerNet interfaces.

15 Q. It's that use of Meeting Space that you were  
16 testifying about creates the VPN and thus infringes,  
17 right?

18 A. Yes, sir, that's an example of it.

19 Q. All right. Now, you did not in your direct  
20 testimony provide any evidence regarding whether the use  
21 of Windows Meeting Space is or is not anonymous, did  
22 you?

23 You didn't discuss that issue?

24 A. I believe I did, sir.

25 Q. Well then, I missed it, so let me ask you



1 about it.

2                                        You will agree with me that  
3 the Windows Meeting Space relevant to the '180 patent,  
4 that there the IP address of the sending machine is also  
5 visible?

6           A.       It is visible on the first link yes, sir.

7           Q.       All right.  Let's go to the point that was  
8 raised.  Let's put up your slide.

9                                       MR. POWERS:  And that's going to be Slide  
10 56, Chris.

11          Q.       (By Mr. Powers) This is the slide that you  
12 were using, the page you were using to describe how  
13 Meeting Space works in connection with the '180 patent,  
14 correct?

15          A.       Yes, sir.

16          Q.       And we have our remote user over here who's  
17 sitting at home, I think you said celebrating a  
18 birthday, who wanted to connect with the students who  
19 were sitting in the library and have a shared meeting?

20          A.       Yes, sir.

21          Q.       That was the example you used to illustrate  
22 the possible use?

23          A.       Yes, sir.

24          Q.       Now, the connection between this remote user  
25 here on the far left and the computer that that remote

1 user attaches to, those two IP addresses will be visible  
2 to a hacker or eavesdropper, won't they?

3 A. Yes, sir.

4 Q. All right. So, again, if I'm right that  
5 anonymity requires concealing those IP addresses, you  
6 will agree it's not met in Windows Meeting Space  
7 either?

8 A. Yes, sir --

9 THE COURT: I am sorry. I couldn't hear  
10 your question.

11 Q. (By Mr. Powers) You will agree with me that  
12 if anonymity, as required by the Court, applies -- means  
13 you can't see those two IP addresses, then, in fact,  
14 it's not met in this case?

15 A. Yes, sir.

16 Q. All right. Now, let's turn to another  
17 topic.

18 And the topic that you described -- that  
19 you addressed at some length in your direct testimony  
20 was the issue of website. Do you have that one in mind?

21 A. Yes, sir.

22 Q. And you will agree with me, and I think you  
23 testified on direct examination, that everywhere a  
24 website appears, Microsoft's products do not literally  
25 infringe?

1 A. Yes, sir.

2 Q. All right. So what I'd like to do, if we  
3 could bring back up your easel and your slide --

4 MR. POWERS: May I approach, Your Honor?

5 THE COURT: Yes, you may.

6 MR. CALDWELL: Your Honor, Plaintiff has  
7 no objection to Mr. Powers showing them, but Plaintiff  
8 does object to Mr. Powers marking or otherwise altering  
9 the demonstrative exhibits that are in evidence.

10 MR. POWERS: Anticipating that exact  
11 objection, I will not mark them up in any way, but I  
12 will add to them in a way it doesn't deface them. I  
13 have a separate thing that can be can be put on top of  
14 them.

15 THE COURT: Okay.

16 MR. POWERS: Can y'all see that?

17 Q. (By Mr. Powers) Can you see that?

18 A. Yes, sir.

19 Q. All right. So just to reorient ourselves --

20 MR. POWERS: May I approach the board,  
21 Your Honor?

22 THE COURT: Yes, you may.

23 Q. (By Mr. Powers) You testified that check --  
24 you allowed Counsel for VirnetX to put red checks in  
25 each of these boxes, and I would like to ask you a

1 slightly different question.

2           If the box meant that there was literal  
3 infringement, you wouldn't be able to put red checks in  
4 these boxes, would you?

5           A.       Not in the second and third one, sir.

6           Q.       All right. So for two out of the three  
7 limitations or elements of the '135 patent, Claim 1, if  
8 the question is whether Microsoft's products, even under  
9 your theory infringe literally, the answer would be  
10 no?

11          A.       That's correct, sir.

12          Q.       There wouldn't be check marks in these  
13 boxes?

14          A.       That's correct, sir.

15          Q.       And if we went to Claim 1 of the '180 --  
16 well, actually, let's do -- let's stay with the '135 for  
17 a minute.

18                   Can we go to Claim 10. And if  
19 instead of asking you whether to put a red check there I  
20 asked you whether there was literal infringement of  
21 these limitations, three of the four limitations you  
22 would have to say no to, wouldn't you?

23          A.       Yes, sir.

24          Q.       All right. So now let's talk about your --  
25 the reason that you put red checks in those boxes

1 despite the fact there is no literal infringement.

2 Okay?

3 A. Yes, sir.

4 Q. Now, you took the position, as I understand  
5 it, that the products you're talking about here with  
6 respect to the '135 patent, Office Communicator and the  
7 others, even though they don't have a website literally,  
8 are equivalent to that?

9 A. Yes, sir.

10 Q. And under what you were describing as the  
11 Doctrine of Equivalents, true?

12 A. Yes, sir.

13 Q. Now, let's orient ourselves a little bit.  
14 You'll agree that the internet is different from the  
15 worldwide web?

16 A. Yes, sir.

17 Q. The worldwide web, which is the subject of  
18 the Court's instructions, that's what's required for the  
19 claim, right?

20 A. Yes, sir.

21 Q. The internet is much broader and different,  
22 isn't it?

23 A. It -- it -- it is much broader than that,  
24 yes, sir.

25 Q. In fact, the internet has existed since

1 1969, hasn't it?

2 A. In one way or form or another, yes, sir.

3 Q. It started with ARPANET, right?

4 A. Yes, sir.

5 Q. Okay. Now, the worldwide web didn't really  
6 start until about 1993, right?

7 A. I believe that's correct, sir, somewhere in  
8 that range.

9 Q. Now, I take it you would agree with me the  
10 worldwide web has transformed our world in a meaningful  
11 way?

12 A. Yes, sir.

13 Q. In a huge way, hasn't it?

14 A. For many people, yes, sir.

15 Q. Most people, wouldn't you agree with me  
16 there?

17 A. In our country, yes, sir.

18 Q. All right. And there are massive companies  
19 that exist only on the worldwide web, right?

20 A. Yes, sir.

21 Q. Amazon?

22 A. Yes, sir.

23 Q. Google?

24 A. Yes, sir.

25 Q. eBay?

1 A. Yes, sir.

2 Q. Yahoo!

3 A. Yes, sir.

4 Q. Facebook?

5 A. Yes, sir.

6 Q. America Online?

7 A. Yes, sir.

8 Q. Some of the biggest companies in the world  
9 are only on the worldwide web and exist only because of  
10 the worldwide web?

11 A. Yes, sir.

12 Q. So the web has had a huge, substantial  
13 impact on our lives?

14 A. Yes, sir.

15 Q. And the economy?

16 A. Yes, sir.

17 Q. Different from the internet?

18 A. Yes, sir.

19 Q. All right. Now, the internet can have many  
20 devices attached to it that aren't websites. You will  
21 agree with that?

22 A. Yes, sir.

23 Q. So I could have a printer sitting right  
24 there that has -- is on the internet because it has an  
25 IP address, but it is not a website. You'd agree with

1 that?

2 A. It may or may not be, sir.

3 Q. But it may not be?

4 A. Yes, sir.

5 Q. The same with a phone, that could be  
6 attached to the internet and not be a website?

7 A. Yes, sir.

8 Q. All right. Now, in your testimony you  
9 testified yesterday that you believed the Doctrine of  
10 Equivalents was met here because of the application of  
11 what you called the function/way/result test; do you  
12 recall that?

13 A. Yes, sir.

14 Q. And I'd like to put up on the screen --

15 MR. POWERS: So if we can darken the room,  
16 Ms. Ferguson, I would appreciate it.

17 Q. (By Mr. Powers) -- your testimony on that  
18 subject and then we talk about it a bit.

19 So, first, function. You were asked yesterday  
20 at Page 108, "So were you able to determine if the  
21 Microsoft '135 products perform substantially the same  
22 function as a secure website?" That was your testimony  
23 about the "function" part of function/way/result, right?

24 A. Yes, sir.

25 Q. And your answer was, "Yes, because they use



1 computers to communicate in a VPN." Let's just stop  
2 there for a minute.

3 I take it you would agree with me any VPN  
4 would meet that requirement. You have computers that  
5 have VPN, right?

6 A. Yes, sir, you do.

7 Q. All right. "To present information to  
8 clients." Well, that's true in any VPN, isn't it?

9 A. Well, it depends on -- yes and no, sir. I  
10 mean there would be situations where you would be and  
11 situations where you wouldn't, but that's not what I'm  
12 discussing here.

13 Q. The typical VPN you're presenting  
14 information to clients across the VPN, you would agree  
15 with that?

16 A. Not -- no, sir, I wouldn't.

17 You would agree often in VPNs, that you are  
18 presenting information to clients

19 A. I wouldn't agree that the VPN is presenting  
20 information to the clients, no, sir.

21 Q. Well, let's talk about a typical use of a  
22 VPN.

23 I'm sitting in my hotel room here and I  
24 connect via my VPN to my office back at the law firm.

25 A. Yes, sir.

1 Q. And there are resources sitting in my office  
2 that are on my network that I can access on my VPN,  
3 right?

4 A. Yes, sir.

5 Q. Like things that are not on my laptop, I can  
6 have shown -- sent to my laptop from my law firm?

7 A. Yes, sir.

8 Q. In that situation I am using a computer to  
9 communicate on a VPN to present information to me, the  
10 client. That's true, isn't it?

11 A. No, sir, that doesn't meet what I'm talking  
12 about here.

13 Q. Well, I'm presenting information?

14 A. No, sir. Those devices would be presenting  
15 information, not the VPN.

16 Q. The devices on the other side of the VPN?

17 A. Yes, sir.

18 Q. Well, of course. That's always what is  
19 presenting information, right, some device on the other  
20 end of the pipe?

21 A. If they are acting as a server they would  
22 be, yes, sir.

23 Q. So any situation where you have a VPN with a  
24 client and a server, that server is presenting  
25 information to the client across the VPN, true?

1 A. By the server are you referring to the other  
2 end of the VPN or a server that's in the virtual private  
3 network?

4 Q. I'm talking about a server  
5 that's at the other end of the VPN.

6 A. If it's just forming part of the tunnel,  
7 then I wouldn't agree with that, sir.

8 Q. That's not what I'm asking. I am connecting  
9 to my law firm.

10 A. Okay.

11 Q. I try to get information from my law firm  
12 that is not on my laptop. That's coming from servers at  
13 my law firm, and it comes back down to me, right?

14 A. Yes, sir.

15 Q. That's a typical use of the VPN, right?

16 A. Yes, sir.

17 Q. And in that typical use of the VPN,  
18 I'm having information presented to me across that VPN,  
19 true?

20 A. Yes, sir.

21 Q. All right. Now, the next thing you say  
22 is to require that clients be authorized to access the  
23 servers. That's also typical on VPNs, isn't it?

24 A. Yes, sir.

25 Q. So now let's go to your testimony about

1 substantially the same way.

2 MR. POWERS: Let's bring that up, please,  
3 Chris.

4 Q. (By Mr. Powers) The very next question and  
5 answer in the transcript. You were asked: "Were you  
6 able to determine if the Microsoft '135 products perform  
7 in substantially the same way?" And the next answer it  
8 was your testimony on that subject, wasn't it?

9 A. Yes, sir.

10 Q. And you said a lot of the same words, "They  
11 make use of computers to communicate on the VPN."  
12 That's the same as what we just talked about, right?

13 A. Yes.

14 Q. Now, using protocols that's true on any  
15 VPN?

16 A. Sir, I think you're misunderstanding what  
17 I'm saying.

18 Q. I am asking you a question about it.

19 A. VPNs use protocols, yes, sir.

20 Q. Okay. "They present information to  
21 clients." That we've already talked about. Now you  
22 say, "through windows." And by "windows" I take it you  
23 mean -- you meant capital W meaning our product  
24 Windows?

25 A. Sir, I meant the windows in an operating

1 system that you typically see --

2 Q. Okay.

3 A. -- the visible windows.

4 Q. Let's stop on that. The '135 patent doesn't  
5 say anything about using Microsoft's Windows operating  
6 system, does it?

7 A. No, sir, it doesn't, I don't believe.

8 Q. It is not a requirement in any claim, not  
9 discussed anywhere in the patents at all?

10 A. It's certainly not a requirement of the  
11 claim. I don't recall if it's somewhere else in the  
12 specification.

13 Q. You certainly didn't rely on that, did  
14 you?

15 A. No, sir.

16 Q. Now, over the internet -- most VPNs go over  
17 the internet, don't they? When I'm sitting in my  
18 hotel room here dialing back to my law firm, I'm going  
19 over the internet, aren't I?

20 A. Yes, sir.

21 Q. And that's a typical use of the VPN?

22 A. Yes, sir.

23 Q. "In a way in which the clients and servers  
24 cooperate." Well, I think we talked about that before.  
25 If I'm connecting to my server, they are cooperating,

1 aren't they?

2 A. Yes, sir.

3 Q. That's typical in a VPN, isn't it?

4 A. Yes, sir.

5 Q. "To ensure that the clients are authorized  
6 to connect." That's what we've already talked about in  
7 the prior slide that I have to log in and say that I'm  
8 me, right?

9 A. Yes, sir.

10 Q. And that's also typical?

11 A. Yes, sir.

12 Q. All right. Let's get to the result part,  
13 the last part, the very next question and answer in the  
14 transcript. "Finally, did you determine whether the  
15 Microsoft '135 products achieved substantially the same  
16 result as a secure website?" And your answer was, "The  
17 result was, well, you communicate with the computers at  
18 a VPN." That's the same as we saw in the last two,  
19 right?

20 A. It's similar to that, yes, sir.

21 Q. The same language essentially, right?

22 A. Yes, sir.

23 Q. "And over a public network," that's the same  
24 as what we have talked about before over the internet?

25 A. Yes, sir.

1 Q. "In a way which only clients that are  
2 registered can communicate." We've talked about that  
3 with authority, right -- authorization?

4 A. Yes, sir.

5 Q. Okay. Now, with regard to the '135 patent,  
6 if the jury were to find that Microsoft's products are  
7 not equivalent to a website, you would agree with me  
8 that there's no infringement of anything in the '135  
9 patent?

10 A. Yes, sir.

11 Q. Let's talk now about indirect infringement.

12 MR. POWERS: And, Chris, could you bring  
13 up Slide 42, please.

14 Q. (By Mr. Powers) So Slide 42 was part of your  
15 presentation to the jury yesterday, wasn't it,  
16 Dr. Jones?

17 A. Yes, sir.

18 Q. And here you were attempting to set out what  
19 you understood to be the requirements for proving  
20 inducement infringement?

21 A. Yes, sir.

22 Q. I take it you weren't trying to say to the  
23 jury that this is the law? You understand that's Judge  
24 Davis' role?

25 A. Yes, sir, I understand he will give them

1 directions on that.

2 Q. Okay. Now, on the first issue, the  
3 question of the knowledge of the patent, you cited two  
4 things, didn't you? One was a Patent Office filing in  
5 one of Microsoft patents and one was a letter from  
6 SAIC?

7 A. Yes, sir.

8 Q. Let's take the first one first.

9 MR. POWERS: Chris, could you go to Slide  
10 43. I think it is the very next slide.

11 Q. (By Mr. Powers) This is the document that  
12 you referred to as providing evidence that Microsoft  
13 knew about the '135 patent, right?

14 A. Yes, sir.

15 Q. Now, what I didn't hear in your testimony  
16 yesterday was what importance should be attached as to  
17 who knew about the '135 patent.

18 You didn't testify about that issue, did you?

19 A. No, sir.

20 Q. And so in your view if any person in all of  
21 Microsoft's 90,000 employees around the world, if any  
22 one of them knew about the '135 patent, that satisfies  
23 this requirement?

24 A. No, sir.

25 Q. So it has to be a relevant person; would you



1 agree with that?

2 A. I believe it would have to be someone who  
3 was, say, in the legal department and/or a technical  
4 person, not -- not someone, say, working in an office.

5 Q. All right. And so it has to be someone with  
6 relevant responsibilities about the products that you're  
7 talking about here in this case. Is that fair? Or  
8 legal responsibilities that relate to those products?

9 A. I'm not sure about relating to those products,  
10 sir; but I think if someone in the legal office were  
11 made aware, that would constitute knowledge?

12 Q. So if it were a lawyer in Microsoft's  
13 Shanghai, China office with no responsibilities relating  
14 to any of these products at all that just happened to  
15 walk in and be handed a copy of the '135 patent, that  
16 would be enough in your mind?

17 A. No, sir, and I don't believe that's what  
18 happened here.

19 Q. No, it's not. But I'm trying to test your  
20 understanding of the relevant person. And you said you  
21 agree it wouldn't be just any employee. And you said,  
22 well, somebody in legal. Now, there's a lot of people  
23 in legal at large companies. Some of them have  
24 responsibilities that are relevant to what we're talking  
25 about and some don't.

1 I take it you agree with me  
2 that the knowledge that we're talking about for  
3 inducement, because inducement is a state of mind by  
4 somebody who knows there's going to be infringement, it  
5 has to be somebody that's responsible for the right  
6 issues, right?

7 A. Sir, I believe if someone were notified  
8 under these circumstances, they would understand that  
9 this was important to Microsoft.

10 Q. That's an assumption of yours; you don't  
11 actually know it?

12 A. Well, it's my belief, sir.

13 Q. Okay. But it's not based on any knowledge  
14 you have, is that fair, in terms of what happened  
15 actually inside Microsoft or what happens inside large  
16 companies like Microsoft? You just don't know?

17 A. I -- I don't know what happened to this  
18 letter other than I would assume the patent inventors  
19 would have been notified.

20 Q. All right. Let's -- well, let's stop there.  
21 You would assume the inventors on the patent -- well,  
22 let's be specific so we have good context here.

23 A. Yes.

24 Q. Exhibit PX-401 is the exhibit that you're  
25 talking about on Slide 43, right?

1 A. Yes, sir.

2 Q. And that is a Microsoft patent application  
3 that was going through the Patent Office at that time?

4 A. Yes, sir.

5 Q. And if we go to your Slide 44. Let's get  
6 your position.

7 MR. POWERS: Can you blow it up a little  
8 bit bigger.

9 Q. (By Mr. Powers) This is the part you relied,  
10 on Dr. Jones?

11 A. Yes, sir.

12 Q. And this is the part when the Examiner was  
13 looking at --

14 MR. POWERS: Thanks, Chris, that's much  
15 better.

16 Q. (By Mr. Powers) In looking at one of  
17 Microsoft's patent's -- patent applications, they said:  
18 Wait a minute, that might not be patentable because of  
19 Mr. Munger's patent disclosure, right?

20 A. I believe they said it wasn't.

21 Q. Right. At this point.

22 A. Yes, sir.

23 Q. Okay. And when you said that, you would  
24 assume that the inventors on this patent would be told  
25 about that fact that the Patent Office had said

1 Mr. Munger's application teaches something relevant to  
2 your invention. You assumed that.

3 A. I believe that, sir.

4 Q. You don't know that, do you?

5 A. I don't know if they were, sir.

6 Q. You don't know what standard practice inside  
7 large corporations is either.

8 A. Not -- not at Microsoft, no, sir.

9 Q. Okay. Now, the inventors on this patent at  
10 issue in PX401 are not anybody involved in anything with  
11 any of the products in this case, are they, as far as  
12 you know?

13 A. As far as I know, sir.

14 Q. The names on this patent application have  
15 never come up in this case as far as you know?

16 A. I don't know, sir.

17 Q. In all the information you read, you can't  
18 recall ever seeing these names; isn't that fair?

19 A. I don't recall, sir.

20 Q. All right.

21 MR. POWERS: Now, let's bring up actual  
22 PX401. Chris, can you bring that up and bring up Page  
23 2, please? No, not Page 2. The address -- I'm looking  
24 for the addressee line on the very second page. One  
25 back. There you go.

1 Q. (By Mr. Powers) Let's look at who it's  
2 addressed to, please, Dr. Jones.

3 A. Yes, sir.

4 Q. This was not sent to Microsoft at all, was it?

5 A. No, sir. It's sent to a law firm.

6 Q. So based on the evidence you supplied to the  
7 jury, no one at Microsoft, not even a lawyer, saw this  
8 document, just based on the document you showed us.

9 A. I have no -- this is what it says, sir.

10 Q. And it says what I said it says, doesn't it?

11 A. Yes, sir.

12 Q. Okay. And you'll agree with me that when  
13 we're talking about inducement infringement, it's  
14 knowledge that what Microsoft is doing could be an  
15 infringement that's relevant, true?

16 A. Yes, sir. They have to have formed that  
17 knowledge.

18 Q. And infringement is defined by the claims you  
19 earlier testified, not the specification, right?

20 A. Yes, sir.

21 Q. You were very, very clear about that in your  
22 direct testimony, that the claims define infringement;  
23 the specification doesn't do that at all, right?

24 A. That's correct, sir.

25 Q. Now, in -- let's go back to your Slide 44,

1 please.

2           The portions that you've called out are only  
3 discussing the specification, not the claims, right?

4           A.    I believe they mention the entire patent, sir.

5           Q.    Well, these are the only two parts of the  
6 entire exhibit where Munger is mentioned, right?

7           A.    I don't recall. I just --

8           Q.    Well, let's bring up -- I'm sorry. I didn't  
9 mean to cut you off.

10          A.    I just focused on these two.

11          Q.    All right. Those are, in fact, the only  
12 two that you were -- you wouldn't have left one out  
13 because you didn't think it was relevant, right? You  
14 cited the ones that were there; isn't that fair?

15          A.    No, sir. I would have just picked these out  
16 on this page as pointing out the knowledge of the  
17 patent.

18                   MR. POWERS: Let's bring up the actual  
19 exhibit then, PX401. And let's go to Page 10 of the  
20 document. And let's bring up the two portions that were  
21 just described relating to Munger, the first paragraph  
22 after obviousness. It's 401.

23          Q.    (By Mr. Powers) These are the two portions  
24 that you were referring to in your Slide 44, Dr. Jones,  
25 aren't they?

1 A. I believe so, yes, sir.

2 Q. And if you look at the second portion, the  
3 only part that was actually called out was a portion of  
4 the specification, true?

5 A. Yes, sir.

6 Q. And -- and it's the particular lines in the  
7 specification at Column 1, Lines 41 to 50.

8 A. I'm sorry. 45 to --

9 Q. 60. I'm sorry. You're right.  
10 Now, that doesn't refer to the claims at all,  
11 does it?

12 A. No, sir.

13 Q. So -- and, in fact, typically, you're somewhat  
14 familiar with how patent prosecution works in the Patent  
15 Office, right? You testified about that on direct  
16 examination.

17 A. Yes, sir.

18 Q. When a reference is being used against a  
19 patent application, typically, what's being referred to  
20 is the teaching of the specification, isn't it?

21 A. Yes, sir. The teaching and the specification  
22 are often referred to.

23 Q. And typically, not the claims, true?

24 A. More often than not, yes, sir.

25 Q. All right. And that's true in the case of

1 Exhibit 401 that you relied on. What's being referred  
2 to is the specification, not the claims.

3 A. Yes, sir. In that excerpt, yes, sir.

4 Q. And -- but it's the claims you have to look at  
5 to know whether there's infringement, right?

6 A. Yes, sir.

7 Q. So this document isn't highlighting anything  
8 relating to the scope of the claims of the Munger  
9 patent, is it?

10 A. At least these excerpts. I'd have to look at  
11 the rest, sir.

12 Q. There's nothing you pointed to in your direct  
13 testimony that did, did it?

14 A. No, sir.

15 Q. All right. Now, you testified a couple of  
16 times on your direct examination that -- that the  
17 Microsoft patent was rejected based on Mr. Munger's  
18 patent.

19 Do you remember that?

20 A. Yes, sir.

21 Q. Well, in fact, the patent was issued to  
22 Microsoft, wasn't it?

23 A. I believe it ultimately was, yes, sir.

24 Q. So the Patent Office decided that this patent  
25 was patentable to Microsoft over and in spite of Mr.



1 Munger's '135 patent.

2 A. Ultimately, yes, sir.

3 Q. All right. Now, that -- that was the first  
4 bit of evidence that you put up before the jury on  
5 knowledge, true?

6 A. Yes, sir.

7 Q. The second was in Slide 45. Let's look at  
8 that. This was a letter that SAIC sent to Microsoft in  
9 May of 2006, correct?

10 A. Yes, sir.

11 Q. And the portion that you showed the jury just  
12 says that -- that the '135 patent would be of interest  
13 and valuable to Microsoft. It doesn't say that  
14 Microsoft infringed it, did it?

15 A. I don't believe it says that, sir.

16 Q. So this is, as you read it, just an invitation  
17 to license, not a statement that Microsoft should look  
18 at this and decide if it infringes.

19 A. I -- yes, sir.

20 Q. All right. Now --

21 MR. POWERS: Chris, let's bring up the  
22 actual exhibit, PX120.

23 Q. (By Mr. Powers) Now, the middle portion of  
24 that, that small paragraph in the middle, you read that  
25 portion when you were preparing for your testimony,

1 right?

2 A. I -- I -- I believe I've read this, yes, sir.

3 Q. But this is not part of what you showed the  
4 jury on -- on the slide in your presentation.

5 A. No, sir, it's not.

6 Q. Okay. Now, part of that same letter that you  
7 did show the jury says that the claims of the patent are  
8 quite broad and would cover virtually any internet-based  
9 communication implementing RFC 3263.

10 Do you see that?

11 A. Yes, I do.

12 Q. Now, you understand that RFC -- well, let's  
13 talk about what an RFC is for a minute.

14 An RFC is a form of internet standard coming  
15 out of the IETF, right?

16 A. Yes. Some of them are standard; some of them  
17 are other documents, yes, sir.

18 Q. And the IETF is something called the Internet  
19 Engineering Task Force?

20 A. Yes, sir.

21 Q. And that's a collection of leading academics  
22 and business people and technologists and government  
23 people all trying to make the internet work better.

24 A. Yes, sir.

25 Q. And they have a standard-setting process where

1 people submit documents in the form of RFCs, some of  
2 which are adopted as standards; some of which are just  
3 out there for comment; is that fair?

4 A. Yes, sir.

5 Q. All right. Now -- and you understood that in  
6 this letter, PX120, SAIC is saying to Microsoft: Hey,  
7 almost anything that implements this RFC will infringe  
8 the '135 patent.

9 You understood that, right?

10 A. I believe that's what they're saying.

11 Q. Now, in all of your preparation for this case,  
12 you said you read some of the testimony of Kendall  
13 Larsen, the CEO of VirnetX, right?

14 A. Yes, sir.

15 Q. Did you read the part where Kendall Larsen  
16 said that this statement in Exhibit 120 was wrong?

17 A. I don't recall seeing that, sir.

18 Q. Well, that would be important to you, wouldn't  
19 it?

20 A. No, sir.

21 Q. It's not -- you did rely on PX120.

22 A. For knowledge of the patent, yes, sir.

23 Q. And also for knowledge about whether it would  
24 be infringement. That's part of your evidence, isn't  
25 it?

1 A. No, sir.

2 Q. Okay. So it's irrelevant to you that the  
3 statement in the letter that you relied on is wrong?

4 A. Yes, sir. It's not relevant.

5 Q. And that the CEO of VirnetX, the Plaintiff in  
6 this case, admitted in his deposition that it's wrong.

7 A. That's not relevant to my analysis, sir.

8 Q. Did you read that testimony from Mr. Larsen?

9 A. I -- I don't recall if I saw that or not, sir.

10 Q. Well, let's show it to you and see if it helps  
11 your recollection.

12 MR. POWERS: Chris, could we bring up  
13 from his July 21 deposition, at Page 286, Line 25,  
14 through 287, Line 4? This is Kendall Larsen, the CEO  
15 and chairman of VirnetX.

16 Q. (By Mr. Powers) Question: Is it your belief  
17 that any product that has general functions and benefits  
18 of what's described in RFC 3263 -- let's stop there for  
19 a minute.

20 That's the same RFC that's in the letter you  
21 relied on, right?

22 A. I believe so, yes, sir.

23 Q. Right.

24 That any product that has general functions  
25 and benefits of what's described in RFC 3263 necessarily

1 comes under the VirnetX patents?

2 Answer: No.

3 Do you remember reading that testimony from  
4 Kendall Larsen, the CEO of VirnetX?

5 A. I still don't recall one way or the other,  
6 sir.

7 Q. Okay. Well, let's try another excerpt and see  
8 if you recall that.

9 MR. POWERS: Chris, could we bring up,  
10 from the same transcript, Page 306, Lines 11 to 23.

11 Q. (By Mr. Powers) Question: It's your belief,  
12 and was in the summer of 2006, that Microsoft was not  
13 actually practicing RFC 3263.

14 That's the same RFC, isn't it, Dr. Jones?

15 A. Yes, sir.

16 Q. All right. Question: Right?

17 Answer from Mr. Larsen: Yes.

18 Question: And when SAIC gave notice to  
19 Microsoft that Microsoft was potentially infringing the  
20 VirnetX intellectual property, Microsoft was told that  
21 if it were practicing RFC 3263, it was potentially  
22 infringing, right?

23 Answer: It was a misstatement. Yes, I do  
24 remember that. And it was a notice from Pam Bumann, and  
25 it was a general indicator that they were practicing

1 3263 and if they were, and Microsoft said we're not.

2 Do you recall that testimony from Mr. Larsen,  
3 CEO of VirnetX?

4 A. I still don't recall seeing that one way or  
5 the other, sir.

6 Q. Okay. Now, for you to know whether a product  
7 would actually infringe a patent claim because of 3263,  
8 you would want to see claim charts. That's the typical  
9 way that you would look to analyze that question, isn't  
10 it?

11 A. No, sir. I would look at the products and  
12 compare them to what's in the claims.

13 MR. POWERS: Let's -- your Honor, may I  
14 approach and hand the witness his deposition transcript?

15 THE COURT: Yes, you may.

16 THE WITNESS: Thank you.

17 MR. POWERS: Does Your Honor wish a copy?

18 THE COURT: No. That's all right.

19 Let me ask -- let me ask you, Mr. Powers,  
20 how much longer are you anticipating with this witness?

21 MR. POWERS: A ways.

22 THE COURT: A ways? All right.

23 I think maybe we'll go ahead and take our  
24 lunch hour a little early today because we just had a  
25 very short 10-minute break this morning, and y'all have

1 been sitting there very attentively.

2                   So let's take an early lunch, and we'll  
3 plan to start back at 1:00 o'clock. So we'll be in  
4 recess until 1:00 o'clock.

5                   COURT SECURITY OFFICER: All rise.

6                   (Jury out.)

7                   THE COURT: You would probably like me to  
8 turn your clock off there, Mr. Powers.

9                   (Lunch recess.)

10                   \*           \*           \*           \*

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CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/ \_\_\_\_\_  
SUSAN SIMMONS, CSR  
Official Court Reporter  
State of Texas No.: 267  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date

/s/ \_\_\_\_\_  
JUDITH WERLINGER, CSR  
Deputy Official Court Reporter  
State of Texas No.: 731  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date



**EXHIBIT F6**

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION

VIRNETX \* Civil Docket No.  
\* 6:07-CV-80  
VS. \* Tyler, Texas  
\*  
\* March 10, 2010  
MICROSOFT CORPORATION \* 1:00 P.M.

TRANSCRIPT OF JURY TRIAL  
BEFORE THE HONORABLE JUDGE LEONARD DAVIS  
UNITED STATES DISTRICT JUDGE

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(Proceedings recorded by mechanical stenography,  
transcript produced on CAT system.)

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P R O C E E D I N G S

COURT SECURITY OFFICER: All rise.  
(Jury in.)

THE COURT: Please be seated.

All right. Counsel, you may proceed.

1 MR. POWERS: Thank you, Your Honor.

2 MARK JONES, Ph.D., PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

3 CROSS-EXAMINATION (CONTINUED)

4 BY MR. POWERS:

5 Q. Good afternoon, Dr. Jones.

6 A. Good evening.

7 Q. Before the lunch break, we were talking about  
8 your opinions regarding indirect infringement,  
9 particularly inducement infringement, and I wanted to  
10 get us back to where we were.

11 MR. POWERS: So, Chris, if you could put  
12 up Slide 45 from Dr. Jones' presentation, we'll get back  
13 to where we were.

14 Q. (By Mr. Powers) You recall, Dr. Jones, that  
15 you -- this is one of the pages of your presentation to  
16 the jury about why, in your mind, Microsoft knew or  
17 should have known about the '135 patent and  
18 infringement?

19 A. Yes, sir.

20 Q. Now, this is the letter that SAIC sent to  
21 Microsoft in May of 2006, correct?

22 A. Yes, sir.

23 Q. And this is the one that made the allegation  
24 that the RFC 3263 would be -- if that's being used, that  
25 basically means you're infringing.

1 Do you recall that?

2 A. Something along those lines, yes, sir.

3 Q. And this is the one where Kendall Larsen, the  
4 CEO of VirnetX, had said that that was a misstatement.

5 Do you recall that?

6 A. Yes, sir.

7 Q. And your testimony was that the fact that that  
8 was a misstatement in the letter on which you're  
9 relying, it didn't bother you.

10 Do you recall that?

11 A. Right. It had no bearing on my opinion, sir.

12 Q. Okay. And when we broke, I was asking you  
13 that wouldn't you personally expect that if somebody was  
14 making an allegation like that, that anybody who uses  
15 RFC 3263 is infringing, that you would normally expect  
16 to see something like a claim chart that proved that.

17 Do you recall that question?

18 A. I don't think that was the question I  
19 answered, sir.

20 Q. Okay. Maybe I -- maybe I rephrased it here.

21 Let me ask it again now. We'll just move from  
22 there.

23 Would you expect that someone making an  
24 allegation that practicing of RFC 3263 would infringe  
25 the '135 patent as was made in this letter?

1           This May of 2006 letter, you would normally  
2 expect that such an allegation would have claim charts  
3 to back it up, wouldn't you?

4           A.    If it were in a legal case, yes, sir.

5           Q.    All right. And you personally haven't made an  
6 assessment of whether that statement is true, i.e.,  
7 whether -- meaning whether practicing 3263 really does  
8 infringe.

9                    You personally haven't done that?

10          A.    I have -- I have not looked to see if there  
11 are ways you could practice 3263 with or without  
12 infringing. I've not done a detailed analysis.

13          Q.    All right. Now, Microsoft answered this  
14 letter, didn't they?

15          A.    I believe so, yes, sir.

16          Q.    And, in fact, one of the things Microsoft  
17 said, when it answered, is they disagreed with the  
18 statements in the letter, true?

19          A.    I'd have to look at it again, sir. I don't  
20 recall.

21          Q.    Could you look at DX3015?

22                   MR. POWERS: And, Chris, could you bring  
23 it up, please?

24          Q.    (By Mr. Powers) Do you recall in your  
25 preparation, Dr. Jones, looking at this letter?

1 It wasn't one used in your opening position to the jury,  
2 was it?

3 A. I -- I believe I might have looked at it.

4 I'm -- I don't remember looking at it in  
5 detail, though, sir.

6 Q. Do you recall that there were two letters that  
7 Microsoft sent back to SAIC about in this back-and-forth  
8 chain?

9 A. I -- I remember seeing that in testimony, sir.

10 Q. All right. But you personally didn't study  
11 those two, or did you?

12 A. I might have seen them, but I didn't study  
13 them in detail, no, sir.

14 Q. All right. So let's look at DX3015. And you  
15 do recognize that in this letter, Microsoft disagreed  
16 with SAIC's allegation regarding the scope of the patent  
17 and infringement?

18 A. Yes, sir. I see where they say they disagree.

19 Q. And in addition to that, Microsoft suggested a  
20 meeting, true?

21 Do you see that in the next to the last  
22 paragraph?

23 A. Yes, sir.

24 Q. And finally, Microsoft asked for exactly what  
25 you would expect to see about a legal case allegation,

1 claim charts, right?

2 A. Yes, I see that they -- they suggested sending  
3 claim charts, yes, sir.

4 Q. Let's just make sure everybody knows what  
5 you're talking about when you say claim charts.

6 Claim charts are where you have the language  
7 of the claims the way you've put up on these big, foam  
8 boards, and next to it some evidence which backs up the  
9 allegations of infringement, right?

10 A. Yes, sir.

11 Q. Okay. And that's what you would normally  
12 expect to see in a lawsuit about infringement, and  
13 that's what exactly what Microsoft was asking for,  
14 right?

15 A. Yes, sir.

16 Q. Are you aware that Kendall Larsen admitted  
17 that no such claim charts were ever sent?

18 A. I'm not aware of that, sir.

19 Q. Have you ever seen any evidence that any claim  
20 charts or any information backing up SAIC's allegations  
21 were ever sent to Microsoft in response to their  
22 request?

23 A. The claim charts, just with respect to the  
24 RFC, sir?

25 Q. Or any claim.



1 A. Well --

2 Q. Before the lawsuit was filed.

3 A. Okay. Yes, sir. I'm not aware of any claim  
4 charts before the lawsuit.

5 Q. All right. Or, in fact, you're not aware of  
6 SAIC or VirnetX sending Microsoft any information  
7 backing up any claims of infringement before the  
8 lawsuit.

9 That's fair, isn't it?

10 A. I -- yes, sir.

11 Q. And you're aware, aren't you, that SAIC and  
12 VirnetX did not meet with Microsoft before the lawsuit?

13 You're aware of that?

14 A. I haven't -- the testimony I heard today --  
15 not today -- in the previous days seem to suggest that,  
16 but I wouldn't have knowledge, if they met or not, sir.

17 Q. You know of no such meeting.

18 That's fair, isn't it?

19 A. Yes, sir.

20 Q. Okay. Now, let's go back to your opinion.

21 That's Slide 42.

22 MR. POWERS: Let's put that up, please,  
23 Chris.

24 Q. (By Mr. Powers) Now, let's focus on the very  
25 last requirement that you talked about, which is not

1 only did someone at Microsoft have to know the patent,  
2 but they had to know that their users would be  
3 infringing that patent.

4           That's essentially what you're saying?

5           A.    Yes, sir.  They knew or should have known.

6           Q.    Knew or should have known that our customers,  
7 Microsoft's customers, would be infringing, right?

8           A.    That the instruction would result in them  
9 infringing, yes, sir.

10          Q.    Now, as to the '135 patent, which was what  
11 we're talking about here, you've admitted that  
12 Microsoft's customers do not literally infringe that  
13 patent, because there's no website?

14          A.    That's correct, sir.

15          Q.    So if Microsoft just looked at that patent and  
16 said, well, our customers can't possibly infringe it,  
17 because it requires a website, and we all know this  
18 isn't a website, that would be true, in your mind?

19          A.    If they were looking at it only literal --  
20 literal infringement, that's correct, sir.

21          Q.    All right.  And that's a requirement in two  
22 out of the three limitations of Claim 1 of the '135  
23 patent?

24          A.    Yes, sir.

25          Q.    And three out of four of the limitations of

1 Claim 10?

2 A. Yes, sir.

3 Q. And in order for someone at Microsoft to have  
4 known or should have known that their customers would be  
5 infringing, they would have to have looked at the claims  
6 of the '135 patent and studied them, right?

7 A. Yes, sir.

8 Q. And you have no evidence of anyone at  
9 Microsoft ever saw these claims or looked at them before  
10 the lawsuit, do you?

11 A. No, sir, I don't.

12 Q. All right. Now, let's move to a slightly  
13 different subject, and that is contributory  
14 infringement.

15 That's another type of infringement that  
16 you've testified about in relation to the '135 patent,  
17 right?

18 A. Yes, sir.

19 Q. But not the '180 patent?

20 A. That's correct.

21 Q. All right.

22 MR. POWERS: So, let's -- Chris, if you  
23 would, please, put up Slide 47 from Dr. Jones'  
24 presentation.

25 Q. (By Mr. Powers) Now, this was the page that

1 you presented to the jury to show your opinion as to why  
2 you felt that Microsoft was contributing to infringement  
3 by others.

4 A. Yes, sir.

5 Q. Now, one requirement -- we've already talked  
6 about knowledge. I won't do that again.

7 One requirement is that there has to be no  
8 substantial non-infringing uses of what Microsoft sells,  
9 right?

10 A. Yes, sir.

11 Q. Now, there are, you will agree, non-infringing  
12 uses. You just argue whether they're substantial.

13 We're at least in disagreement there?

14 A. I'd have to look at what was said for non- --  
15 for what was stated to be a non-infringing use, sir.

16 Q. I was listening carefully to your testimony,  
17 and what I heard you say was, well, as to one use, you  
18 don't think it's substantial; as to other uses, you  
19 don't think they're actually uses of the invention.

20 Do you recall that testimony?

21 A. Not specifically, sir.

22 Q. Fair enough.

23 A. Sorry.

24 Q. We'll go through it in detail then.

25 A. Okay.

1 Q. All right. Do you recall a discussion about  
2 high-security mode?

3 A. Yes, sir.

4 Q. That's one mode in which the actual parts of  
5 Microsoft's products that you're talking about as  
6 infringing can be used?

7 A. Yes, sir.

8 Q. This isn't in that category of non-use that  
9 you described. This is actual use of the products that  
10 you're talking about infringing?

11 A. Yes, sir.

12 Q. Okay. And Claim 10 of the '135 patent  
13 requires that that DNS proxy server gets a request from  
14 a client; true?

15 Would you like to have it up in front of you?

16 A. No, sir. I -- I can -- I can recollect it.

17 Q. Okay.

18 A. It -- it -- well, Claim 10 is a system claim,  
19 so it requires that it be capable of such a thing.

20 Q. And Claim 1 requires the same thing as part of  
21 the method?

22 A. Claim 1 actually is a method. Claim 10, you  
23 have to take those steps.

24 Q. Exactly.

25 And there's a request to look up an IP

1 address.

2 MR. POWERS: Let's just get the claim in  
3 front of us. Let's put up Claim 10.

4 Q. (By Mr. Powers) The first requirement of Claim  
5 10 is a DNS proxy server that receives a request from  
6 the client to look up an IP address.

7 Do you see that?

8 A. Yes, sir.

9 Q. And the DNS proxy server returns the IP  
10 address that was requested; true?

11 A. Yes, sir.

12 Q. That's what the claim requires?

13 A. Yes, sir.

14 Q. And in your opinion, when you provided your  
15 opinion to the jury of infringement, what you're calling  
16 the DNS proxy server in this claim is the OC server,  
17 true?

18 A. No, sir.

19 Q. You're calling the OC APIs, actually, on -- as  
20 part of Windows?

21 A. The RTC interfaces, sir.

22 Q. The interfaces that you say are part of  
23 Windows, right?

24 A. Yes, sir.

25 Q. Okay. And in high-security mode, that

1 particular limitation is not satisfied, right?

2 The DNS -- those RTC interfaces do not return the IP  
3 address?

4 A. Maybe if I can clarify a little bit.

5 What you're asking is -- is for the rest of  
6 that, if it is determined that access to a non-secured  
7 website has been requested?

8 Q. Precisely.

9 A. Okay.

10 Q. So let's take an example where I'm just going  
11 to Google.com. You'll agree that's not a secure website  
12 or address?

13 A. Not that I know of, sir.

14 Q. Okay. And so if I'm asking for that, what  
15 you're calling the DNS proxy server, those RTC  
16 interfaces, those don't return that IP address for  
17 Google.com, right?

18 A. In high-security mode, they will not return  
19 that, sir.

20 Q. So in high-security mode, if it ran -- the  
21 products that you're accusing of being used in  
22 high-security mode, it would not infringe Claim 10?

23 A. It would infringe Claim 10, sir.

24 Q. Even though it does -- even though it returns?

25 A. It -- Claim 10 is a system claim, so it has

1 the capability that if the software is still there,  
2 you've still assembled the system.

3 Q. Well, what I thought the claim requires that  
4 where it's not a secure website, it returns the IP  
5 address.

6 A. The software still has that capability. This  
7 is just a configuration setting we're talking about for  
8 high-security mode.

9 Q. Well, but in high-security mode, in fact, the  
10 IP address is not returned for a non-secure website,  
11 right?

12 A. Yes, sir.

13 Q. And that -- and the claim requires that in --  
14 for a non-secure website, it still returns the IP  
15 address?

16 A. Yes, sir, it --

17 Q. Okay.

18 A. -- it does.

19 Q. Now -- and you don't know one way or the other  
20 how substantial the use is of high-security mode, do  
21 you?

22 A. I -- I -- by substantially, you mean how many  
23 people are doing it, sir?

24 Q. Sure.

25 A. I -- I do understand that some -- some users



1 are doing that. Yes, sir, I do.

2 Q. You don't know about its usage enough to say  
3 whether it's substantial or insubstantial; is that fair?

4 You know it's used?

5 A. I -- I do know it's used, yes, sir.

6 Q. And you don't know enough to know whether or  
7 not its use is important to those who use it to make it  
8 substantial either, do you?

9 A. I believe high-security mode is important to  
10 those who use it, sir.

11 Q. And so it's substantial for them?

12 A. It's substantial. I just don't agree that  
13 it's non-infringing.

14 Q. All right. So let's go to Claim 10. We've  
15 still got it on the screen.

16 The last requirement --

17 MR. POWERS: And, Chris, let's highlight  
18 this.

19 Q. (By Mr. Powers) -- is a gatekeeper computer.  
20 Do you see that?

21 A. Yes, sir.

22 Q. Now, as I heard your testimony yesterday, you  
23 were saying that a gatekeeper computer can be just  
24 software, not an actual computer, right?

25 A. Yes, sir.

1 Q. And you were relying -- as I listened to  
2 your -- your reasons for that, you said it's consistent  
3 with the Court's construction of DNS proxy server.

4 Do you recall that?

5 A. I -- I said it was consistent with that, yes,  
6 sir.

7 Q. All right. So the definition of being a DNS  
8 proxy server was that a proxy server could be either a  
9 computer or a program, right?

10 A. Yes, sir.

11 Q. And so the Court's construction of proxy  
12 server is what distinguished between computers and  
13 programs -- or computers and software?

14 A. Yes, sir.

15 Q. And here the term that we're talking about is  
16 gatekeeper computer?

17 A. Yes, sir.

18 Q. The Court's never given a construction that  
19 says a computer can be just software, has it?

20 A. The Court hasn't construed that term at all,  
21 sir.

22 Q. And, in fact, you know computer to be  
23 hardware, right?

24 A. Not necessarily, sir.

25 Q. Normal use of a computer isn't a piece of

1 hardware that's setting on a --

2 A. That's certainly one of the normal uses, yes,  
3 sir.

4 Q. All right. Now, let's turn back to the '180  
5 patent for a moment. And let's put up your Slide 7.

6 This is your page showing what you contended  
7 was infringing for the '180 patent, true?

8 A. Yes, sir.

9 Q. Let's take XP first. That's the one on the  
10 left.

11 The reason that you contended that XP  
12 infringes is that it has in it what you called the  
13 PeerNet APIs or interfaces; is that fair?

14 A. Yes, sir.

15 Q. Now, in XP, there's actually no application  
16 that uses those interfaces at all, is there?

17 A. That -- that comes with -- that it comes  
18 with -- installed with that space?

19 Q. Exactly.

20 A. No, sir, there's not.

21 Q. So if I -- for every copy of XP that's shipped  
22 out to anybody, those APIs are setting there, but  
23 there's no application that uses them to create a  
24 meeting or anything like that, is there?

25 A. Not out of the box, sir. No, sir.

1 Q. All right. Now, for Vista, there's one  
2 program and one program only that you referred to, and  
3 that's Meeting Space, right?

4 A. Yes, sir.

5 Q. And that's supplied by Microsoft?

6 A. Yes, sir.

7 Q. Now -- and Meeting Space is the only  
8 application that you testified about in your testimony  
9 to the jury?

10 A. Yes, it is.

11 Q. All right. Now, you testified at length in  
12 your direct examination about a technology called PNRP.

13 Do you remember that?

14 A. Yes, sir.

15 Q. As I heard your testimony, you were saying  
16 that P -- that when PNRP is used to form the connection  
17 that that infringes the '180 patent.

18 Is that fair?

19 A. Yes, sir.

20 Q. There are other ways to form a connection  
21 using Windows Meeting Space and Vista, other than PNRP,  
22 right?

23 A. You mean to get -- to get the initial address,  
24 sir?

25 Q. Absolutely.

1 A. Yes, sir.

2 Q. And you have not given us an opinion that  
3 those infringe, true?

4 A. Yes, I have.

5 Q. And they don't infringe, do they?

6 A. I said the use with those with graph  
7 maintenance infringes, yes, sir.

8 Q. Well, let's just talk about forming the  
9 initial connection, because you're right; you did talk  
10 about graph maintenance.

11 MR. POWERS: So let's -- let's bring up  
12 Dr. Jones' Slide 56. I think that will help.

13 Q. (By Mr. Powers) This was the page that you  
14 used to talk about how Windows Meeting Space could form  
15 a connection and create a group meeting, true?

16 A. Yes, sir.

17 Q. All right. And we've got our familiar remote  
18 user sitting at home celebrating a birthday with our  
19 students diligently working away in the library?

20 A. Yes, sir.

21 Q. All right. Now, one way that that remote user  
22 can connect to the Meeting Space -- to the meeting with  
23 all the people in the library is for somebody in the  
24 library to send them an invitation that has the IP  
25 address in it, right?

1           A.    Yes, sir.

2           Q.    And you understand that's a common way?

3           A.    Yes, sir.

4           Q.    All right.  And it's that way of making the  
5 connection, assuming that there's no other changes,  
6 that -- let's call the person in the library Bob, and  
7 the person over the remote user celebrating the  
8 birthday, Bill.

9                    Bob will send an invitation to Bill that will  
10 have the IP address.  Bill accepts and the connection is  
11 formed.

12                   That's a typical way, right?

13          A.    Yes, sir.

14          Q.    With that formation of the connection, with no  
15 other information yet, nothing else has happened,  
16 there's no infringement, right?

17          A.    That's correct sir.

18          Q.    All right.  And if the entire meeting  
19 finishes, Bob is over there at the library; stays in the  
20 library; doesn't shut his computer; he doesn't leave the  
21 meeting in a huff; he stays there; they finish the  
22 meeting; no disconnections; no nothing.

23                   That entire meeting at that point as to Bill  
24 has been non-infringing?

25          A.    No.  Graph maintenance still may take place to

1 add additional connections, sir.

2 Q. And it may not.

3 A. And it -- if it's fast enough, it won't.

4 You're right, sir.

5 Q. All right. Now, a second way to form that

6 connection, other than this -- what we call the

7 invitation form, is a way called Meetings Near Me.

8 You're aware of that, aren't you?

9 A. Yes, sir.

10 Q. And Meetings Near Me is a way for Bill, over

11 there remotely celebrating the birthday, to look for a

12 meeting near him, right?

13 A. Yes, sir.

14 Q. And if a connection is formed using Meetings

15 Near Me, without anybody leaving or shutting their

16 laptops or any that have, no disconnections, none of

17 that, that formation of the connection is not

18 infringing?

19 A. Yes, sir.

20 Q. All right. A third way of forming that

21 connection is People Near Me. That's a technology built

22 into the product, right?

23 A. Yes, sir.

24 Q. And with all the same assumptions of no

25 laptops closing, no people leaving in a huff,

1 connections formed using People Near Me, this third way,  
2 also no infringement?

3 A. Yes, sir.

4 Q. Okay. Now, the only way that there's  
5 infringement even under your theory is if PNRP is  
6 actually used to make the connection, right?

7 In the initial connection; that's all we're  
8 talking about. We'll get to later events later.

9 A. With respect to Claim 1, yes, sir.

10 Q. Okay. Now -- and as I -- and you have no  
11 information, do you, about the extent to which PNRP is  
12 used to make connections versus the other three ways I  
13 just described among people who actually use the  
14 product?

15 A. No, sir, I don't.

16 Q. Okay. Now, you testified about what you  
17 called graft maintenance. Is that -- that was the term  
18 you used?

19 A. Yes, sir.

20 Q. And your testimony was that in graph  
21 maintenance, PNRP would be used, right?

22 A. Yes, sir.

23 Q. That's not a means of forming the initial  
24 connection, is it?

25 A. No, sir, not -- well, there are situations



1 that it could be, but, generally, no.

2 Q. Generally no. Okay.

3 All right. So let's -- let's switch gears for  
4 a minute to a different subject. There's another claim  
5 term called a secure computer network address.

6 Do you recall that term?

7 A. Yes, sir.

8 Q. That's in all of the term claims of the '180  
9 patent that are accused, right?

10 A. Yes, sir.

11 Q. So if that limitation is not found in the  
12 Windows products that you just used, there's no  
13 infringement, right?

14 A. Right.

15 Q. And similarly, if VPN is not found, there's no  
16 infringement?

17 A. Yes, sir.

18 Q. Only one? It only takes one?

19 A. Yes, sir.

20 Q. All right. Now, with respect to secure  
21 computer network address, the example that's given in  
22 the patent and that was on some of the slides that you  
23 used was .scom.

24 Do you recall that?

25 A. Yes.

1 Q. And the S stood for secure, right?

2 A. Yes, sir.

3 Q. A normal e-mail address would be your name at  
4 blank.com only, right?

5 A. Yes, sir.

6 Q. And the point in the patent that you were  
7 giving was that it's .scom instead of .com to show that  
8 it was secure.

9 That was your point, wasn't it?

10 A. I believe that was an example of a secure  
11 domain name, yes, sir.

12 Q. Okay. Now, the -- let's go back to your Slide  
13 56, which is our friends in the library and Bill  
14 celebrating the birthday.

15 So as I understand your testimony, the secure  
16 address is the address of Bill's computer setting over  
17 at the UT -- UT-Tyler library.

18 A. Yes, sir.

19 Q. All right. And that address is an IP address,  
20 as we've previously discussed?

21 A. Yes, sir.

22 Q. And if Bill stays in his little cubicle in the  
23 library; doesn't close it up; he doesn't leave; he stays  
24 there.

25 Let's say it's 7:00 o'clock. He's on the

1 internet; he has an IP address at that time?

2 A. Yes, sir.

3 Q. And that IP address is one of those four  
4 numbers separated by dots that we've looked at before?

5 A. That's one example, yes.

6 Q. Typically, yeah.

7 And if Bill, who's sitting over there at home,  
8 sends Bob an e-mail, that will use that -- Bob's IP  
9 address to do so?

10 A. Generally not, sir. No, sir.

11 Q. In order to access Bill's computer,  
12 ultimately, that e-mail will arrive using Bob's IP  
13 address. That's how it gets to his computer, right?

14 A. Well, the e-mail wouldn't typically be sent  
15 directly to his computer from Bill, sir.

16 Q. Of course not. But Bill ultimately receives  
17 the computer via a path -- the e-mail via a path that  
18 uses his IP address?

19 A. Typically, he would contact a server for that,  
20 sir.

21 Q. Exactly.

22 And the contact and the communication between  
23 him and his server would be using his IP address?

24 A. Yes, sir.

25 Q. So we'll call his IP address X, so we don't

1 have to use all -- all of the digits.

2 Fair enough?

3 A. Okay.

4 Q. So at -- at 7:00 o'clock, Bob is in the  
5 library getting an e-mail from the server, and his  
6 e-mail address is X at that time.

7 A. Yes, sir.

8 Q. At that time, X is not a secure address, is  
9 it?

10 It doesn't need authorization for access,  
11 which is the Court's construction, isn't it?

12 A. It -- it does meet the Court's construction.  
13 I'm not sure what you're saying as the access in it at  
14 this point.

15 Q. Well, it's -- let me clear. That's a fair  
16 point.

17 A. Okay.

18 Q. So Bob over there in the computer -- in the  
19 library, he's not on Windows Meeting Space; he's not  
20 doing anything; he's on Google; he's surfing the web;  
21 he's shopping at Amazon.com; he's doing all sorts of  
22 things, trying to delay starting on the project and  
23 waiting for the other people to get there.

24 At that point, his IP address is not a secure  
25 address, is it? That's not requiring authority for

1 access?

2 A. It does -- there are -- to access it through  
3 grouping would require authority -- would require  
4 authorization for access, sir.

5 Q. I'm not talking about groups. I'm just  
6 talking about what he's doing at 7:00 o'clock at night,  
7 waiting for the others to arrive. He's surfing the web;  
8 he's going to Google; he's going to Amazon; he's playing  
9 a World of Work graph; he's doing whatever he's doing.

10 At that point, he's not in a group; he's not  
11 started that at all; it's not a secure address?

12 A. If it's capable of grouping, then there's a  
13 secure computer network address, sir.

14 Q. So at that point, even though he's not doing  
15 any grouping, his address, because it's capable of  
16 grouping, your testimony is, it's secure?

17 A. If his computer is ready to participate in  
18 grouping, yes sir.

19 Q. He doesn't have the program open; it's setting  
20 there totally dormant; he's just surfing the web;  
21 nothing to do with grouping. We're not talking about  
22 grouping at all. He hasn't thought about the group. He  
23 may not have even stole it yet.

24 A. Okay. If -- if it's not enabled, then I would  
25 agree; it's not a secure computer network address, sir.

1 Q. All right. And that's -- his address is X.  
2 Now, at 8:00 o'clock, he brings up the grouping program,  
3 and he's ready to start.

4 A. Yes, sir.

5 Q. At that point, his address is still X?

6 A. Yes, sir.

7 Q. But now it's secure, under your opinion?

8 A. Yes, sir.

9 Q. Same address not secure at 7:00 o'clock;  
10 secure at 8:00 o'clock?

11 A. Yes, sir.

12 Q. And he could be communicating during his  
13 grouping session with e-mail servers and Amazon.com; he  
14 could be doing all of that at the same time?

15 A. Yes, sir.

16 Q. Exactly what he was doing with an unsecure  
17 address at 7:00?

18 A. Yes, sir.

19 Q. But your testimony is that it's still a secure  
20 address now?

21 A. Yes, sir.

22 Q. All right. Now, I'd like to go back to the  
23 check marks that you made on the various claim charts.

24 MR. POWERS: May I approach, Your Honor?

25 THE COURT: Yes, you may.

1 Q. (By Mr. Powers) Can you see that?

2 A. No.

3 Q. Would it be better if I tilted it a little  
4 bit?

5 A. No. That will be fine, sir.

6 MR. POWERS: Can the jury see that?

7 Great.

8 Q. (By Mr. Powers) Now, we talked earlier about  
9 the difference between your check marks and what would  
10 be checked if it were asking literal infringement. I  
11 want to try to make that clearer.

12 So let's put first as to the '135, instead of  
13 your check marks, let's ask the question, whether  
14 there's literal infringement.

15 And as to '135, Claim 1, you would agree with  
16 me as to this second limitation, the answer would be no?

17 A. Yes, sir.

18 Q. And as to this third limitation, the answer  
19 would also be no?

20 A. Yes, sir.

21 Q. Now, in addition as to Claim 1 of '135, if VPN  
22 limitation is not met, then the claim's not met  
23 literally or under the Doctrine of Equivalents, true?

24 A. Yes, sir.

25 Q. So --

1 MR. POWERS: I won't mark on the board; I  
2 promise you.

3 Q. (By Mr. Powers) So that would be a no under  
4 literal or DoE?

5 A. Yes, sir.

6 Q. That's true with respect to the first part of  
7 the claim and the last part of the claim, right?

8 A. Yes, sir.

9 Q. Now, let's go to Claim 10 of the '135 patent.  
10 And instead of the check marks, we'll do the same thing.  
11 Instead of the check marks that you gave to the question  
12 of whether there's literal infringement, the answer  
13 would be no on all three of the last three limitations?

14 A. Yes, sir.

15 Q. And in addition to that, whether it's literal  
16 or Doctrine of Equivalents, if the answer on virtual  
17 private network is no, there's no infringement anyway?

18 A. Yes, sir.

19 Q. That applies to the top part and also the last  
20 two limitations as well?

21 A. Yes, sir.

22 Q. Now, those are the only two independent claims  
23 of the '135 patent, right?

24 A. I didn't catch the last part, sir.

25 Q. I'm sorry.



1           The two independent claims of the '135 patent?

2           A.    Yes.  Those are the only two.

3           Q.    And so those ones would apply to the dependent  
4 claim of the '135?

5           A.    Yes, sir.

6           Q.    All right.  So now let's switch to the '180  
7 patent.

8                   Now, in the '180 patent, as far as Claim 1,  
9 here there's not a question of literal infringement,  
10 because there is no Doctrine of Equivalents issue on  
11 '180, right?

12          A.    That's correct, sir.

13          Q.    Okay.  We will mark out literal.

14                   And with respect to the '180 patent, we have  
15 the issue that's a secure computer network address.  And  
16 if that's not present, then there's no infringement of  
17 any of the claims, right?

18          A.    Yes, sir.

19          Q.    I will just write S-A; is that okay?  Secure  
20 address?

21          A.    Okay.  Yes, sir.

22          Q.    It's too hard to write in that little spot.

23          A.    Yes, sir.

24          Q.    And that's true in various parts of the claim,  
25 isn't it?

1 A. Yes, sir.

2 Q. And in addition, there's a requirement in the  
3 '180 patent of all the claims for VPN?

4 A. Yes, sir.

5 Q. And that's true down here (indicates)?

6 A. Yes, sir.

7 Q. And if that's not present, then there's no  
8 infringement of any of these claims either?

9 A. That's correct, sir.

10 Q. And that would be true -- I don't want to take  
11 the time, but of all the claims of the '180 patent?

12 A. Yes, sir.

13 MR. POWERS: No further questions, Your  
14 Honor. Pass the witness.

15 THE COURT: All right. Redirect?

16 MR. CALDWELL: Your Honor, may I take a  
17 minute to review something that my colleague has given  
18 me?

19 THE COURT: Yes.

20 (Pause in the proceedings.)

21 REDIRECT EXAMINATION

22 BY MR. CALDWELL:

23 Q. Professor Jones, did you hear Mr. Powers give  
24 an example of how he uses his laptop to connect in a  
25 virtual private network back to his office in San

1 Francisco?

2 A. Yes, sir.

3 Q. Now, if we took Mr. Powers' laptop and we  
4 connected it to the internet --

5 A. Yes, sir.

6 Q. -- and we used the virtual private network  
7 that his firm uses to connect its various offices and  
8 its various attorneys as they're traveling -- are you  
9 with me so far?

10 A. Yes, sir.

11 Q. Would his laptop have an IP address on it?

12 A. Yes, sir, it would.

13 Q. Okay. Would that IP address be assigned,  
14 basically, when he connects to the internet?

15 A. Yes, sir.

16 Q. Now, if we were to intercept the  
17 communications that Mr. Powers acknowledges are VPN  
18 communications being sent across the internet back to  
19 his office, what IP addresses would we see?

20 A. We'd see the IP address assigned to that  
21 laptop computer and the IP address of the VPN server at  
22 the company's offices.

23 Q. We would see the IP address for his computer?

24 A. Yes, sir.

25 Q. And is there any dispute in this case that

1 that would be VPN that his firm uses or that our firm  
2 uses?

3 A. In a typical VPN, no, sir. There's no dispute  
4 about that.

5 Q. Now, Professor Jones, are there schemes -- I  
6 use schemes; it's probably a little techie word here --  
7 but are there schemes that you can use in order to help  
8 hide the true internet address that's being used out on  
9 the internet when you send things across the internet?

10 A. Yes, there are. There are schemes like IP  
11 hopping, for example.

12 Q. And you introduced that to us in the -- in  
13 your direct testimony, correct?

14 A. Yes, sir, I did.

15 Q. Now, in order to prove infringement, do you  
16 have to prove that Microsoft's products use IP hopping  
17 in order to mask the public internet address of those  
18 messages?

19 A. No, sir. In fact, those are different claims  
20 of the patents that aren't asserted.

21 Q. Okay. I put Claim 1 of the '135 patent up on  
22 the board.

23 Is there anyplace in this claim where it says  
24 you have to have IP hopping and provide a way to hide  
25 the public internet address of the computers

1 communicating in the VPN?

2 A. No, sir, there's not.

3 Q. Now, we've referred to Judge Davis'  
4 definitions.

5 A. Yes, sir.

6 Q. Have you reviewed those?

7 A. Yes, sir, I have.

8 Q. How many times?

9 A. It's got to be scores at this point.

10 Q. And how many times in reviewing those claim  
11 constructions have you found a claim construction that  
12 says you need to use IP hopping in order to hide the  
13 public internet address?

14 A. Sir, that's not in that construction.

15 Q. Okay.

16 MR. CALDWELL: Now, Mr. Moreno, do you  
17 have Plaintiff's Exhibit 1 you can pull up for us?

18 I want you to go to the very, very back  
19 and maybe the next to the last page where the claims  
20 are.

21 There you go. Can you grab most of that  
22 column there on the left that's starting with what is  
23 claimed is?

24 I need to refresh my recollection here.

25 Q. (By Mr. Caldwell) Okay. Now --

1 MR. CALDWELL: I tell you what, to make  
2 everything a little bit more legible, can you drop that,  
3 and can you pull out Claim 1s and then Claim 6,  
4 Mr. Moreno?

5 That's Claim 1. Let's pause there for a  
6 second.

7 Q. (By Mr. Caldwell) Professor Jones, is that the  
8 claim that we have right here on the board?

9 A. Yes.

10 Q. Okay. So I think as long as the jury trusts  
11 us on that and the typing was good, we can actually drop  
12 that bubble.

13 MR. CALDWELL: And now make Claim 6 as big as  
14 you possibly can.

15 Q. (By Mr. Caldwell) Okay. Now, Professor Jones,  
16 can you read for us what we see here in Claim 6?

17 A. Yes, sir.

18 The method of Claim 1, wherein Step 3  
19 comprises the step of establishing the VPN by creating  
20 an IP address hopping scheme between the client computer  
21 and the target computer.

22 Q. Is this the scheme you were talking about that  
23 would hide the external public address of the  
24 communication?

25 A. Yes, I believe it does obscure those, yes,

1 sir.

2 Q. Now, what does it mean when this claim says  
3 the method of Claim 1 wherein, additional stuff?

4 A. That means practicing Claim 1, as well as  
5 doing this additional thing, of IP address hopping.

6 Q. So is IP address hopping required by Claim 1?

7 A. No, sir, it's not.

8 Q. It's an additional requirement that VirnetX  
9 would need to put evidence of -- would need to present  
10 evidence for, if VirnetX were asserting Claim 6,  
11 correct?

12 A. Yes, sir.

13 Q. Is there any requirement in Claim 1 about IP  
14 hopping?

15 A. No, sir, there is not.

16 Q. And have you alleged infringement of Claim 6?

17 A. No, sir, I haven't.

18 Q. Now, are there claims just like this in the  
19 '180 patent?

20 A. Yes, sir, I believe there are.

21 Q. Did you understand, when Mr. Powers very  
22 briefly had up a page of a book, that he suggested you  
23 needed to have one IP address hidden inside, another IP  
24 address in order to create a VPN?

25 A. Yes. I did understand what he was saying,

1 sir.

2 Q. Is there a name for that concept?

3 A. IP within IP, or tunneling is another word for  
4 that, sir.

5 Q. Is IP tunneling a requirement of the patents?

6 A. No, sir, it's not.

7 Q. Is it a requirement of Claim 1?

8 A. No, it's not.

9 Q. Claim 10?

10 A. No, sir.

11 Q. Claim 12?

12 A. No, sir.

13 Q. If we move to the '180 patent, Claims 1, 4,  
14 15, 17, 20, 31, 33, 35?

15 A. Very good.

16 No, sir. It's not a requirement of those  
17 either.

18 Q. Okay. Now, in the case of the SIP  
19 communications in Office Communicator and Office -- I'm  
20 going to start that one over, because that wasn't going  
21 anywhere good.

22 In the case of SIP communications in Office  
23 Communicator and Office Communications Server, what kind  
24 of address is the inner address in the communications?

25 A. That's a SIP address, sir.



1 Q. All right. When those communications, those  
2 SIP communications, are in the VPN mode that you  
3 identified in your direct testimony, can you see those  
4 on the open internet?

5 A. You can't see those inside the VPN on the open  
6 internet, sir.

7 Q. Now, did you demonstrate that to us yesterday?

8 A. Yes, sir. I did show that.

9 Q. And what tool did you use to use that?

10 A. Wireshark.

11 Q. Do you believe those communications are  
12 anonymous?

13 A. Yes, sir, I do.

14 Q. Do they protect the identity -- do they  
15 protect an identity for the people communicating in that  
16 VPN?

17 A. Yes, sir. They protect the identities.

18 Q. Now, let's talk about the peer-to-peer  
19 communications.

20 Is it your understanding the PeerNet  
21 interfaces can create virtual private networks?

22 A. Yes, sir.

23 Q. And that is in the -- what function was it?

24 A. That's when in grouping, sir.

25 Q. Now, in grouping, when folks are participating

1 in a group --

2 MR. CALDWELL: Actually, I'm going to  
3 pull up one of the PowerPoints, if we could.

4 I want to PowerPoint with the UT-Tyler  
5 library on it.

6 Q. (By Mr. Caldwell) Okay. Is this one of the  
7 slides you showed us, Professor Jones?

8 A. Yes, sir, I believe it is.

9 Q. Okay. And my understanding is that these  
10 folks right here are participating in what you've  
11 identified as the virtual private network?

12 A. Yes, sir.

13 Q. All right. If -- if this person right here  
14 (indicates) sends a message into the group --

15 A. Yes, sir, I'm with you.

16 Q. -- and our trusty hacker pops up right here  
17 (indicates), is our trusty hacker going to have a clue  
18 who sends that message?

19 A. No, sir. They won't be able to determine  
20 that.

21 Q. And why is that?

22 A. Well, as that message is -- is sent around the  
23 group, the hacker can't determine which computer that  
24 originated from.

25 Q. Thank you.

1           Professor Jones, I -- I also recall, while  
2 we're on this topic of anonymity, Microsoft's Attorney  
3 generally presenting that some sort of surprise that you  
4 would see an IP address on a communication on the  
5 internet, and yet you would still say this thing is  
6 anonymous.

7           Can you send a packet on the internet without  
8 having a visible IP address?

9           A.    No, sir.  You have to see the IP address when  
10 things are going over the internet for IP packets.

11          Q.    Were you here when Dr. Short gave his  
12 presentation?

13          A.    Yes, sir.

14          Q.    And very early on in that presentation, I  
15 think Mr. Cawley asked Dr. Short, we see a cloud up  
16 here; what's really going on in the cloud?

17                He clicks a button, and it kind of pops out a  
18 whole bunch of computers.

19          A.    Yes, sir.

20          Q.    The computers that make up all those links in  
21 the internet, what were those called again?

22          A.    Well, he called those routers, sir.

23          Q.    And how does a router work, sir?

24          A.    Well, it examines the IP address to determine  
25 where to send that packet.  So it uses the IP address so

1 it knows where to go. It's an address.

2 Q. Well, how successful would our communications  
3 be, sir, if we did not include a visible IP address that  
4 those routers could see?

5 A. Well, if the routers have no ability to read  
6 the address, they wouldn't know where to send it, sir.

7 Q. And so in your opinion, Dr. Jones, does the  
8 fact that you can see an outer identity, an outer  
9 identifier like that IP address -- does that negate  
10 anonymity or infringement?

11 A. No, sir, it doesn't.

12 Q. Now, Mr. Powers also showed you more of those  
13 documents that suggest Office Microsoft Communicator  
14 doesn't require a virtual private network.

15 A. Yes, sir, I remember that.

16 Q. This probably goes without saying, but  
17 whenever Microsoft wrote those documents, did they have  
18 the Court's claim construction?

19 A. I believe in the document that I saw, the 2007  
20 document, they did, sir.

21 Q. Well --

22 A. No, actually --

23 Q. I think it was a line of communication  
24 servers.

25 A. Yes, sir. Actually, I don't believe they did

1 have it.

2 Q. Okay. Well, what I want to know is, when your  
3 Office Communications Server and you use it in the  
4 secure mode you identified, is it your opinion that that  
5 use provides a virtual private network?

6 A. Yes, sir. That's the opinion I explained,  
7 sir.

8 Q. Okay. Well, why would Microsoft be putting in  
9 its marketing materials that you don't need a virtual  
10 private network for Office Communicator and Office  
11 Communications Server?

12 MR. POWERS: Objection, Your Honor. He's  
13 calling for speculation about why Microsoft would put  
14 something in its materials.

15 THE COURT: Restate your question.

16 Q. (By Mr. Caldwell) Professor Jones, when you  
17 read a statement -- with your technical background and  
18 you read a statement in Microsoft's product literature  
19 indicating this product doesn't need a virtual private  
20 network, what does that tell you?

21 A. Sir, that tells me that within the context of  
22 that document, that Microsoft is telling us we don't  
23 need an additional VPN. In other words, I don't need to  
24 set up my own VPN and use that software, because Office  
25 Communications -- those products will provide that

1 functionality, provide that VPN for me.

2 Q. And in your opinion, do those -- Office  
3 Communications Server and Offense Communicator products,  
4 do they provide data security and anonymity for the  
5 folks using the product to communicate?

6 A. Yes, sir, as I explained yesterday.

7 Q. Can you move briefly to the issue of website  
8 and Doctrine of Equivalents?

9 A. Yes, sir.

10 Q. Now, during the first day of trial, were you  
11 here when Judge Davis read instructions to the jury?

12 A. Yes, sir, I was.

13 Q. Did you hear when Judge Davis said there were  
14 two ways you can infringe?

15 A. Yes, sir.

16 Q. And what were those two ways?

17 A. You can infringe literally or under the  
18 Doctrine of Equivalents.

19 Q. Can you read this little attachment Mr. Powers  
20 made for the board?

21 A. Yes, sir, I can.

22 Q. You see it says VPN and no and no.  
23 What's the title?

24 A. Literal Infringement, sir.

25 Q. Will you remind the jury whether or not you

1 even asserted literal infringement of Claim 1 of the  
2 '135 patent?

3 A. No, sir, I didn't. I said that claim -- that  
4 claim was infringed under the Doctrine of Equivalents,  
5 sir.

6 Q. That's the second way Judge Davis said a  
7 patent can be infringed.

8 A. Yes, sir.

9 Q. What about Claim 10? Did you assert literal  
10 infringement of Claim 10?

11 A. No. I asserted that Claim 10 was infringed  
12 under the Doctrine of Equivalents, sir.

13 Q. And now, in the questioning on  
14 cross-examination, there was a time when you indicated  
15 that you would like to explain some of your answers  
16 about why you believe the functions of Office  
17 Communications Server and Office Communicator are  
18 equivalent to a website?

19 A. I'm sorry, sir. I don't recall at this point,  
20 but I could explain that, sir.

21 Q. Well, I just remember there was a chance when  
22 you said, I could explain, if you wanted me to, but I  
23 want to give you that chance now.

24 Will you tell the jury why you believe that  
25 the functions provided by OCS and Office Communicator,

1 Live Communications Server, the products you identified,  
2 are equivalent to a website?

3 A. Yes, sir. And you're talking about just  
4 outside of -- just the general reasons, or are you  
5 talking about the specific function-way-result test,  
6 sir?

7 Q. Just why you believe it's an equivalent.

8 A. Well, I believe it's an equivalent because I  
9 applied that function-way-result test to show that there  
10 is -- are insubstantial difference between what's going  
11 on in this -- in this Office Communications Server  
12 within these claims and what's going on in a website in  
13 these claims.

14 And it was my opinion that they -- that both  
15 of those entities communicate with a client computer.  
16 They do so over protocols and then present that  
17 information to clients through Windows.

18 Q. Now, did Mr. Powers' questions, the questions  
19 he asked you in cross-examination on whether there is an  
20 equivalent to a website in the Microsoft '135 products,  
21 did his questions cast any doubt in your mind as to  
22 whether there is an equivalent to the website in the  
23 Microsoft '135 products?

24 A. No, sir, they didn't.

25 MR. CALDWELL: Can we pull up Plaintiff's



1 Exhibit 401 for a second?

2           Okay. Now, can we flip several pages  
3 into this? I think it's probably about Page 10,  
4 Mr. Moreno. I'm sorry I didn't give you warning as to  
5 which page I was going to. That's it.

6           Q. (By Mr. Caldwell) Now, what we have -- can you  
7 see this reasonably well on your screen?

8           A. Yes, sir, I can.

9           Q. Now, I remember you showed us a couple of  
10 portions of this -- of this document in the direct  
11 testimony, correct?

12          A. Yes, sir.

13          Q. And do you remember Mr. Powers asking you a  
14 question saying there were two places in there where it  
15 mentions the Munger patent and no more?

16                Do you remember that?

17          A. Yes, sir.

18          Q. Said those are the only two places where this  
19 document mentions the Munger patent, did he not?

20          A. I remember something along those lines, sir.

21          Q. And I believe he blew out a couple of big  
22 excerpts from this document and kind of moved them  
23 towards the middle of the screen so we could read them?

24          A. Yes, sir, or that might have been my -- from  
25 my presentation. I don't recall, sir.

1 Q. Okay.

2 MR. CALDWELL: Well, let's look at the  
3 very first line up here, Mr. Moreno.

4 Q. (By Mr. Caldwell) That's one you showed us in  
5 your direct testimony, right?

6 A. Yes, sir, it is.

7 Q. Okay. That the -- the patent -- the -- the  
8 claims Microsoft wanted were rejected as unpatentable in  
9 view of a Gunningberg prior art and the Munger prior  
10 art, correct?

11 A. Yes, sir.

12 MR. CALDWELL: Can we drop that now,  
13 Mr. Moreno?

14 Q. (By Mr. Caldwell) Now, what do we see right  
15 here?

16 Now, there was something that Gunningberg,  
17 that prior art didn't have, but what does the second  
18 sentence say?

19 A. It says: However, Munger teaches instructions  
20 executed at an application layer in accordance with an  
21 OSI model. See Column 4, Lines 1 through 15.

22 Q. And that's this Munger sitting right here with  
23 the red tie, correct?

24 A. Yes, sir, it is.

25 MR. CALDWELL: Can we drop that bubble?

1 Q. (By Mr. Caldwell) Now, what is -- what do we  
2 see right here, Mr. Moreno (sic)? What does the first  
3 sentence say there?

4 A. It says: It would be obvious for one of  
5 ordinary skill in the art at the time of the invention  
6 to modify Gunningberg in view of executing the  
7 instruction and application layer in accordance with an  
8 OSI model as in Munger.

9 Q. And that's our -- still our same Munger, still  
10 the same '135 patent, is it not?

11 A. Yes, sir.

12 MR. CALDWELL: Can we drop that bubble,  
13 Mr. Moreno?

14 Q. (By Mr. Caldwell) And now what do you see  
15 right here? Was this the other portion you showed us in  
16 your direct testimony?

17 A. The top two lines are, yes, sir.

18 Q. There's citation after citation to Mr. Munger  
19 in here, is there not?

20 A. I believe I see four on this page, sir.

21 MR. CALDWELL: Can we flip to the next  
22 page, Mr. Moreno? Actually, maybe two or three more  
23 pages. There we go. Right there.

24 Q. (By Mr. Caldwell) Now, I want you to -- what  
25 is this page right here? What is this for, Dr. Jones?

1           A.     Well, when the Patent Office is communicating  
2 with the applicants, it indicates what reference -- the  
3 Patent Office indicates what references were cited.

4                   MR. CALDWELL:   Can you open that bubble  
5 up for us there?

6           Q.     (By Mr. Caldwell) What's the one patent that  
7 they cited in this list of references cited?

8           A.     Sir, they cited the '135 patent by Mr. Munger  
9 and Dr. Short and the other inventors.

10          Q.     Do you recall Mr. Powers asked you a question:  
11 Now -- but who does this document have to go to?  Would  
12 it be okay if it goes to Microsoft's Shanghai office?

13                   Do you recall that?

14          A.     I do recall that question, sir.

15                   MR. CALDWELL:   Can we go to the first  
16 page?

17                   Oh, I'm sorry.  I keep tricking you  
18 there.  Can we go to the next page?

19          Q.     (By Mr. Caldwell) All right.  Now, we see that  
20 it goes to a law firm.  Whose lawyers are those?

21          A.     Those are lawyers representing Microsoft in  
22 prosecuting this patent, sir, is my understanding.

23          Q.     Patent lawyers?

24          A.     Yes, sir.

25                   MR. CALDWELL:   Can we look at Plaintiff's

1 Exhibit 120 for a second?

2 I'd like to catch some of these names up  
3 here, if you could, Mr. Moreno.

4 Well, actually, I want just the whole  
5 width of it. I'm sorry. I know you have a -- I'm  
6 probably blocking you with my foam board and pointing at  
7 the same time, so I apologize for that.

8 Q. (By Mr. Caldwell) Who all received this  
9 letter, if you could read that for us there, Professor  
10 Jones?

11 A. Yes, sir.

12 On the left side, it says: Mr. Anoop Gupta,  
13 the corporate vice president of Unified Communications  
14 Group at Microsoft.

15 Q. Does that -- oh, I'm sorry. I didn't mean to  
16 interrupt you.

17 But Mr. Anoop Gupta, the corporate vice  
18 president of Unified Communications Group was the  
19 original addressee of this letter, correct?

20 A. Yes, sir.

21 Q. Now, Unified Communications Group -- I,  
22 candidly, probably should have asked you about that  
23 earlier. Can you tell us what the Unified  
24 Communications Group is?

25 A. Well, that's the group that would have

1 responsibility for things like Office Communication  
2 Server, sir.

3 Q. Was this letter sent to unrelated groups of  
4 folks in the Shanghai office?

5 A. It doesn't appear so, sir.

6 Q. Okay. And then when it left Mr. Gupta's  
7 possession, where did it go first? I think we want to  
8 look over here on the far right.

9 A. That's -- it says Bradford L. Smith in the  
10 Microsoft Legal Department.

11 Q. Okay. And it looks like the next day,  
12 Mr. Smith forwarded it to somebody else. Who's that?

13 A. That's Mr. Marshall Phelps, sir.

14 Q. Any idea who Marshall Phelps is?

15 A. He's in the Microsoft Legal Department, and  
16 when I looked him up, sir, he's -- I believe he's a  
17 corporate vice president of intellectual property at  
18 Microsoft.

19 MR. CALDWELL: Now, let's scroll down or  
20 let's -- let's drop this bubble first.

21 Can we catch all of this -- the last two  
22 paragraphs there?

23 Thank you, sir.

24 Q. (By Mr. Dawson) Now, Mr. Powers focused on  
25 this first sentence there that said: We believe the

1 claims of this patent are broad -- quite broad and would  
2 cover this RFC.

3           Are we in this Court right now talking about  
4 an RFC and opening up an RFC and comparing an RFC 3263  
5 to these claims?

6           A.    No, sir, we're not.

7           Q.    Okay.

8                       MR. CALDWELL:  Well, can we drop that  
9 part of it then, Mr. Moreno?

10          Q.    (By Mr. Caldwell) What did the owner of the  
11 '135 patent tell Microsoft in this paragraph?

12          A.    The owner was telling Microsoft that they  
13 believe that Microsoft would have an interest in the  
14 '135 patent for its Live Communication Server 2005  
15 product with Service Pack 1 and with its Microsoft  
16 Office Communicator 2005 product.

17          Q.    In fact, even in the first sentence, it says:  
18 We would like to contact you in the next week or so to  
19 discuss the possibility of offering Microsoft a license,  
20 correct?

21          A.    Yes, sir.

22          Q.    And I remember Mr. Powers following up with  
23 you about, oh, gee, were there claim charts?  Are you  
24 familiar with claim charts?

25          A.    Yes, sir, I am.

1 Q. Have you prepared claim charts in this case?

2 A. Yes, sir, I have.

3 Q. About how many pages of claim charts would you  
4 guess you've prepared in this case?

5 A. Hundreds and hundreds, sir. I don't know if  
6 it exceeds a thousand yet or not, but hundreds.

7 Q. I can assure that it's -- I remember one  
8 that's 576 to it. So how many hours and hours have you  
9 spent doing that?

10 A. Oh, hundreds of hours, sir.

11 Q. Okay. And in order to do that, in order to  
12 provide the claim charts that were in your expert  
13 report, did you look at Microsoft confidential  
14 documents?

15 A. Yes, sir.

16 Q. And how did you get those documents?

17 A. After the lawsuit was filed, the orders are  
18 put in place that would allow me to see those documents,  
19 sir.

20 Q. I mean, even you, Professor Jones, who has  
21 experience in patent litigation matters, could you have  
22 possibly prepared these gigantic charts that you've  
23 prepared in this case with the information that SAIC  
24 had?

25 A. Not the kind of claim charts I would prepare,



1 sir, no, sir.

2 Q. But setting aside claim charts, let's get back  
3 to the actual issue on that document.

4 Will you please remind us for what purpose you  
5 showed the jury that document?

6 A. I relied upon that document to show that  
7 Microsoft had knowledge of the '135 patent, sir.

8 Q. It was received by Mr. Gupta, correct?

9 A. Yes, sir.

10 Q. Forwarded to at least two people in the  
11 Litigation Department -- or the Legal Department?

12 A. Yes, sir.

13 Q. Any doubt in your mind Microsoft knew of that  
14 patent?

15 A. No, sir.

16 Q. We talked a little bit -- well, let me grab  
17 one.

18 You were asked about Claim 10, which is a  
19 system claim, fair?

20 A. Yes, sir.

21 Q. Is high-security mode of the Office  
22 Communicator Product non-infringing with respect to this  
23 claim?

24 A. No, sir, it's not. This is a system claim,  
25 and the Microsoft Office Communicator product -- or

1 sorry -- the RTC interfaces still have those  
2 capabilities in -- whether it's configured by the user  
3 in high-security mode or not.

4 Q. So is high-security mode an option that just  
5 allows different flexibility in how you might use it?

6 A. Yes, sir.

7 Q. Is that sort of flexibility in the product  
8 significant or important?

9 A. It is useful to have that flexibility, but it  
10 doesn't make it non-infringing, sir.

11 Q. Now let's talk about the '180 patent.  
12 Mr. Powers asked you some questions about the '180  
13 patent, and one of the questions he asked you was he  
14 said, let's talk about Windows XP.

15 Do you remember that?

16 A. Yes, sir.

17 Q. And for Windows XP, he said, hey, does Windows  
18 XP come with Windows Meeting Space?

19 A. Yes, sir, or something along those lines, sir.

20 Q. And what's the answer to that question?

21 A. Well, it -- Windows XP doesn't come with  
22 Windows Meeting Space, sir.

23 Q. Do you need Windows Meeting Space to infringe  
24 that claim right there?

25 A. No, sir. That's a computer-readable storage

1 medium claim. That means if you have those instructions  
2 on a computer -- I'm sorry -- on a computer-readable  
3 storage medium and those instructions being what's  
4 represented up there, then you infringe.

5           And that happens with -- when you have them in  
6 the PeerNet interfaces, sir.

7           Q. Are those computer-readable instructions in  
8 this box (indicates)?

9           A. Yes, sir.

10          Q. That's XP, right?

11          A. Yes, sir.

12          Q. Are those computer-readable instructions in  
13 this box (indicates)?

14          A. Yes, sir.

15          Q. Plaintiff's 947, that's XP, isn't it?

16          A. Yes.

17          Q. The previous one was Plaintiff's 830.

18                 Now we can jump to Vista.

19                 Plaintiff's Exhibit 829, are those  
20 computer-readable instructions in this box (indicates)?

21          A. Yes, sir.

22          Q. It just so happens that this box also comes  
23 with Windows Meeting Space?

24          A. Yes, sir, it does.

25          Q. So does Microsoft Windows XP Service Pack 2,

1 straight out of the box -- still in the box, infringe  
2 that claim right there?

3 A. Yes, sir, it does.

4 Q. Now, do you recall a discussion about Windows  
5 Meeting Space and having a meeting at the library?

6 A. Yes, sir, I do.

7 MR. CALDWELL: Will you put that slide  
8 back up, Mr. Moreno?

9 Q. (By Mr. Caldwell) So I tried to take pretty  
10 good notes on this, and I know I didn't get it verbatim,  
11 but there was some questions like, oh, gee if this  
12 person, Bob, invites Bill to the meeting, Bob never  
13 closes his laptop, so Bob's always there.

14 A. Yes, sir, I remember that.

15 Q. And the invitation sends you the proper  
16 address, so you don't need to find the address to make  
17 your first connection.

18 Do you recall that?

19 A. Yes, sir.

20 Q. There was a question, I think, put to you  
21 like, well, gee, would that still infringe? Would it  
22 still use PNRP, the peer name resolution protocol?

23 A. Yes, sir, I recall that.

24 Q. What's the answer to that question?

25 A. Well, sir, it would still infringe. Because

1 graph maintenance would be used, it would infringe  
2 Claim 1. But it would infringe Claim 17 and Claim 33  
3 anyway.

4 Q. Okay. And I thought one of your answers was,  
5 well, if you assume the meeting is short enough, you may  
6 not have this graph maintenance.

7 So we -- let's stay we still have our  
8 hypothetical -- I'm sorry. Was that correct? I didn't  
9 mean to put words in your mouth.

10 A. Yes, sir, that's correct.

11 Q. Now, let's assume we're having our meeting.  
12 And what was it they were writing, a term paper?

13 A. I believe that was my example, yes, sir.

14 Q. How quickly do these students have to finish  
15 their term paper to avoid without graph maintenance  
16 taking place?

17 A. Well, based on Microsoft's documents, it's my  
18 understanding that the graph maintenance takes place  
19 approximately every three minutes, sir.

20 Q. Is that a fairly quick term paper?

21 A. Yes, sir. And I'm trying to recall whether it  
22 was three or five minutes, but it's something in that  
23 range.

24 Q. Now, Mr. Powers also asked you, said, hey, you  
25 don't use graph maintenance. That's not something you

1 do to form the initial connection.

2 Do you recall that?

3 A. Yes, sir, I do.

4 Q. Is there any requirement in any claim of the  
5 '180 patent that you are using the secure domain name  
6 service to form the initial connection and only the  
7 initial connection?

8 A. No, sir. It's a -- it's a method for  
9 accessing a secure computer network address. It doesn't  
10 require that for a -- for the initial connection.

11 Q. Okay. And near the end of your  
12 cross-examination, you were asked about secure domain  
13 names. You were asked in particular, I believe, about  
14 secure domain names in the context of the PeerNet  
15 interfaces?

16 A. Yes, sir, I recall that.

17 Q. Why do you believe a group member's address is  
18 a secure computer network address?

19 A. I believe a group member's address is a secure  
20 computer network address because it meets the Court's  
21 claim construction of requiring authorization for  
22 access, for example. That was the aspect we were  
23 talking about.

24 And to access grouping in there that we were  
25 talking about, that requires a computer trying to make

1 that connection to present a password or a group  
2 membership certificate.

3 Q. And if they can't?

4 A. Then they won't be allowed to join the group,  
5 sir.

6 Q. So did Mr. Powers' questions in the entire  
7 cross-exam cast any doubt on your opinions in this  
8 matter?

9 A. No, sir, they didn't.

10 Q. Will you look at the jury and tell them what  
11 you've concluded?

12 A. I've concluded that Microsoft infringes the  
13 '135 patent and the '180 patents.

14 Q. Thank you.

15 MR. CALDWELL: Pass the witness.

16 THE COURT: Recross?

17 MR. POWERS: Thank you, Your Honor.

18 RE-CROSS-EXAMINATION

19 BY MR. POWERS:

20 Q. Dr. Jones, I'd like to begin on the subject of  
21 anonymity --

22 A. Yes, sir.

23 Q. -- which was the beginning part of the last  
24 redirect examination.

25 A. Yes, sir.

1 Q. Now, let's start with first principles.

2 You do agree that anonymity is required under the  
3 Court's construction.

4 A. Yes, sir.

5 Q. Okay. And you agreed with me during  
6 cross-examination that anonymity includes anonymity as  
7 to the person and the machine.

8 Do you recall that?

9 A. Yes, sir.

10 Q. All right. And you recall that the SIP  
11 address that is obscured relates to the person?

12 A. Yes, sir.

13 Q. But the IP address in the products that you're  
14 accusing of infringement, that relates to the machine.

15 A. Yes, sir.

16 Q. And that's not obscured. It's visible to the  
17 eavesdropper, right?

18 A. On the -- in the discussion we were having,  
19 yes, sir.

20 Q. All right. Now, there was questions from  
21 VirnetX's counsel about IP hopping and tunnels.

22 Do you recall that line of questioning,  
23 generally?

24 A. Yes, I do, sir.

25 Q. Those are just two types of -- two different



1 ways of hiding that IP address corresponding to a  
2 standard machine, aren't they?

3 A. I believe IP address hopping is tunneling in  
4 many configurations, would not hide the outer IP address  
5 sir.

6 Q. And in some configurations, it would?

7 A. Yes, sir, it's possible.

8 Q. Okay. So there are ways that -- there are  
9 different ways where you can hide that IP address  
10 corresponding to the machine?

11 A. Yes, sir, I believe there are.

12 Q. And you understand that Microsoft is not  
13 arguing here to this jury that you have to use IP  
14 hopping or tunneling or any particular way.

15 You understand that, don't you?

16 A. I -- I'm -- I'm not sure what Microsoft is  
17 arguing with respect to that, sir. I don't believe I've  
18 heard that yet.

19 Q. All right. Now, you were asked a question as  
20 to whether an IP address is needed to send information  
21 from one router to another on the internet.

22 Do you recall that line of questions?

23 A. Yes, sir, I do.

24 Q. Now, you need an IP address for that routing,  
25 correct?

1 A. Yes, sir, typically.

2 Q. But the IP address that you're sending doesn't  
3 necessarily have to be the IP address corresponding to  
4 RL Fabrikam's machine in the example that you gave us,  
5 correct?

6 A. That's right, yes, sir.

7 Q. So you could achieve anonymity by hiding that  
8 address in different ways.

9 A. Yes, sir, you could.

10 Q. But Microsoft does not.

11 A. Yes. There are ways that that address is  
12 hidden after that initial link, sir.

13 Q. But Microsoft does not hide it to that  
14 eavesdropper, because you showed us it was visible.

15 A. On that link, sir, that's correct.

16 MR. POWERS: No further questions, Your  
17 Honor.

18 THE COURT: Okay. Thank you.

19 Anything further?

20 MR. CALDWELL: No, Your Honor.

21 THE COURT: All right. Thank you. You  
22 may step down.

23 All right. Who will be your next  
24 witness?

25 MR. CASSADY: Your Honor, before we call

1 our next witness, may we approach?

2 THE COURT: Yes, you may.

3 (Discussion at the bench off the record.)

4 THE COURT: All right. Ladies of the  
5 Jury, I have a matter I need to take up at this time  
6 with the attorneys. So it's a little early, but I think  
7 I'm going to go ahead and give you a 20-minute recess  
8 until 2:35. And so enjoy your recess, and we'll see you  
9 back here at 2:35.

10 COURT SECURITY OFFICER: All rise for the  
11 jury.

12 (Jury out.)

13 THE COURT: Please be seated.

14 All right. I think the best way to  
15 proceed is, if we can break these into groups and let me  
16 just -- have y'all discussed what kind of groups you  
17 want to deal with these in?

18 MR. CASSADY: Yes, Your Honor.

19 Generally -- generally, we have.

20 THE COURT: All right. I mean, it looks  
21 to me like the first several pages down through the top  
22 of Page 6 deal with what is argued as irrelevant  
23 financial data. These are basically spreadsheets and  
24 financials of Microsoft; is that correct?

25 MR. CASSADY: You're correct, Your Honor.

1 THE COURT: All right. And this would be  
2 Exhibits 64, 65, 66, 76, 80, 82, 99, 100, 102, 165, 177,  
3 989, 990, 991, 992, 993, 994, 995, 996, 998 through  
4 1000, 1004, 1006, -7, -8, -9, 1011, -12, -13, 1015,  
5 1029, 1031, 1037, 1038; is that correct?

6 MR. CASSADY: You are correct, Your  
7 Honor.

8 THE COURT: All right. And you're  
9 going -- you wish to offer those exhibits to use in  
10 conjunction with your testimony of Dr. Reed.

11 MR. CASSADY: Yes, Your Honor.

12 THE COURT: And what are Defendant's  
13 objections?

14 MR. SAYLES: May it please the Court.  
15 We object to those exhibits on the basis that they  
16 provide irrelevant financial information and financial  
17 data.

18 These exhibits that they intend to use  
19 show revenue numbers of Microsoft, and we submit that  
20 these figures do not have any tie to the alleged  
21 infringing features in the products accused of  
22 infringement and that there is no proper economic  
23 analysis that would suggest that the patents-in-suit  
24 account for the large portion of the revenues that  
25 Mr. Reed is proposing to support in his testimony.

1 THE COURT: Okay. Response?

2 MR. CASSADY: Your Honor, these go  
3 directly to the revenue related to this case. Mr. Reed  
4 has done a Georgia-Pacific analysis that requires him to  
5 look at the profit share -- profit, market share, and  
6 revenues of the accused products.

7 Now, Mr. Reed, as we discussed with  
8 regards to the motion in limines and motion to strike,  
9 took an apportionment method in doing his analysis.  
10 This data, even if it does include overall sales that  
11 Mr. Sayles -- I'm sorry that that kind of works that  
12 way, Mr. Sayles and overall sales -- I apologize -- even  
13 if it includes overall sales, those overall sales are  
14 directly related to --

15 THE COURT: Do y'all sell overalls?

16 MR. CASSADY: -- directly related to  
17 Georgia-Pacific Factor -- I believe it's 7 that relates  
18 to convoyed sales. I may have my number wrong, but I  
19 know it's convoyed sales, Your Honor.

20 And, basically, I would say that these  
21 documents should come in simply because of the argument  
22 that their motion in limine, their motion to strike  
23 failed on this very issue.

24 THE COURT: Okay. All right. Objection  
25 to those exhibits is overruled.

1                   Okay. What's next? Are these licenses  
2 that are next?

3                   MR. CASSADY: Your Honor, I believe  
4 Mr. Sayles has some specific objections to the next four  
5 documents.

6                   THE COURT: Next four?

7                   MR. CASSADY: Or five.

8                   THE COURT: So that would be 602, 666,  
9 209, and 646?

10                  MR. CASSADY: And 653, Your Honor.

11                  THE COURT: And 653. The next five.  
12 Okay.

13                  MR. SAYLES: Yes, Your Honor.

14                  The -- Exhibit 602 is a license agreement  
15 that we submit is irrelevant. It's a noncomparable  
16 license. And this is one of the licenses that we  
17 discussed on the motion in limine, I believe --

18                  MR. CASSADY: I believe that's correct.

19                  MR. SAYLES: -- at pretrial.

20                  But we submit that there's no showing  
21 that the patented technology involved in that license is  
22 substantially similar or similarly -- similar enough to  
23 be relevant in this case, and we object to it on that  
24 basis.

25                  THE COURT: Okay. Response?

1                   MR. CASSADY: Your Honor, just like with  
2 the motion in limine and the motion to strike on these  
3 licenses, whether or not the licenses are comparable is  
4 not the only evidence as to whether or not they come in  
5 the case.

6                   I believe Mr. Cawley argued during  
7 pretrial that it goes to the weight of the evidence.  
8 Mr. Sayles can cross Mr. Reed till the cows come home  
9 about how comparable these are, but the fact of the  
10 matter is, they're relevant to a Georgia-Pacific  
11 analysis.

12                   I would actually submit to the Court that  
13 had we not used these licenses and they had some tidbit  
14 in them that the defense liked, they would bring it up  
15 and say, Mr. Reed, why didn't you consider these  
16 licenses?

17                   But -- and I think it's evidenced by the  
18 fact that Dr. Ugone is going to rely on 30 lump sum  
19 agreements to which there's no evidence of a technical  
20 comparison, and he's planning to put those in. I'm  
21 pretty sure those will come in during his testimony.

22                   Furthermore -- furthermore, Your Honor,  
23 again these were subject to the motion in limine. And  
24 even if they're not comparable, which I'm not completely  
25 agreeing they are -- they aren't, they go to the fact

1 that Microsoft has licensed patents on the reasonable  
2 royalty basis.

3           And as Your Honor may know, Microsoft's  
4 normal arguments in these cases is, they always agree to  
5 a lump sum no matter what, and these go directly against  
6 that statement by Microsoft that they don't pay running  
7 royalties.

8           MR. SAYLES: May it please the Court,  
9 could I add to that?

10           THE COURT: Yes.

11           MR. SAYLES: Your Honor, on that last  
12 point that they offered 602 -- and this happens to also  
13 apply to 666, which is an the MPEG agreement, they say  
14 that they're offering that to show that Microsoft  
15 sometimes accepts a running royalty.

16           Microsoft has never denied that it  
17 sometimes accepts a running royalty, but has asserted  
18 that it has a preference for a lump sum.

19           But even if you accept the premise upon  
20 which they purport to offer those, to show that  
21 Microsoft has accepted a running royalty in those cases,  
22 that doesn't mean that the rate shown in those two  
23 agreements should be permitted.

24           And we object to showing the rate in  
25 those agreements which is unrelated to the technology at



1 issue.

2           Dolby is the sound that everyone is  
3 familiar with, surround sound and other types of sound,  
4 and MPEG is a well-known technology involved --  
5 involving the transmission of images.

6           And so we submit that even on that last  
7 argument, they shouldn't be allowed to present the  
8 rates.

9           THE COURT: Okay. Any further response?

10           MR. CASSADY: Your Honor, depending on  
11 how Mr. Sayles is using the term rate, we are not going  
12 to show a percentage royalty rate related to Dolby and  
13 MPEG. We're going to show the per-unit dollar amount  
14 that goes to those licenses, again, simply to evidence  
15 that they do pay running royalties.

16           But Mr. Reed --

17           THE COURT: Does that solve your problem  
18 with regard to --

19           MR. SAYLES: It doesn't, because they  
20 actually, in their documents and in the prior reports,  
21 have attempted to convert that per-unit royalty into a  
22 percentage. So that does not solve it.

23           MR. CASSADY: Your Honor, Mr. Reed is not  
24 going to do that conversion during this case. His  
25 slides and his testimony --

1 THE COURT: Okay. Well, I'm going to  
2 sustain the objection as to the rate or the amount but  
3 will allow you to admit them just solely as to the fact  
4 that they did take running royalties.

5 MR. CASSADY: And, Your Honor, just so  
6 we're clear, I can't refer to overall payments they've  
7 made for those licenses or the per-unit rate?

8 THE COURT: Right. Right.

9 MR. CASSADY: All right. Thank you, Your  
10 Honor.

11 THE COURT: All right. What's next:  
12 209?

13 MR. CASSADY: Mr. Sayles, 209?

14 MR. SAYLES: I'm sorry. Yes. 209.

15 209 is another license agreement that we  
16 originally had an objection to 209 on the basis that it  
17 wasn't the correct document, but that was -- that was  
18 fixed, and the correct document is there.

19 But with the correct document, we still  
20 have the objection that it's a protocol license, and the  
21 technology has not been linked to the technology in this  
22 case and that it should not be permitted.

23 THE COURT: Response?

24 MR. CASSADY: Your Honor, these -- these  
25 patent license agreements are structured around

1 PNRP-related technology. I don't know how much more  
2 comparable you get than --

3 THE COURT: All right. Objection is  
4 overruled.

5 646.

6 MR. SAYLES: 646, Your Honor, I have a  
7 copy for the Court so that I can show the specific part  
8 of the objection.

9 May I approach on that, Your Honor?

10 THE COURT: Yes.

11 MR. SAYLES: And while I'm at the bench,  
12 may I also give 653, which is also a specific objection  
13 that I'll be getting to in just a moment?

14 With respect to Exhibit 646, Your Honor,  
15 on Page -- let's see -- Page 31, beginning at 31 and  
16 going through Page 33, you'll see a note at the bottom  
17 of Page 30 that says: Standard patent licensing rates  
18 are between 1.5 percent to 2 percent per patent.

19 THE COURT: Wait a minute. You're on  
20 Page 30?

21 MR. SAYLES: Yes, sir, of Exhibit 646.

22 THE COURT: Yes.

23 MR. SAYLES: And this is an internal  
24 VirnetX presentation. This statement -- and it  
25 continues for several pages in Exhibit 646 -- is

1 referring to so-called standard patent licensing rates.  
2 We object to that on the grounds that it's hearsay. The  
3 source is not identified, and the source is not here and  
4 available for cross-examination.

5 THE COURT: Well, it's a -- response?

6 MR. CASSADY: Your Honor, it doesn't go  
7 to the truth of the matter. It goes to whether VirnetX  
8 and SAIC believed at the time that that was a standard  
9 royalty rate.

10 THE COURT: All right. Overruled.

11 What's next?

12 MR. SAYLES: With regard to 653, Your  
13 Honor, on Page No. 17, on that page -- again, this is a  
14 VirnetX presentation, and within it, there is a standard  
15 rate and an incentivized rate, and this is security  
16 patent licensing model assumptions taken from another  
17 source, and we object to that as hearsay.

18 THE COURT: That goes to the weight as  
19 well, and VirnetX is here through their representatives,  
20 and you can cross-examine them about it, if you wish to.  
21 And it's not offered to prove the truth of the matter  
22 asserted.

23 What's next?

24 MR. CASSADY: Your Honor, I believe it's  
25 the next group.

1 THE COURT: Be the summaries?

2 MR. CASSADY: The summaries of financial  
3 data.

4 THE COURT: All right. And what's the  
5 objection to their expert using summaries?

6 MR. SAYLES: Judge, the objection to the  
7 summaries is similar to the objection to the exhibits  
8 upon which they are based, and that is that they are the  
9 irrelevant financial data, and they simply summarize  
10 that. There's been no sound economic connection between  
11 what is shown there, the claim --

12 THE COURT: All right. My ruling -- my  
13 ruling on the summary will be the same as the financial  
14 data. That will go to the weight, and that's 430 --  
15 well, I'm not going to read them off, beginning on Page  
16 6 at 434 and going through Page 8, 1025.

17 Now, what's this at 211? Does this start  
18 more licenses?

19 MR. SAYLES: Yes, Your Honor. These are  
20 the other protocol licenses and noncomparable licenses  
21 that we object to.

22 They are in the pending stipulation,  
23 which has not been allowed by the Court yet, so we would  
24 ask the Court for a ruling with regard to the  
25 admissibility of those objections -- of those exhibits.

1 THE COURT: All right. And what is your  
2 objection?

3 MR. SAYLES: The objection is that they  
4 are noncomparable licenses; that the technology is not  
5 shown to be related to the technology in suit; and that  
6 they are irrelevant.

7 THE COURT: All right. Exhibits 211,  
8 beginning on the bottom of Page 8 through the end of the  
9 Reed exhibit objections list on Page 11, are overruled,  
10 and they will be admitted.

11 So you can make your offer when the jury  
12 comes in or whenever you'd like to.

13 MR. CASSADY: Thank you, Your Honor.

14 THE COURT: Okay. All right. Anything  
15 further?

16 MR. POWERS: Your Honor, there is.

17 We filed on Monday night a brief about  
18 the DTPN objections that VirnetX had made to certain  
19 exhibits, about the DTPN prior art, and those witnesses  
20 are coming tomorrow, so we need to resolve that issue,  
21 and I just wanted to inquire from the Court as to when  
22 you wish to do so.

23 THE COURT: Now, is that that  
24 memorandum --

25 MR. POWERS: Yes, Your Honor.

1 THE COURT: -- that you filed?

2 Was VirnetX going to file a response to  
3 that or --

4 MR. McLEROY: Your Honor, we can, if you  
5 would like. We have not got around to it yet.

6 THE COURT: Oh. I -- when we get to the  
7 end of the day, I'll just hear some argument on that. I  
8 don't think it's necessary to file a -- to file a  
9 pleading or -- after we have the argument, if I need  
10 one, I'll ask for an additional brief.

11 All right.

12 MR. CASSADY: Your Honor, can -- I  
13 apologize. Can I have two seconds?

14 THE COURT: Yes.

15 MR. CASSADY: I just wanted to make sure  
16 we're following the rules here.

17 What I would like to do is put Reed on  
18 the stand, discuss the documents that are in his slides,  
19 and then tomorrow morning give you a full list of what's  
20 being admitted.

21 Does that work?

22 THE COURT: Is that acceptable to you,  
23 Mr. Sayles?

24 MR. SAYLES: Yes.

25 THE COURT: You have the rulings on the

1 record.

2 MR. SAYLES: That's fine.

3 MR. CASSADY: Thank you, Your Honor.

4 THE COURT: Okay. All right. Very good.

5 Okay. What else?

6 MR. SAYLES: One other thing, Your Honor.

7 I want to be very careful about making the objections.

8 I can understand Your Honor's rulings, and I respect the  
9 Court's rulings.

10 I would like to renew our Daubert  
11 objections to Dr. Reed's testimony, which was Motion  
12 256. The essential ground of that is Mr. Reed's  
13 methodology does not show a sound economic connection  
14 between the claimed invention and the broad proffered  
15 royalty base.

16 And we've discussed that in connection  
17 with these exhibits. Your Honor has ruled. But to the  
18 extent that I should do so, I would ask the Court to  
19 grant that and strike the testimony of Mr. Reed.

20 THE COURT: Okay. I've already ruled on  
21 that, and my ruling is the same.

22 Okay. Be in recess until they start to  
23 come back.

24 COURT SECURITY OFFICER: All rise.

25 (Recess.)



1 COURT SECURITY OFFICER: All rise.

2 (Jury in.)

3 THE COURT: Please be seated.

4 All right. Who will your next witness  
5 be?

6 MR. CASSADY: Your Honor, the Plaintiff,  
7 VirnetX, calls Mr. Reed.

8 THE COURT: Mr. Reed.

9 MR. CASSADY: Your Honor, would you like  
10 a copy of the binders?

11 THE COURT: No. That's all right. Thank  
12 you.

13 MR. CASSADY: May it please the Court.

14 THE COURT: Uh-huh.

15 BRETT REED, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

16 DIRECT EXAMINATION

17 BY MR. CASSADY:

18 Q. Could you please introduce yourself to the  
19 jury.

20 A. Yes. Good afternoon. My name is Brett Reed.  
21 I'm an economist from Los Angeles.

22 Q. And are you married, Mr. Reed?

23 A. Yes, I am.

24 Q. Do you have kids?

25 A. I have three kids, yes.

1 Q. And how old are they?

2 A. Well, they're all in their 20s, and the oldest  
3 is 26.

4 Q. So they're all grown up and out of the house?

5 A. Yes, they are.

6 Q. Okay. Now, Mr. Reed, can you please tell the  
7 jury why you're here today.

8 A. Well, I'm here to testify about reasonable  
9 royalties, and specifically, the reasonable royalties  
10 that Microsoft should pay to VirnetX for the  
11 infringement of the '135 patent and the '180 patent.

12 Q. Okay. Now, we're going to get to your opinion  
13 on that, but first let's talk about your educational  
14 background.

15 Where did you go to college?

16 A. Went to college at the University of  
17 California Irvine where I got a bachelor's degree in  
18 economics, and also I double majored in geography as  
19 well.

20 Q. Okay. Did you graduate with honors?

21 A. Yes, I did.

22 Q. Did you receive any other degrees?

23 A. Well, yes, I went to graduate school, and I  
24 got a master's degree in economics at UCLA.

25 Q. Okay. And you say a master's degree?

1 A. Yes.

2 Q. Did you get any other education after that?

3 A. Well, I was in the Ph.D. program, and I got a  
4 master's degree in the process of that.

5 Q. Okay. Did you complete your coursework in the  
6 Ph.D. program?

7 A. All the coursework, except for the  
8 dissertation. I'm what's sometimes called ABD or all  
9 but dissertation.

10 Q. You said all but dissertation?

11 A. Yes.

12 Q. Okay. And so I assume that means you didn't  
13 complete your dissertation?

14 A. That's correct.

15 Q. And why didn't you complete your dissertation?

16 A. Well, the -- my oldest daughter was born in my  
17 last year at UCLA, and after that year, I was going to  
18 work in the business I'm in now, which is I'm an  
19 economic consultant.

20 Q. So that -- that's the -- well, let me ask it  
21 differently. That's the work you do today, correct?

22 A. That's correct.

23 Q. Okay. Well, what job or where did you begin  
24 that career?

25 A. Back then, I worked for a company called

1 National Economic Research Associates.

2 Q. And do you still work there today?

3 A. No. I worked there about four and a half  
4 years, and then I went to work for a couple of other  
5 companies, and then six months ago, I co-founded the  
6 company I'm currently in.

7 Q. Okay. And what company is that?

8 A. It's Competition Economics.

9 Q. And what does Competition Economics do?

10 A. Well, the firm does economic consulting and  
11 research, and we focus on antitrust issues, and in my  
12 case, I focus on intellectual property issues, which  
13 include patent valuation and patent damages, like the  
14 case we're working in -- we're here about today.

15 Q. Okay. And what's your position at Competition  
16 Economics?

17 A. I'm one of the co-founders and director, and  
18 I'm in charge of the Los Angeles office.

19 Q. Okay. So I know we know you have a Los  
20 Angeles office. How many other offices do you have?

21 A. We have another office in California and then  
22 an office in Austin.

23 Q. Austin, Texas?

24 A. Yes.

25 Q. Well, how did you end up with an office in

1 Austin, Texas?

2 A. One of our co-founders is a professor of  
3 economics at the University of Texas, and he heads that  
4 office.

5 Q. So am I correct to assume you've spent your  
6 entire career doing economic analysis like what we're  
7 about to do in this case?

8 A. Well, putting aside when I was a teaching  
9 associate and an assistant at UCLA, yes. Once I started  
10 working 25 years ago, I focused on economic analysis,  
11 antitrust issues, and then more recently really have  
12 focused on patent infringement damages and patent  
13 valuation.

14 Q. Now, Mr. Reed, have you consulted for any  
15 companies that the jury or myself would be familiar  
16 with?

17 A. I think so. I've done work in a variety of  
18 high-tech areas, but in the computer area, I've worked  
19 for Dell computer and for Hewlett -- I'm sorry, not  
20 Hewlett-Packard, but Packard Bell.

21 And the software area, I've worked for a  
22 variety of companies, including Novell and Palm.

23 Q. Have you -- have you published articles  
24 related to the economic analysis that we're about to  
25 show the jury?

1 A. Yes, I have.

2 Q. Okay. Have you been certified by courts, like  
3 this one, in the past as an expert in economic analysis?

4 A. Yes, I have.

5 Q. Okay. Now, I know we discussed this a little  
6 bit, but could you please tell the jury what it is you  
7 were asked to do today.

8 A. Well, I was asked to calculate the amount of  
9 reasonable royalties, and in particular, I was asked to  
10 evaluate the amount of damages that would be adequate to  
11 compensate VirnetX and no less than a reasonable  
12 royalty.

13 Q. Now, Mr. Reed, you said no less than a  
14 reasonable royalty. Where does that language come from?

15 A. It comes from the patent statute, as I  
16 understand it.

17 Q. Okay. And that's the patent statute issued by  
18 the United States Congress?

19 A. Yes.

20 Q. Okay. Did you use any court-approved  
21 messages -- or sorry -- methods for calculating the  
22 reasonable royalty you referenced?

23 A. Yes, I did.

24 Q. Okay. We'll discuss your analysis in detail  
25 in a moment, but what was the summation or the

1 conclusion of your analysis?

2 A. Well, I have a chart that shows the summary  
3 analysis, and if I can get that chart.

4 Q. I think you have control, Mr. Reed.

5 A. Oh, I do? I just -- so this shows the  
6 summary -- and I'll get into more detail later, but what  
7 I want to address now is that through the summer of  
8 2009 -- that's -- I did the calculations through that  
9 time period, and for the '135 patent and '180 patents,  
10 the total reasonable royalty, as I determined, would be  
11 \$200 -- 242 million.

12 Q. Okay. And, Mr. Reed, let me ask you another  
13 question about this slide. At the bottom left, you have  
14 two numbers, PX406 and PX417. What are those?

15 A. Well, those are exhibits that show the  
16 underlying calculations from -- from, essentially, tabs  
17 or exhibits from my report.

18 Q. Okay. And do those tabs or exhibits rely on  
19 specific types of data?

20 A. Yes, they do. They rely on a wide range of  
21 information that was produced by the parties in this  
22 case and other public information that I obtained  
23 through my research.

24 Q. Okay. Now, Mr. Reed, can you explain to the  
25 jury what work went into the analysis that led to \$242

1 million?

2           A.     Well, a substantial amount of work on behalf  
3 of myself and the people assisting me in my company.  
4 And we reviewed, as I mentioned, a wide range of  
5 materials, some of them produced by Microsoft, some  
6 produced by VirnetX, public materials. And I have a  
7 chart that summarizes some of the materials.

8           Q.     Can you generally describe what the jury is  
9 seeing here?

10          A.     Yes. This is a summary of the various  
11 different materials that my research and analysis  
12 considered in coming up with my overall calculations and  
13 determinations of the reasonable royalty.

14          Q.     Okay. Now, Mr. Reed, I see at the bottom  
15 left, it says: Interviews with Dr. Jones. Is that the  
16 Dr. Jones that the jury just heard about -- or heard  
17 from for many hours yesterday and today?

18          A.     Absolutely, yes.

19          Q.     And why would you need to interview Dr. Jones?

20          A.     Well, I'm an economist, and the technical  
21 aspects of this case are very important, as you all  
22 know, and so I had many conversations with Dr. Jones  
23 addressing the importance of the VirnetX technology and  
24 the importance of the VirnetX technology to Microsoft.

25          Q.     Okay. Now, Mr. Reed, I see on the second



1 column, you have listed sworn testimony of Microsoft  
2 employees. What is that referring to?

3 A. Well, that refers to the depositions. In  
4 trial, so far, we've heard some about the depositions  
5 that were taken in this case, and that material is  
6 available to someone like me to read what individuals,  
7 in this case, Microsoft employees, say about issues,  
8 such as patent license agreements, sales data, the  
9 introduction of some of the products that are at issue  
10 in this case, and the importance of -- of those  
11 products.

12 So that's the kind of information that I was  
13 able to evaluate and approximately 25 to 30 depositions  
14 of Microsoft individuals.

15 Q. And are those all of the depositions you  
16 reviewed or just the ones from Microsoft?

17 A. Those -- those are just the Microsoft.

18 Q. Okay.

19 A. There are additional depositions that are  
20 identified on this list as well.

21 Q. Now, Mr. Reed, on the third column, we have  
22 SAIC documents. Now, the jury has heard a little bit  
23 about SAIC, but I'm curious why those are important to  
24 your analysis.

25 A. Well, SAIC was the owner of this technology

1 back in 2003. And 2003 is an important time period that  
2 I've analyzed.

3 Q. Okay. Now, Mr. Reed, what products are we  
4 here to talk about?

5 A. We're here to talk about the products that  
6 Dr. Jones addressed, and here's a list of them.

7 Thank you.

8 Q. No problem.

9 A. So it's the -- the products that are accused  
10 under the '135 patent and '180 patent, and they're the  
11 same products that you've been hearing about for the  
12 last many hours.

13 Q. The last many hours from Dr. Jones?

14 A. Exactly, yes.

15 Q. Okay. Now, I want to focus on your analysis  
16 that you conducted in this case.

17 How did you go about determining, the term you  
18 used, reasonable royalty?

19 A. Well, as I mentioned a moment ago, I used a  
20 well-known court case to analyze certain factors.  
21 They're called the Georgia-Pacific Factors.

22 And I analyzed those factors to come up with a  
23 reasonable royalty. And I have a chart that shows the  
24 listing of the factors.

25 Q. Okay. Well, Mr. Reed, my first question is,

1 where do these factors come from?

2 A. Well, it's listed at the top. That's a court  
3 case, a very well-known court case for patent damages,  
4 in particular, reasonable royalty analysis. And the  
5 case was called Georgia-Pacific Corp versus the United  
6 States Plywood Corp.

7 Q. Now, Mr. Reed, was that a case like the one  
8 we're sitting in today?

9 A. Yes. It's from several decades ago, but it  
10 was a patent infringement case much like this one.

11 Q. Okay. Now, Mr. Reed, what is a  
12 Georgia-Pacific analysis?

13 A. Well, it's the analysis of a variety of  
14 economic and financial and licensing issues, and it also  
15 analyzed within the context of the hypothetical  
16 negotiation you see down here, which is a negotiation  
17 between a willing licensor and a willing licensee.

18 That's the 15th Georgia-Pacific Factor, and I  
19 considered that a framework for analyzing the other  
20 factors.

21 Q. Okay. Well, now, we've got another term for  
22 the jury. Now it's not an acronym, so maybe they're  
23 happy about that, but what is a hypothetical  
24 negotiation?

25 A. Well, a hypothetical negotiation is what --

1 what it sounds like or seems like. It's not an actual  
2 negotiation that would lead to a license agreement,  
3 because in a case such as this, there was not an actual  
4 negotiation between the parties, and there was never a  
5 license agreement that was entered into.

6           So the hypothetical negotiation is where we  
7 assume the parties would have got together back at the  
8 time of the first infringement, and they would have sat  
9 down and negotiated a reasonable royalty for the use of  
10 the technology.

11           And I actually have a slide that just  
12 illustrates the concept.

13           Q. Does this illustrate what a hypothetical  
14 negotiation would look like in this case?

15           A. Yes, it does, I believe.

16           Q. Okay. And I see at the top, you say early  
17 2003. What is that in reference to?

18           A. Well, early 2003 would be the date of this  
19 hypothetical negotiation, which would be just before the  
20 infringement of the '135 patent. You might recall the  
21 '135 patent issued at the very end of year 2002.

22           Q. Well, would this negotiation be for one patent  
23 or for two patents?

24           A. Well, I believe it would be for two patents.  
25 It would include the '180 patent, even though that

1 patent didn't issue until March of 2007, several years  
2 later.

3 Q. Okay. Why would we include a patent that  
4 hadn't issued yet in the negotiation in early 2003?

5 A. Well, I think for two reasons.

6 One is it helped simplify the analysis, but  
7 also it's a reasonable way to approach it for Microsoft.  
8 Because I believe Microsoft would want to make sure it  
9 had rights to the patents that were at issue for these  
10 products.

11 Q. And is that common in a real-world  
12 negotiation?

13 A. Yes. There are different -- different  
14 negotiations or different licenses are dealt with in  
15 different ways, but certainly, that's one way in which  
16 patents that might issue in the future would be taken  
17 into account.

18 Q. And the fact that you've included the '180  
19 patent in this hypothetical negotiation in early 2003,  
20 who does that favor: Microsoft or VirnetX?

21 A. Well, based on my analysis, I believe it's  
22 favors Microsoft, because I did a separate analysis of a  
23 reasonable royalty for the '180 patent, assuming that  
24 there would be a negotiation later in time, and that  
25 gave rise to a larger reasonable royalty amount for the

1 '180 patent.

2 Q. And when would that hypothetical negotiation  
3 have occurred?

4 A. That would have been right around March of  
5 2007 when the '180 patent issued.

6 Q. Okay. And how much more would the '180 have  
7 been worth in 2007?

8 A. In the analysis I did, I believe it would --  
9 for the '180 patent, it would have increased the amount  
10 of reasonable royalties through December 2009 by about  
11 \$50 million.

12 Q. Okay. So we know we have the hypothetical  
13 negotiation, and we have these two guys sitting here at  
14 the table. We've got Microsoft on one side and VirnetX  
15 and SAIC on the other side.

16 What are you trying to show the jury here with  
17 this picture?

18 A. Well, it sets the stage for this -- this first  
19 assumption, which is the parties would get together to  
20 determine a reasonable royalty for the -- and that would  
21 be the royalty payment in exchange for rights to the  
22 patented technology.

23 And so one of the assumptions is that the  
24 parties get together and come up with this agreement.

25 Q. Now, Mr. Reed, are there any other assumptions

1 made in the hypothetical negotiation?

2 A. Yes, there are, and I've listed some of them  
3 here.

4 Q. Okay. And why are these assumptions  
5 important, Mr. Reed?

6 A. Well, they're important because they put in  
7 context the issues that have to be analyzed. And the  
8 way one would assess the facts associated with those  
9 Georgia-Pacific Factors, the licensee and economic and  
10 financial issues to evaluate.

11 And one of the important assumptions -- it's  
12 the first one that's listed here -- that VirnetX and  
13 Microsoft would agree that the patents are valid,  
14 infringed, and enforceable.

15 Q. Okay. Well, why is that important, Mr. Reed?

16 A. Well, it's important because it's  
17 distinguished somewhat from happens often in real life  
18 negotiations that lead to license agreements.

19 Often parties in a -- in a negotiation over a  
20 license agreement will disagree. The party taking the  
21 license might say the patent may not be valid or it's  
22 not valid or argue about the validity.

23 Same with respect to infringement. There may  
24 be discussions about, disagreements about whether the  
25 products at issue would infringe the patent.

1           And that's a different situation than this  
2 hypothetical negotiation, because here both parties  
3 understand that the patents are valid, and the patents  
4 are infringed, and they have to come to an agreement.

5           Q.    Okay.  Well, Mr. Reed, were you here during  
6 opening statements?

7           A.    Yes, I was.

8           Q.    And did you hear Mr. Powers tell the jury that  
9 Microsoft believed the patents were invalid and  
10 uninfringed and not worth a dime?

11           Do you remember that?

12           A.    Yes, I do.

13           Q.    Okay.  So how does that fall into the  
14 hypothetical negotiation in this case?

15           A.    Well, that reflects what's sometimes the  
16 position of a licensee in a real negotiation, and that  
17 kind of information is used to argue for paying a lower  
18 amount.

19           But here, those types of arguments couldn't be  
20 made.  The patents are understood to be valid and  
21 infringed.  And an amount of a reasonable royalty -- or  
22 I should say damages adequate to compensate VirnetX at  
23 no less than a reasonable royalty is necessary.

24           Q.    Okay.  Well, let's move on to your second  
25 bullet point.  VirnetX and Microsoft understand the need



1 to reach an agreement.

2           What does that mean?

3           A.    I think it's pretty straightforward.  They're  
4 sitting at the table.  They have to come to an  
5 agreement.  You can't just walk away from the table  
6 without an agreement.

7           Q.    Okay.  And I'm going to pick on Mr. Powers  
8 again.

9                    What if he's the guy who goes there for  
10 Microsoft to negotiate this deal, and he says exactly  
11 what he said to the jury, not valid, not infringed, not  
12 worth a dime, and throws his pen down and goes to walk  
13 out of the room?  What happens?

14           A.    Well, I think he would return back to the  
15 table and continue to negotiate, and that would happen  
16 on both sides of the table.

17           Q.    Okay.  So everybody's locked in that room;  
18 nobody's leaving till there's a deal?

19           A.    That's -- that's correct.  I think that's the  
20 right way to frame this issue.

21           Q.    Okay.  And then finally, Mr. Reed, you've got  
22 relevant future facts would be known in 2003?

23                    What does that mean?

24           A.    Well, it's related to something that's called  
25 the book of wisdom.

1           Now, in this analysis of the Georgia-Pacific  
2 Factors and the use of the hypothetical negotiation,  
3 we're allowed to consider information that may have  
4 occurred after 2003, information that would occur  
5 through 2009, for example.

6           Q.    What are some examples of what might have  
7 occurred after 2003 that the parties at the hypothetical  
8 negotiation would be aware of?

9           A.    One example I mentioned a moment ago is the  
10 issuing of the '180 patent in March of 2007.

11                   And another example would be the knowledge  
12 that the technology was used in certain Microsoft  
13 products, the accused Microsoft products, for the time  
14 period beginning in 2003 through December 2009, and, in  
15 fact, also the extent of the sales revenues associated  
16 with those products.

17           Q.    Okay. Now, you said the extent of the sales.  
18 What is the extent of the sales of just the Vista and XP  
19 products in this case?

20           A.    Well, if I go back to the first chart, I can  
21 show that -- this is a calculation I did associated with  
22 U.S. activity, and that reflects 48 billion in revenue  
23 for the time period through December of 2009.

24                   And then there's also additional revenue  
25 associated with the LCS/OCS Office Communications Server

1 products, and there's 69.1 million associated with those  
2 products.

3 Q. Okay. Thank you, Mr. Reed.

4 Now, the next question I have for you is, you  
5 mentioned -- well, you've mentioned the hypothetical  
6 negotiation, but the word royalty has come up more than  
7 a couple of times, and I'm not sure we've defined it, so  
8 could you please define that for the jury.

9 A. Sure. A royalty can be of a -- different  
10 forms. There can be a lump sum payment. There can be a  
11 running royalty. And here I wanted to illustrate a  
12 common reasonable royalty structure by using something  
13 that's common here in Texas, which is royalties  
14 associated with oil and gas.

15 And so what I've done is illustrated the  
16 concept of a running royalty and starting with the  
17 revenue from the oil production, so you can think about  
18 that as a royalty base.

19 And then a certain percentage of that revenue  
20 is going to be paid to the landowner. And you can think  
21 about that as a royalty rate. It might be 3 percent, 4  
22 percent. That's the percentage that would go to the  
23 landowner.

24 And then ultimately, the multiplication of the  
25 royalty rate and the royalty base gives rise to the

1 total royalties collected, which, ultimately, we can  
2 think about as the running royalties or the reasonable  
3 royalties.

4 Q. Okay. Now, Mr. Reed, how does -- in your  
5 analogy here of the oil and gas revenues, how does a  
6 royalty rate get calculated?

7 A. Well, the royalty rate goes back to the  
8 analysis of these Georgia-Pacific Factors I mentioned  
9 and the evaluation of the different financial and  
10 economic and licensing factors to come up with an  
11 appropriate reasonable royalty rate and a royalty base  
12 to ultimately determine these reasonable royalties.

13 Q. And how does your oil and gas analogy here  
14 equate to this case?

15 A. Well, the royalty base would be the revenues  
16 associated with the Microsoft APIs. The royalty rate  
17 would be the analysis to determine what is a royalty  
18 rate that would go with those revenues to generate a  
19 reasonable royalty.

20 And so, ultimately, the combination of the  
21 royalty base associated with the Microsoft revenues and  
22 the royalty rate associated with the Georgia-Pacific  
23 analysis can give rise to a reasonable royalty or a  
24 running royalty.

25 Q. I think you hinted at it, but I want to go

1 ahead and ask the question. How do we calculate a  
2 royalty rate in this case?

3 A. Well, it goes back to those Georgia-Pacific  
4 Factors. So it's the -- essentially, the first 13  
5 Georgia-Pacific Factors in the context of the 15th  
6 factor, which is the hypothetical negotiation.

7 Q. Okay. Now, Mr. Reed, do we need to go through  
8 all 15 Georgia-Pacific Factors?

9 A. Well, I did in my reports and in my analysis,  
10 but for the purposes here, I've summarized them into  
11 three groups.

12 Q. Okay. And do these groups that you're  
13 identifying, do they take into account all 15 factors?

14 A. Well, they take into account the first 13, I  
15 believe. Those are the economic and licensing and  
16 financial factors.

17 The 14th factor deals with expert testimony or  
18 expert opinions, probably a better way of stating it.  
19 And certainly, I considered the expert opinions of -- of  
20 Professor Jones.

21 And then the 15th factor is the framework I  
22 mentioned, the hypothetical negotiation between a  
23 willing licensor and a willing licensee.

24 Q. Okay. And, Mr. Reed, just so the record is  
25 clear, did you take all 15 factors into account in your

1 analysis?

2 A. Yes, I did.

3 Q. Okay. Now, let's start at the beginning, the  
4 first group.

5 What is the first group?

6 A. Well, the first group are the factors that  
7 address licensing and the royalty rates that come from a  
8 variety of sources that would be available from my  
9 research.

10 Q. Okay. And why is this group important?

11 A. Well, it's important because, among other  
12 things, it can give information, such as a potential  
13 benchmark or comparable royalty rate, to take into  
14 account to come up with that royalty rate that gets  
15 applied in the calculation I mentioned a moment ago.

16 Q. Okay. And are any of these factors part of  
17 other groups?

18 A. Well, this is the way I grouped them for  
19 purposes here.

20 And the 13th factor is one I've also put into  
21 the third group. It's a factor that deals with the  
22 portion of profits and how that might be credited to the  
23 invention and how it might take into account the  
24 relative contributions of both the VirnetX technology  
25 and the many contributions of Microsoft.

1 Q. And why would that factor be in both Group 1  
2 and Group 3?

3 A. Well, I think that factor is reflected in  
4 royalty rates in the real world, generally, the issue of  
5 how profits get shared and allocated between licensees  
6 and licensors.

7 And then the third group deals with -- with  
8 value, profitability, the extent of the use of the  
9 technology, and the portion of the profits would relate  
10 there as well.

11 Q. Okay. Now, Mr. Reed, are we going to discuss  
12 Factor 13 in detail now or in Group 3?

13 A. It's -- it's going to be covered near the end  
14 of my -- of my analysis. It's an important factor that  
15 will be covered at that point.

16 Q. Now, Mr. Reed, you mentioned this group was  
17 important because it gave -- I believe you said  
18 benchmarks; is that -- is that correct?

19 A. Yes.

20 Q. What are benchmarks?

21 A. Well, if you think about the oil and gas  
22 example, a benchmark might be -- for a landowner, the  
23 benchmark might be the neighbor's royalty rate, to the  
24 extent they can find that information.

25 They might know that their neighbor got a

1 certain percentage, and they might think, well, my land  
2 is better for drilling oil, and I should get a better  
3 rate than that. I think I'm going to produce more  
4 efficiently here or allow their producers to produce  
5 more efficiently.

6           So that benchmark rate can be information that  
7 could be assessed to help determine a royalty rate.

8           Q.    Okay. And did you find benchmark licenses in  
9 this case?

10          A.    Well, I found a variety of information, and  
11 yes, I found some information that I could consider to  
12 help guide my analysis.

13          Q.    Okay. And what benchmark licenses did you  
14 determine or find in this case?

15          A.    Well, I started with agreements from SAIC, and  
16 they're listed on this next chart. These are agreements  
17 that we've heard about that SAIC has entered into with  
18 SafeNet and VirnetX.

19          Q.    Now, Mr. Reed, why are these agreements  
20 relevant in this case?

21          A.    Well, there's -- there's differences that need  
22 to be taken into account and that I did take into  
23 account, but they're relevant because they cover the  
24 patented technology at issue here. They actually relate  
25 to the patents and patent applications associated with



1 the '135 patent and '180 patents.

2 Q. Okay. And you mentioned a little bit, but I  
3 just want to make sure the jury understands, these are  
4 the very same agreements that Mr. Munger testified about  
5 on the stand some two days ago?

6 A. That's correct. I believe it was Monday.

7 Q. Okay. Now, didn't Mr. Munger testify that  
8 that SafeNet agreement -- the SafeNet agreement was  
9 canceled before any royalties were paid?

10 A. Yes, he did, and that's one of the differences  
11 that I -- that I note and address.

12 Q. Okay. Well, how can it still be relevant  
13 then?

14 A. Well, it's relevant because it still provides  
15 guidance as to what two parties were considering were a  
16 reasonable amount for the use of the VirnetX technology.

17 Q. Okay. And so what royalty rates were applied  
18 in this case -- in those licenses?

19 A. Well, in those licenses, we have the 20  
20 percent royalty rate that applied for the SafeNet  
21 license agreement. And then in the case of VirnetX,  
22 there was a 15 percent running royalty rate.

23 Q. Okay. Now, Mr. Reed, are we done now? I  
24 mean, can we just take those two rates and multiply it  
25 times the Windows products and save the jury a lot of

1 time?

2 A. No. That wouldn't be appropriate because of  
3 the differences that I mentioned. There's significant  
4 differences that need to be taken into account and other  
5 factors that need to be taken into account as well.

6 Q. Okay. And what are those differences?

7 A. Well, one of the differences is what was just  
8 mentioned a moment ago; that SafeNet never paid  
9 royalties at that 20 percent royalty rate. In fact,  
10 VirnetX doesn't yet have the Gabriel product out, and  
11 VirnetX also hasn't paid royalties at the 15 percent  
12 royalty rate.

13 And then if you think about the difference  
14 compared to the hypothetical negotiation with Microsoft,  
15 Microsoft is the leading software producer in the world,  
16 and if these products were going to apply, as Dr. Jones  
17 says they do, to Windows XP and Windows Vista, those are  
18 very large successful products, and that difference  
19 needs to be taken into account.

20 Q. Okay. And was there any difference -- or are  
21 there any differences with the products in those  
22 agreements and the products that would be in this  
23 hypothetical negotiation?

24 A. There are, but there's actually a couple of  
25 other differences I'd like to mention first, if I could.

1 Q. Go ahead.

2 A. One is the -- these SAIC license agreements to  
3 SafeNet and VirnetX included exclusivity aspects,  
4 whereas the hypothetical negotiation leading to a  
5 license with Microsoft would be a non-exclusive license.  
6 That's a Georgia-Pacific Factor I'll address a little  
7 later.

8 And then another difference is the agreements  
9 with SafeNet and VirnetX provided rights to more than  
10 patents. It also provided rights to knowhow and even  
11 access to Mr. Munger and Dr. Short and some of the  
12 inventors, whereas, again, the hypothetical license with  
13 Microsoft would only cover rights to the patents, the  
14 '180 and the '135 patents.

15 Q. Okay. Now, are there any other differences  
16 you'd like to talk about?

17 A. Well, it gets back to the one you identified  
18 up there. There's a difference in the products as well.

19 Q. Okay. Now, Mr. Reed, what are the differences  
20 in the products?

21 A. Well, the SAIC agreement -- agreements with  
22 SafeNet and VirnetX had in mind a security software  
23 product, a product that would be priced at somewhere  
24 around \$13.50 to \$27, whereas the license with Microsoft  
25 would apply to products like Windows XP and Windows

1 Vista that range in price, depending on the version,  
2 from \$50 to above a hundred dollars, and then would also  
3 apply to the OCS/LCS products, Office Communications  
4 Server, and those products also have a different price  
5 structure.

6 Q. Okay. What does it matter that those products  
7 are different in the way you described or based on the  
8 price?

9 A. Well, it generated different royalty per user,  
10 and I think that should be taken into account to kind of  
11 adjust these royalty rates, if you will.

12 Q. And how did you take the price difference and  
13 the other differences into account?

14 A. I considered the royalty that would be --  
15 would have been generated by these 20 percent and 15  
16 percent royalty rates applied to the software security  
17 product. And that's an amount of approximately 2 to \$5  
18 per user.

19 And then I considered that to the price for  
20 some of the -- of the base Windows XP and Windows Vista  
21 products, and those have prices in the 50 to \$80 range.  
22 And so if I make the adjustment, the royalty rates fall  
23 in a range of 2.5 percent to 10 percent, and that's an  
24 adjustment. That's necessary for one of these several  
25 differences that I've noted here.

1 Q. Okay. Now, Mr. Reed, before we get to that  
2 rate you've got, how did you go about determining what  
3 the expected royalty per user would be when we all know  
4 that no product was ever sold under the SafeNet  
5 agreement?

6 A. That's right. There wasn't actual information  
7 leading to a product, but there was plans and documents  
8 from SAIC and VirnetX addressing the expected price  
9 range. And I considered that information with the  
10 prices that I mentioned earlier, 13.50 to -- up to about  
11 \$27. And it depends on how many years the products  
12 would be used.

13 Q. And so is that how you arrived at the 2 to \$5  
14 you have on the slide here, is multiplied the percentage  
15 above times the price of the product you believed would  
16 be sold?

17 A. That's correct, yes.

18 Q. Okay. Did you do anything else to confirm  
19 that SafeNet and SAIC were on the right track with  
20 regards to the price of their security product?

21 A. Well, I certainly looked at that issue and had  
22 assistance from Professor Jones, and there were several  
23 products relating to VPN security that were sold at  
24 prices that range from about \$40 to \$70. So I  
25 considered that information.

1 Q. Okay. Now, Mr. Reed, we'll go ahead and skip  
2 down now to 2.5 percent to 10 percent. So you say that  
3 takes into account the price difference of the products,  
4 correct?

5 A. Correct.

6 Q. Okay. So are we done? Do we just take this  
7 2.5 percent to 10 percent and multiply that times the  
8 Windows products?

9 A. No, we're not done. There are other  
10 differences that I took into account, and there are the  
11 other Georgia-Pacific Factors as well. So I continue  
12 the analysis.

13 Q. Okay. And, Mr. Reed, I want to ask you kind  
14 of a -- just a basic question so that the jury  
15 understands for the rest of the slides.

16 At the bottom left, you've got PX134, PX647,  
17 and PX648. If the jury wants to see any of these  
18 documents related to your calculations or to the  
19 agreements, can they ask for those documents by those  
20 numbers?

21 A. I understand so, yes.

22 Q. Okay. Now, Mr. Reed, did you find any other  
23 benchmarks that are relevant to this case?

24 A. Yes, I did. And the next category relates to  
25 a Microsoft licensing program.

1 Q. Okay. And what Microsoft licensing program  
2 did you find relevant?

3 A. Well, it's called the Work Group Server  
4 Protocol program or WSPP. And I found information  
5 relating to rates -- royalty rates that Microsoft charge  
6 other companies under this program to have an important  
7 bearing on the analysis of the reasonable royalty.

8 Q. Okay. And just for a little more background,  
9 what is the WSPP licensing program?

10 A. Well, it relates to patents -- Microsoft  
11 patents relating to communication protocols that are  
12 licensed to other companies.

13 And in particular, it -- the overall program  
14 covers different technology areas. And some of the  
15 technology areas are authentication and network  
16 communications, and some relate to PNRP.

17 And so those are some of the different  
18 technology areas, what Microsoft calls scenarios that I  
19 was able to explore the royalty rate for them.

20 Q. Okay. And why else are the WSPP licenses  
21 relevant to your analysis?

22 A. There's a variety of reasons why they're  
23 relevant.

24 One is they're non-exclusive license  
25 agreements. And what I mean by that is, it's offered to

1 a variety of different companies. It's not exclusive  
2 like, for example, VirnetX's license agreement is with  
3 SAIC.

4 Another -- another difference is -- or another  
5 important point to consider is that they have  
6 patent-only royalty rates. And so that's an important  
7 comparison.

8 Before I mentioned that the SAIC covered other  
9 types of intellectual property, more than just patents.  
10 These particular agreements included rates that apply to  
11 patents only.

12 Q. Did you do anything else to determine whether  
13 these rates here in this agreement are reasonable?

14 A. Yes, I did. I considered information that was  
15 available that addressed other companies entering into  
16 these agreements, agreeing to take a license and to --  
17 to enter into the license with Microsoft to pay the  
18 royal -- these royalty rates.

19 And also I was aware of information that  
20 Microsoft believed that they were reasonable rates as  
21 well.

22 Q. Excuse me.

23 Now, in this slide, you have two ranges here,  
24 and I think you already said it, but -- you described  
25 them as patent-only rates, correct?



1 A. Correct.

2 Q. Okay. And you've already told the jury  
3 they're important because that's what we have here in  
4 this case, is a patent-only license, correct?

5 A. Correct.

6 Q. Okay. Now, what's the first range, .46 to  
7 3.87 percent?

8 A. That was the overall range of the different  
9 technology areas or scenarios that relate to the  
10 percentage royalty rates. And so I considered that.  
11 But in some cases, the number of patents that were  
12 covered would be in the range of 10 or 12 patents in  
13 some of these particular scenarios.

14 But I was able to explore as a subset of these  
15 scenarios that only had a few patents; for example, one  
16 patent or two or three or four. And for that group, the  
17 range of the royalty rates was 0.46 percent to 1.82  
18 percent, and that's the group I focused on.

19 Q. Okay. And I'm going to sound like a broken  
20 record, but are we just going to take this .46 to 1.82  
21 percent and multiply that by the Windows products?

22 A. No. Again, it's part of the consideration of  
23 my analysis of the Georgia-Pacific Factors, but there  
24 are other factors to analyze, so I continued with the  
25 analysis.

1 Q. Okay. Now, Mr. Reed, one more question about  
2 these.

3 How did you determine that these were -- or  
4 wait. You know what? I think you've already answered  
5 this. You said these were related to the PRNP patents,  
6 correct?

7 A. Well, the PRNP patents certainly are included  
8 as an example of some of the technology area that was  
9 part of this program, but more generally, they also  
10 covered things like authentication and network  
11 communications, which are similar to the types of  
12 technologies that -- that we're talking about in this  
13 case.

14 Q. Okay. And how else did you go about  
15 determining if these were relevant to this case?

16 A. Well, I -- I identified the P -- there were  
17 two PNRP patents. That's peer name resolution protocol.  
18 And I identified those to Professor Jones, and he  
19 indicated that they were in a similar technology area to  
20 the patents at issue in this case.

21 Q. And then similar, does that mean comparable?

22 A. Well, it could be, yes.

23 Q. Okay. Now, besides these benchmark licenses,  
24 did you take into account any other information in your  
25 first group?

1           A.    Yes, I did.

2           Q.    Okay.  And what other information did you take  
3 into account?

4           A.    I also took into account what's sometimes  
5 called Georgia-Pacific Factor 4, which deals with the  
6 expectations and the policies regarding patent licensing  
7 of the owner of the patents.

8           Q.    And why is that important to your analysis,  
9 Mr. Reed?

10          A.    Well, I think it gives it context for that  
11 hypothetical negotiation.  What would be the position of  
12 SAIC or VirnetX when they were sitting at the table to  
13 negotiate a reasonable royalty?  What would they have in  
14 mind?

15          Q.    Okay.  And what did you generally find SAIC  
16 and VirnetX's expectations to be?

17          A.    Well, I think, first, the expectations would  
18 be that there would be a running royalty rate.  And both  
19 SAIC and VirnetX focused on a percentage royalty, like  
20 the example I gave with the oil and gas royalty  
21 situation.

22                   And among other things, I discussed with  
23 Mr. Munger the position and approach of SAIC back in  
24 2003 when Mr. Munger was there, and Mr. Munger told me  
25 that SAIC's approach would be to pursue a running

1 royalty, a percentage royalty.

2 Q. Now, Mr. Reed, where else did you determine --  
3 well, actually, what rate did you determine was the  
4 interest or needed by VirnetX or SAIC?

5 A. There were different rates discussed in  
6 different SAIC and VirnetX documents, but overall, the  
7 range was about 1 percent per patent up to 5 percent per  
8 patent.

9 Q. Okay. Now, Mr. Reed, where did you get that  
10 from?

11 A. It came from a variety of SAIC and VirnetX  
12 documents.

13 Q. Okay. And I just want to put up an example.

14 MR. CASSADY: PX653, please, Mr. Moreno.

15 And can you please turn to Page 17?

16 Is this -- oh, thank you.

17 Would you highlight the whole top portion  
18 where it says standard rate and incentivized rate,  
19 please, the whole -- yeah. Yes. Thank you.

20 Q. (By Mr. Cassady) Is this an example of one of  
21 the documents you were referring to?

22 A. Yes. This is a VirnetX document. It's the  
23 most recent of the various examples that I -- that I  
24 explored. This one is from 2009.

25 Q. And so we have -- I see some large rates, 10

1 to 25 percent, 5 to 10 percent. Why aren't we applying  
2 those rates?

3 A. Well, those relate to the entire portfolio of  
4 VirnetX patents, and here we're focusing on the '135 and  
5 the '180.

6 Q. Okay. So these two here, the 2 to 5 percent  
7 and 1 to 2 percent, are those the more relevant?

8 A. Well, certainly, they would be more relevant,  
9 and in fact, I focused more on the incentivized rate,  
10 the 1 to 2 percent per patent range.

11 And by incentivized rate, that meant, if  
12 VirnetX was working to come to an agreement, that would  
13 be the type of rate that VirnetX would have in mind at a  
14 hypothetical negotiation.

15 Q. Okay. And is this the only presentation you  
16 relied on?

17 A. No. There were three or four others, and  
18 there was also some information from SAIC regarding its  
19 research on security patent royalty rates.

20 Q. Okay. And are a few examples located at  
21 PX646, PX690, and PX691?

22 A. I believe those are the PXs and I identified,  
23 yes.

24 Q. Okay. Now, again, back to my broken record,  
25 do we just take this 1 to 2 or to 2 to 5 percent rates

1 that you found that VirnetX and SAIC believed to be  
2 relevant and just apply it to the Microsoft Windows  
3 revenue?

4 A. No. That reflects the position of VirnetX,  
5 but not -- VirnetX didn't enter into any license  
6 agreements specifying those rates. So, again, I  
7 continue the analysis.

8 Q. Now, did you determine that any other licenses  
9 were relevant in your analysis?

10 A. Yes, I did. There were additional license  
11 agreements that Microsoft has entered into where it  
12 licensed its patented technology to other companies.  
13 And I considered a range of the different programs that  
14 Microsoft has entered into, and the royalties that  
15 Microsoft receives for those programs.

16 Q. And which licenses did you discover in that  
17 group?

18 A. Well, I've listed them. There's several.  
19 And the first item here we've already discussed, the  
20 WSPP program.

21 There's also a similar program related to the  
22 MCPP program. And I think that's Microsoft  
23 Communication Protocol Patent -- or Program licenses.  
24 You'll note that that included patents and other  
25 intellectual property, but it had royalty rates of 1 to

1 5 percent. But these are the examples of other programs  
2 and other royalty rates I considered.

3 Q. Okay. And how did these license agreements  
4 apply to your analysis?

5 A. Well, I also took into account this  
6 information. It relates to Georgia-Pacific Factor 12,  
7 which is royalty rates in the industry, and I  
8 particularly considered, for example, the licenses  
9 related to LCS, Live Communications Server.

10 And I also considered the Interoperability  
11 licenses, which dealt with exchange server and Vista.  
12 And then also the Microsoft ActiveSync license with --  
13 where Microsoft entered into an agreement with Google  
14 and Mr. Shank from Microsoft viewed Google as more of a

15 SEALED BY ORDER OF THE COURT  
16 rate for a particular Google product, and that's also  
17 something I took into account.

18 Q. Okay. Now, Mr. Reed, could you go ahead and  
19 take another example off this list to discuss with the  
20 jury in more detail?

21 A. I'm sorry. I couldn't hear the last part.

22 Q. Could you pick another example here to  
23 describe in detail for the jury?

24 A. Well, the Interoperability license, as I  
25 mentioned briefly, but one of the things I would note

1 is, there's a document where Microsoft stated that the  
2 patent licenses for patents on open protocols will also  
3 be made available at low royalty rates.

4           And the -- the base rate for these programs is  
5 a 1 percent royalty rate, but Microsoft has minimum  
6 per-unit royalties that go into effect. And so  
7 depending on the price of the product of the company  
8 that takes the license, the royalty rates could range  
9 above 1 percent.

10           And on the analysis I did, I had a range of  
11 1.8 to 4.2 percent when you take the minimums into  
12 account.

13           Q.    Okay. Now, Mr. Reed, did you take any other  
14 license agreements into account in your analysis?

15           A.    Yes. I also considered license agreements  
16 where Microsoft takes a license from other companies'  
17 patented technology.

18           Q.    Okay. And what agreements are those?

19           A.    Well, they're on the next slide.

20           And first, I considered different license  
21 agreements that Microsoft entered into with patented  
22 technology where a lump sum was paid by Microsoft. And  
23 I considered deposition testimony where Microsoft said  
24 they prefer paying lump sum amounts.

25           Q.    Okay. Well, I don't know that we've used that



1 phrase before. What is a lump sum?

2 A. It would be an example where one payment would  
3 be made, usually upfront, and it might be -- in the case  
4 of these agreements, a hundred thousand dollars paid,  
5 and then Microsoft would have rights to the patented  
6 technology for the lives of the patent.

7 Q. So you're saying, that hundred thousand  
8 dollars payment on whatever technology that may relate  
9 to, if Microsoft sold a hundred billion dollars in  
10 product related to that technology, that hundred grand  
11 is all they paid?

12 A. That's correct, yes.

13 Q. Okay. And why is that relevant to your  
14 analysis?

15 A. Well, it's certainly something I considered,  
16 but, in my opinion, this structure would not be  
17 acceptable to VirnetX or to SAIC.

18 Q. Okay. And just so we get back to the top of  
19 the slide, what -- what did you find relevant about the  
20 three agreements -- or I believe there's two agreements  
21 listed with the heading Microsoft Pays Running  
22 Royalties?

23 A. It's actually three, because this last one is  
24 a newer version of the second one.

25 But these are examples where Microsoft does

1 pay running royalties for important technology.

2 Q. And why is that important to your analysis?

3 A. Because it's -- it's a reflection that goes in  
4 against, if you will, the position that Microsoft  
5 prefers paying lump-sum royalties. There are occasions  
6 where Microsoft does pay running royalties.

7 Q. Okay. And, Mr. Reed, I notice that you don't  
8 have the royalty rates listed here. And I don't want to  
9 ask you what those are. I simply want to understand,  
10 are these comparable to the technology in this case?

11 A. No, I don't believe so.

12 Q. And why do you say that?

13 A. Well, the MPEG license agreement covers a  
14 portfolio of patents from a variety of companies. It's  
15 not just a few patents from one company; it's rights  
16 to -- to patents from a number of companies.

17 And it's a large number of patents, and it's  
18 in a different technology area. It deals with visual  
19 images that would be used on computers and patents  
20 related to that.

21 And then also -- the Dolby -- of course, many  
22 of you may know the Dolby trademark -- this particular  
23 license agreement relates to sound and audio technology.  
24 And in addition to rights to patents -- I think there's  
25 18 patents -- it also provides rights to the trademarks.

1 Q. Now, Mr. Reed, are we finished with your Group  
2 1 part of your analysis?

3 A. Yes, we are.

4 Q. Okay. So we can now move on to the second  
5 group?

6 A. Yes.

7 Q. Okay. And generally, what does the second  
8 group cover?

9 A. The second group covers information relating  
10 to the structure or the scope of the license agreements.  
11 And we also included the commercial relationship in this  
12 category. And by that, I mean the competitive  
13 relationship between the parties, SAIC and VirnetX and  
14 Microsoft.

15 Q. Okay. So we'll just start at the top.  
16 Factor No. 3 says: Scope of license that would be --  
17 would have been negotiated.

18 What is that?

19 A. Well, there's different aspects of this scope.  
20 One aspect is, it's a non-exclusive license. I  
21 mentioned that before.

22 So Microsoft would have rights to use the  
23 patents, but so would VirnetX and so would other  
24 companies that VirnetX might choose to license the  
25 technology to.

1           So that's one aspect.

2           Q.    Okay.  What other aspects are there?

3           A.    Another aspect would be the coverage, whether  
4 it's worldwide or relating to U.S. activity.  And this  
5 license agreement would be related to U.S. activity, not  
6 worldwide activity.

7           Q.    Okay.  And why would it only apply to the  
8 United States activity?

9           A.    Because the '180 and the '135 patents are U.S.  
10 patents, and they cover the right to make, use, import,  
11 sell, or offer to sell the technology in the United  
12 States.

13          Q.    Well, Mr. Reed, how do you go about  
14 determining what was sold or -- or -- I believe you said  
15 what was sold, used, manufactured, or offered for sale  
16 in the United States.  How do you figure that out?

17          A.    Well, I went to the Microsoft information  
18 relating to sales data, and I considered the summary  
19 information that Microsoft provided.  And they provided  
20 worldwide information, and then they also provided  
21 information related to U.S. activity.

22          Q.    Okay.  Now, Mr. Reed, how did Microsoft  
23 determine their United States revenues?

24          A.    The way Microsoft did it was, they did it by  
25 credited sales area.  So it included shipments to the

1 United States, but it also included all the products  
2 associated with OEMs that are located or headquartered  
3 in the United States.

4 And by OEM, I mean a PC manufacturer such as  
5 Dell in Austin or Hewlett-Packard in California.

6 Q. Okay. Well, I guess maybe I'm  
7 misunderstanding. How can -- well, I'll ask a different  
8 one.

9 Can't Dell sell a computer or make a computer  
10 in France and sell it in England, and it will never  
11 touch the United States?

12 A. Well, it's more common for Dell to manufacture  
13 in Taiwan or China, but it's possible that Dell could  
14 manufacture in Taiwan and then ship the product to  
15 France.

16 Q. Okay. Well, why then do those sales count  
17 under United States activity?

18 A. Well, from one standpoint, it's -- those  
19 particular products -- well, let me put it this way:  
20 Dell is a U.S. manufacturer, and the way that Microsoft  
21 recorded that information or that sale, they credited it  
22 to the United States to give the United States sales  
23 team or sales organization -- organization of Microsoft  
24 a credit for that sale.

25 Q. Okay. So one term would be an offer to sell

1 in the United States, correct?

2 A. That's correct, yes.

3 Q. Okay. Now, what else -- or why else did you  
4 believe that method was reasonable?

5 A. Well, it's also the way that Microsoft  
6 recorded the information. So I, obviously, took that  
7 into account as well.

8 Q. Okay. And what about how Microsoft  
9 accumulated that data leads you to believe it's  
10 reasonable?

11 A. Well, the other aspect is, there are certain  
12 manufacturers of PCs or OEMs that are located overseas,  
13 and Microsoft records those particular shipments of  
14 Windows and XPs -- Windows XP and Windows Vista as  
15 outside the United States, even though companies like  
16 Toshiba or Acer or Sony might ship products to the  
17 United States with Windows.

18 Q. Okay. Well, didn't Microsoft have another way  
19 to break it down?

20 A. Yes, they did. And I considered the  
21 deposition testimony of a Microsoft employee,  
22 Mr. Jhavar, who was asked the specific question: Are  
23 there other ways to try to break down the U.S. revenues  
24 so that you would not include the U.S. OEMs, all of the  
25 revenue in the United States?

1           And I summarized what Mr. Jhawar said. When  
2 asked the question, are there other ways to do this, he  
3 said: We don't have a reasonable basis for estimating  
4 breakouts of that.

5           Q.       And what does that tell you, Mr. Reed?

6           A.       Well, that Microsoft didn't believe there was  
7 another way that would be superior to the way they  
8 treated the credited sales area and how they measured  
9 U.S. sales.

10          Q.       Okay. Now, Mr. Reed, what about the United  
11 States government? Was that included in your  
12 calculation?

13          A.       No. I took -- in my calculations, I excluded  
14 the U.S. government, so all the sales associated with  
15 the Windows products to U.S. government entities were  
16 not included in my calculation.

17          Q.       Okay. And then I think we're done with Factor  
18 3, correct?

19          A.       No. I believe there's one -- oh, with Factor  
20 3, that's correct, yes.

21          Q.       Yeah. Sorry. Not Group 2, but Factor 3.

22          A.       Yes. I'm sorry.

23          Q.       Jigsaw puzzle here.

24                    So with regards to Group 5 -- or actually, got  
25 me messed up now -- Factor 5, commercial relationship

1 between patent-holder and accused infringer, what does  
2 that mean?

3 A. Well, that deals with the competitive  
4 relationship between VirnetX and SAIC and Microsoft, and  
5 as we heard, Micro -- VirnetX has not yet introduced its  
6 Gabriel technology, so as of now, at least from the past  
7 through 2009, they're really not competitors, VirnetX  
8 and Microsoft are not competitors.

9 But the very large size and scope of Microsoft  
10 and the fact that they sell these products that are  
11 accused, Windows XP and Windows Vista to the vast  
12 majority of customers in the United States is an  
13 important competitive consideration that VirnetX would  
14 take into account in the negotiation.

15 Q. Okay. And what about Factor 7, remaining life  
16 of patent? What is that referring to?

17 A. That refers to the patent life, and the  
18 VirnetX patents at issue here, the '135 patent and the  
19 '180 patents, they expire in the year 2020.

20 So back in the 2003 hypothetical negotiation,  
21 VirnetX would be looking at a very long life with these  
22 particular patents and also with the understanding that  
23 this technology was going to become more important over  
24 time.

25 So this is a very important license agreement



1 for VirnetX to enter into. Microsoft is a very large  
2 player. The license agreement entered into with  
3 Microsoft would be taken into account by all the other  
4 activities that VirnetX would do in the future.

5 Q. Okay. And just so I understand, maybe we give  
6 the reverse example. What if you only had two years  
7 left on the life of the patent? How would that affect  
8 the negotiation?

9 A. Well, one way of thinking about it is, you  
10 want to collect as much royalties as you can in that  
11 two-year period, so you might be more favorable in the  
12 terms that you would offer to a company to take a  
13 license. You have less options of what you can do with  
14 your technology.

15 Q. Okay. Now, Mr. Reed, are we done with Group 2  
16 of your analysis?

17 A. Yes, we are.

18 Q. Okay. Can we go to Group 3 now?

19 A. Sure.

20 Q. Now, what is Group 3?

21 A. Group 3 are the Georgia-Pacific Factors that  
22 deal with value, profitability, and the extent of use.

23 Q. Okay. And what did you find, through your  
24 review of the documents in this case and the depositions  
25 with regards to Group 3?

1           A.    Well, first, I started with Dr. Jones,  
2 actually, and I discussed with Dr. Jones the importance  
3 of the VirnetX technology and the importance of that  
4 technology to Microsoft, in particular with the '135  
5 patent as it relates to RTC.

6           You might remember RTC APIs, real-time  
7 communication interfaces, and then with respect to the  
8 '180 patent and the peer-to-peer technologies.

9           So with that framework, I reviewed a large  
10 number of documents, including Microsoft documents, and  
11 I actually have some of those documents that show what  
12 Microsoft was thinking about these technologies, RTC and  
13 peer-to-peer over the time period at issue.

14          Q.    Okay. Well, you said you had some examples.  
15 Let's go ahead and see them.

16                    What does this show, Mr. Reed?

17          A.    This is a Microsoft document that's  
18 copyrighted in 2008, so it's a relatively recent one,  
19 and there's an important statement here about the  
20 real-time communication technologies.

21                    It states: We believe unified communications  
22 will transform business in the coming decade in the same  
23 way e-mail changed the business landscape in the 1990s.

24          Q.    Okay. Well, I'm not sure I understand,  
25 Mr. Reed. What is that saying to us?

1           A.     Well, unified communications relates to  
2 real-time communications, and of course, the '135 patent  
3 is accused against that technology.

4                     And what it's saying is that from -- I take  
5 this as 2008 going out to the next 10 years, unified  
6 communications is going to develop as a very important  
7 technology, much like we all know how e-mail expanded in  
8 the 1990s, and now pretty much everybody has e-mail.

9                     So this is a statement of the importance of  
10 this technology in Microsoft's mind --

11           Q.     Now, Mr. --

12           A.     -- going forward.

13           Q.     I apologize. I didn't mean to cut you off.  
14 Now, Mr. Reed, do you have any other examples, or is  
15 this the only document you have?

16           A.     No. I have other examples, and these are a  
17 few of many.

18           Q.     And what are we seeing here, Mr. Reed?

19           A.     This is a 2001 document when Microsoft was  
20 assessing the new RTC products that were going to be  
21 introduced as part of Windows XP. And what is stated  
22 is: RTC is one of the top five reasons to buy Windows  
23 XP.

24           Q.     Okay. And why is that important?

25           A.     Again, it reflects Microsoft's view of the

1 importance of the RTC capabilities that were going to be  
2 in the platform for Windows.

3 Q. Okay. Now, is that the only document you  
4 have?

5 A. No. I have an additional one.

6 Q. Okay. What is this one telling us, Mr. Reed?

7 A. This is from a similar time period. It was a  
8 similar statement. It's saying that the RTC information  
9 would help drive XP, Windows XP, through the Windows PC  
10 experience. So it's a similar one.

11 Q. Okay. And do you have any other examples?

12 A. Yes. This is another document from that time  
13 period, and this document generally addressed  
14 Microsoft's views of its competition in real-time  
15 communications with important competitors, IBM and  
16 Cisco.

17 And near the end of the document, Microsoft  
18 states: Why we win. And what was stated, among other  
19 things, but the most prominent statement was: Let the  
20 customer securely communicate when, where, and however  
21 they desire.

22 And I think this statement goes to the -- some  
23 of the advantages that Dr. Jones associates with the use  
24 of the VirnetX technology: Flexibility, secure, ease of  
25 connection, that type of information.

1 Q. Okay. And I'll ask again, do you have any  
2 more examples of RTC documents?

3 A. I believe I do.

4 Q. What is this, Mr. Reed?

5 A. This document addresses an issue relating to  
6 pricing of the RTC APIs. And what it -- what it  
7 addresses is that Microsoft considered doing something  
8 very unusual. Microsoft considered separately pricing  
9 the RTC APIs.

10 Q. And why is that important?

11 A. Well, Microsoft had never done that, as I  
12 understand it, and this document addresses that.  
13 Microsoft never separately charged for any specific API.  
14 So, again, it suggests the relative importance that  
15 Microsoft placed on these RTC APIs, because they  
16 considered pricing it separately.

17 Q. Okay. Well, they were discussing pricing them  
18 here separately from Windows. Did they do that?

19 A. No, they didn't. Ultimately, Microsoft  
20 included that as part of -- part of Windows, and  
21 Dr. Jones addressed that.

22 And the reason that's stated for that, and  
23 it's reflected in other documents as well, is that  
24 Microsoft didn't want to limit the ubiquity of  
25 getting -- and what I mean by that is make them

1 generally available. They wanted to make the RTC APIs  
2 generally available in the entire platform of the  
3 Windows XP and Windows Vista products.

4 Q. Okay. So that's what ubiquity means is  
5 generally available?

6 A. Well, widely generally available everywhere,  
7 essentially.

8 Q. Okay. Now, I think we've discussed the RTC in  
9 a lot of detail. Are these the only examples that you  
10 looked at to come to your analysis in this case?

11 A. No. There were other examples, and there was  
12 also deposition testimony.

13 Q. Okay. Now, what about peer-to-peer?

14 A. I've done a similar thing with peer-to-peer  
15 addressing some of the documents.

16 And this first one, Microsoft is stating that  
17 for Windows, peer-to-peer is a natural destiny. And it  
18 basically says, when the Windows platform is very large,  
19 most customers have it, so it's a great platform from  
20 peer-to-peer. And then Microsoft states: We've been  
21 working on realizing that peer-to-peer destiny.

22 Q. Okay. And why is that important to your  
23 analysis, Mr. Reed?

24 A. Well, it's important, again, stating the  
25 emphasis that Microsoft was placing on the peer-to-peer

1 technologies.

2 Q. Okay. And do you have any other examples, Mr.  
3 Reed?

4 A. Yes.

5 Q. And what are those?

6 A. These are e-mails, and the first one,  
7 Microsoft is addressing developing a suite of  
8 technologies relating to peer-to-peer that would be a  
9 first order feature of the Windows operating system.  
10 And this is actually reflected in what other Microsoft  
11 documents say a back-of-box application, and that became  
12 a key application of the Windows Vista product.

13 Q. You said back-of-box. What does that mean?

14 A. Well, earlier we saw the box that had the  
15 Vista -- what Microsoft meant by back-of-box is the  
16 application was noted on the back of the box that we  
17 would see in the store.

18 Q. Okay. And that's PX829?

19 A. I can't see it.

20 Q. You can't see it. I apologize. That's PX829  
21 we talked about earlier.

22 Now, Mr. Reed, I'm looking at the back of the  
23 box, and I don't see anything about peer-to-peer on the  
24 back.

25 A. Well, this is relating to Windows Meeting

1 Space. Professor Jones addressed Windows Meeting Space  
2 as being an application on the -- using the peer-to-peer  
3 technologies and accused associated with the '180  
4 patent.

5 Q. Okay. So on the back here where it says:  
6 Collaborate and share documents with Windows Meeting  
7 Space, that's what you're referring to?

8 A. Yes, it is.

9 Q. Okay. And why is it important that Microsoft  
10 put it on the box?

11 A. Well, it notes that Microsoft believed that  
12 that was going to be a very interesting feature for its  
13 customers.

14 Q. Okay. Now, we've talked about the first  
15 document. What about the second one here?

16 A. Well, this one is -- is just stating that  
17 peer-to-peer would be a game changer for application  
18 development.

19 So, again, it's addressing Microsoft's  
20 emphasis on this particular technology and how it would  
21 be important for the future.

22 Q. All right. I don't know if I understand the  
23 term game changer. What does that mean?

24 A. It means that it's going to change the way  
25 developers work with APIs and with technologies for



1 developing programs that would run on Windows Vista.

2 Q. Okay. Do you have any other examples of  
3 peer-to-peer documents, Mr. Reed?

4 A. Yes.

5 Q. And what are these showing us?

6 A. These documents both address the competition  
7 that Microsoft was -- was facing in the earlier period  
8 when it was developing the peer-to-peer APIs, and  
9 specifically, Microsoft was concerned about SUN, who was  
10 also developing peer-to-peer technology.

11 Q. Okay. And I see in the second document -- I'm  
12 going to skip ahead a little bit -- it says: SUN  
13 Microsystems is training gunfire on one of its oldest  
14 enemies, Microsoft.

15 What does that mean?

16 A. That just means that the two parties were  
17 competing with one another, and in my review of these  
18 documents, it suggests Microsoft was very concerned  
19 about enhancing this peer-to-peer technologies to -- and  
20 making them widely available.

21 Q. Okay. And were there any other examples,  
22 specifically PX698 and 699 that related to the SUN  
23 competition?

24 A. Oh, yes, there were. There were a lot of  
25 discussions, and I also had public information about the

1 SUN product that was attempting to compete with  
2 Microsoft.

3 Q. Okay. Now, Mr. Reed, I think you referred to  
4 Meeting Space, and we talked about it on the box. What  
5 about Meeting Space is important?

6 A. Well, here's a document that's addressing  
7 Meeting Space, and it's stating that -- it's being  
8 positioned by marketing as one of the top enterprise  
9 features for Vista Client.

10 Q. And why is that important?

11 A. Again, the Marketing Department at Microsoft  
12 viewed Meeting Space to be a very interesting product  
13 for a corporation's enterprise, companies that would be  
14 using this -- this feature or this application in its  
15 products.

16 Q. Okay. And is that the Meeting Space that  
17 Mr. Jones referred to as being used in the '180 patent?

18 A. Correct.

19 Q. That's the one that Mr. Powers and Dr. Jones  
20 went back and forth about whether he was in the San  
21 Francisco Office with his laptop at his law firm, and  
22 he's talking with his other law firm offices, does that  
23 infringe, right?

24 A. I can't recall if Mr. Powers was talking about  
25 that, but it also would relate to the law library

1 example or the Tyler library example where the  
2 collaboration was going on.

3 Q. Okay. And then what else about Meeting Space  
4 did you find out?

5 A. Well, there's one other document relating  
6 to Meeting Space. This was an advertisement by Dell  
7 that I received in a publication at my office just four  
8 or five or six months ago, and Dell put this  
9 advertisement in a magazine, and twice in this  
10 particular advertisement, Dell talked about the Meeting  
11 Space as a reason why corporations should consider using  
12 Vista and upgrading to Vista.

13 Q. And why is that important?

14 A. Again, it talks about a major customer of  
15 Microsoft, Dell, and Dell's views about the Meeting  
16 Space product.

17 Q. Okay. So we have talked about peer-to-peer,  
18 we have talked about the RTC and the UCC products. What  
19 else is important to Group 2 -- Group 3, I apologize?

20 A. Also, profitability is important. So I  
21 considered information on Microsoft's profitability.

22 Q. How profitable is Microsoft?

23 A. Very profitable, but I have a chart that  
24 summarizes two of the particular divisions or groups at  
25 Microsoft.

1 Q. And before we get into this, why is  
2 profitability important to your Georgia-Pacific  
3 analysis?

4 A. Generally, profitability is important to  
5 consider; but, in particular, here my discussions with  
6 Dr. Jones address the importance of Microsoft enhancing  
7 its platform. When I say "platform" I mean the Windows  
8 Vista and Windows XP operating systems that are  
9 provided. And those are available for developers to  
10 develop technologies. By enhancing the platform,  
11 Microsoft keeps developers interested; and it helps what  
12 Microsoft calls the ecosystem, developers and customers  
13 and Microsoft all working together to make sure  
14 Microsoft stays successful.

15 Okay. And so here you're showing Microsoft's  
16 profit margins, correct

17 A. Correct, yes.

18 Q. You have got gross margin and contribution  
19 margin. What are those?

20 A. Well, gross margin is the profit after  
21 taking into account the cost of manufacturing the  
22 product, and here there's not much -- there's a box and  
23 there's a DVD.

24 Contribution margin, though, takes into  
25 account the other expenses associated with the division.

1 And basically that's the profit before an allocation  
2 goes to corporate overhead.

3 And I would note that these  
4 particular margins here are for the division that deals  
5 with Windows XP and Windows Vista products.

6 Q. Okay. Now, Mr. Reed, are those high profit  
7 margins?

8 A. Yes, they are the highest contribution  
9 profit margins I have ever seen.

10 Q. Ever seen in your 25 years in the  
11 business?

12 A. Yes.

13 Q. Okay. What about the UC or Unified  
14 Communications products?

15 A. Unified Communications products include the  
16 LCS/OCS, Office-Communication-Server-type products.  
17 They also have high margins. There's a difference  
18 between these 51 to 58 percent contribution profit  
19 margins, and the margins up here show exactly how high  
20 the Windows XP and Vista platform profit margins are.

21 Q. Okay. Now, we talked about profitability,  
22 we have talked about the importance of the  
23 features. What else is important to Group 3?

24 A. I also considered the market share of  
25 Microsoft.

1 Q. Okay. And how is the market share of  
2 Microsoft relevant?

3 A. Well, it's relevant in a couple of different  
4 ways. One is back to this issue of the ecosystem. Why  
5 Microsoft is -- it's important to Microsoft to enhance  
6 its platforms with interesting and important future APIs  
7 like the peer-to-peer APIs and the real-time  
8 communication APIs that Dr. Jones informed me about.  
9 And that would -- we have also heard some of that from  
10 today and yesterday. But it's also important because  
11 it reflects on VirnetX and SAIC's concerns when they  
12 were licensing their patented technology. Because  
13 Microsoft has such a large portion of the overall  
14 activities with respect to these types of operating  
15 systems that go in personal computers, it would be  
16 important for VirnetX to take into account how widely  
17 spread its technology could be.

18 Q. Well, Mr. Reed are these high market  
19 shares?

20 A. Yes. They're -- they are very high market  
21 shares, that's correct.

22 Q. Okay. Again, are these the highest you have  
23 ever seen?

24 A. Well, I think there could be some cases at  
25 least for a short time period where a company might be a

1 pure monopolist, lift but these -- this is not an  
2 example of that, but these are very high market  
3 shares.

4 Q. Now, Mr. Reed, my question is if the profit  
5 margins are so high and the market share is so high,  
6 what does it matter if Microsoft just leaves a feature  
7 out of it?

8 A. Well, based on my conversation with  
9 Professor Jones, it's important for Microsoft to enhance  
10 its features to -- to add these additional future  
11 technologies to make sure that it can compete with all  
12 the other different companies, Apple, Linux. You saw  
13 the example of SUN. So by enhancing with these advanced  
14 technologies, Microsoft is able to help maintain its  
15 market share.

16 Q. Okay. And, well, again, I'm not sure I  
17 understand. If they have such high profit margins and  
18 such a high market share, what does it matter if they  
19 just lose a couple of points here and there?

20 A. Well, I did an analysis in my report  
21 addressing the impact of Apple gaining just a few  
22 percentage points. It's actually less than two  
23 percentage points in the 2007-2009 time period. And  
24 because of the large contribution profit margin, the  
25 impact of that gain in market share had a reduction in

1 the contribution margin, profit margin for Microsoft  
2 over the three years by about \$656 million. So it has a  
3 huge impact on Microsoft's overall performance.

4 Q. Okay. Now, Mr. Reed, have we summarized all  
5 the important factors related to Group 3?

6 A. We have, with the exception of Factor 13  
7 that I mentioned before.

8 Q. Okay. Before we get to Factor 13, did you  
9 come to a preliminary opinion on the royalty rate?

10 A. Well, yes. Based on this analysis and the  
11 other analysis of the Georgia-Pacific factors, I started  
12 with an assessment of a 1 percent royalty rate per  
13 patent relating to the Windows XP and Windows Vista  
14 products and a 3 percent royalty rate with respect to  
15 the OCS Office Communicator and LCS products.

16 Q. Okay. So do we just apply that rate to the  
17 Microsoft Windows products?

18 A. No, no, I believe there were various  
19 adjustments and apportionments that needed to be taken  
20 into account, so I made those adjustments.

21 Q. Well, this is going to be a long question,  
22 and I'm just going to read it. How have you apportioned  
23 a reasonable royalty to the value of this invention as  
24 it relates to the accused products in line with Factor  
25 13 and the George-Pacific factors?



1           A.       Well, it's reflected in the next chart that  
2 summarizes the various things that I did.

3           Q.       And what are we showing here, Mr. Reed?

4           A.       Well, for the Windows platform, that is,  
5 Windows XP and Windows Vista relating to both the '135  
6 patent and the '180 patent, I started with that 1  
7 percent base rate I mentioned and then I did a variety  
8 of things taking into account other Georgia-Pacific  
9 factors and this Factor 13.

10                   I started by considering that Microsoft sells  
11 different versions of -- of the Windows XP and Windows  
12 Vista products that I think we saw earlier with the  
13 boxes. There's a home version and there's a  
14 professional or a business version.

15                   The professional version has a higher price  
16 because Microsoft adds additional functions and  
17 technology that would be useful to businesses. And I  
18 wanted to be sure not to include an additional  
19 functionality in the analysis.

20                               So, basically, what I did is I  
21 applied only the price associated with the base product,  
22 the home premium-type products and not the higher prices  
23 associated with the professional versions.

24           Q.       Okay. And what about the third bullet, the  
25 10 percent quantity discount, what is that?

1           A.       I took into account -- one way of thinking  
2 about it is the contribution of Microsoft because they  
3 are a very successful company with lots of features and  
4 functionality, and they have a very large level of  
5 sales. And I took into account the programs that  
6 Microsoft had where it granted quantity discounts to  
7 other companies like Cisco and Hitachi, and they had a 5  
8 percent 10 percent, it scaled up the discount that was  
9 provided. That's what Microsoft provided to these other  
10 companies. I applied a 10 percent, the highest discount  
11 under that program, to all of the Microsoft sales at  
12 issue.

13           Q.       Okay. And, finally, you have got this  
14 phase-in 1 percent rate. What is that referring to?

15           A.       That refers to the fact that I don't start  
16 with a 1 percent royalty rate per patent. I recognize  
17 that there's a lot of other functionality in these  
18 products and that these particular APIs were developing  
19 over time. The peer-to-peer technology is still  
20 developing relating to something called IPv6, which is a  
21 protocol related to the internet.

22                   Also, the real-time communications technologies  
23 were developing; and even though they came out in 2003,  
24 instant messaging for corporations, for example, wasn't  
25 expected to become important until 2008. And we saw

1 that document a moment ago talking about the 2008  
2 document looking at Unified Communications over the next  
3 decade. So clearly this technology is developing.

4           So I started with a royalty rate of 0.33  
5 percent per patent. Then I increased that in fiscal  
6 year 2008 to 0.66 percent. Then it wouldn't be until  
7 fiscal year 2012 for Microsoft that the rate would go to  
8 that 1 percent rate.

9           Q.       Okay. And now what about the LCS/OCS  
10 products?

11          A.       Well, it is the 3 percent rate that I  
12 mentioned, and then I apply -- I apply it to only  
13 certain base products. So sometimes Office Communicator  
14 is included in the Microsoft Office Suite. And most of  
15 us probably know what that is. Office Suite includes  
16 Word, Excel, sometimes other applications as well. In  
17 the high-end Office Suites, Microsoft includes Office  
18 Communicator.

19                 But I only took 4.25 percent of all the  
20 revenue for those products, and that's all that I  
21 included in the OCS products where I calculated the  
22 royalty.

23          Q.       That's all you included in the royalty base,  
24 correct?

25          A.       That's right, yes.

1 Q. That's what you multiplied 3 percent  
2 times?

3 A. Correct.

4 Q. Let me ask you about the 3 percent. How  
5 come or why is that larger than the 1 percent for the  
6 Windows products?

7 A. Well, there are a couple of reasons that I  
8 took into account, and two of them specifically that I  
9 will address now is one way is the way that Microsoft  
10 advertised the LCS/OCS. They advertised it as saying no  
11 VPN required. In fact, I talked to Dr. Jones about this  
12 before my report probably about a year ago and I said  
13 what does Microsoft mean by no VPN required and how does  
14 it relate to the technology? He said that's what  
15 provides -- the technology at issue here is what  
16 provides Microsoft the ability to say that. Because he  
17 said they're not using a standard or traditional VPN,  
18 they're using technology associated with the patented  
19 technology here.

20 Because of that advertising I believe that the  
21 royalty rate would be higher as it applies to the  
22 LCS/OCS products.

23 Q. Okay. Did you take anything else into  
24 account in that rate?

25 A. Yes, I took into account other information

1 as well, including the -- we've heard about Magenic.  
2 Magenic was a company that VirnetX had hired in 2006,  
3 maybe even hired in 2005 but some of the work was going  
4 on in 2006. Magenic was helping VirnetX develop a  
5 product that would work with LCS to provide additional  
6 security. And so this was a potential product for  
7 VirnetX to sale. But in the process of that work I  
8 understand that VirnetX came to learn that -- that LCS  
9 2005 was a secure product, so they stopped following  
10 that research plan.

11           So this reflects to the competitor  
12 relationship, and VirnetX and SAIC would be looking for  
13 a larger royalty on this particular product for that  
14 reason, among others.

15           Q.       And that's that Magenic discussions that we  
16 had throughout the trial. I think people referred to it  
17 as the modification of OCS 2005; is that correct?

18           A.       Yes, my understanding is it wasn't a  
19 modification based on my conversation with people at  
20 VirnetX, again, about a year ago. Magenic was working  
21 on a product for VirnetX to work with or maybe you could  
22 think about it on top of the LCS 2005 product.

23           Q.       And they stopped doing that once they  
24 realized that Microsoft had already included the  
25 functionality?

1 A. Yes.

2 Q. Okay. Now, I want to talk about Windows  
3 again. How did these apportionments affect the result  
4 results of your analysis?

5 A. Well, I have two slides that show that. I  
6 can go through them pretty quickly. The first one deals  
7 with the royalty base. So you can see I start with 48  
8 billion in revenue associated with the U.S. activity and  
9 Windows XP and Windows Vista. Then I adjust the price  
10 to reduce the price to the home versions to take out the  
11 additional revenue in the professional and business  
12 versions. That reduced the revenue to \$33 billion.

13 Q. What did you do next?

14 A. Then also I applied the 10 percent quantity  
15 discount, and that reduced the amount to 30 billion.

16 Q. Okay. So do we just take the 1 percent or  
17 the 0.66 percent you calculated and multiply it times  
18 that?

19 A. Well, you have got to take into account the  
20 royalty rate fees in so -- I've already discussed this,  
21 but you start with the -- I start with the 0.33 percent  
22 royalty rate per second. Then in fiscal year 2008 --  
23 the fiscal year for Microsoft ends in June. Starting  
24 fiscal year 2008, it goes to 0.66 percent.

25 Q. Okay. So are we done with our

1 Georgia-Pacific analysis, Mr. Reed?

2 A. Yes, we are.

3 Q. Okay. And what is the result of your  
4 analysis?

5 A. Well, the result is the summary that we have  
6 already seen and we are back to. The calculation of  
7 reasonable royalties based on this methodology through  
8 December 2009 for both the patents and for both of these  
9 product groups, the total reasonable royalties are \$242  
10 million based on my calculations and analysis.

11 Q. Okay. I want to break it down a little bit.  
12 For the '135 patent with regards to the Windows XP and  
13 Vista programs, how large is the reasonable royalty?

14 A. Well, the reasonable royalties for the '135  
15 patent are a hundred -- sorry, that's not working.  
16 \$140.1 million.

17 Q. Okay. And how much of that is  
18 Vista, and how much of that is XP?

19 A. It's little bit more than 50 percent for  
20 Vista.

21 Q. Okay. Now, the second step there, you have  
22 got another number underneath that, is that related to  
23 the '180 patent?

24 A. Correct.

25 Q. How much is the reasonable royalty for the

1 '180 patent on the Windows XP and Vista products?

2 A. It's 83.6 million. And the reason it's  
3 smaller is because the '180 patent doesn't issue until  
4 March 2007, and this calculation of reasonable royalties  
5 for the '180 does not begin until March 2007 after the  
6 '180 patent issued.

7 Q. Okay. And just so we're clear, Mr. Reed, we  
8 never applied that 1 percent rate that you found,  
9 correct?

10 A. That's correct. That wouldn't occur until  
11 fiscal year 2012.

12 Q. Again, that's after this case is over,  
13 correct?

14 A. That's correct.

15 Q. And the jury is not being asked to grant  
16 those damages here, correct?

17 A. Correct.

18 Q. Okay. Now, the '135 patent on LCS/OCS, how  
19 much did you determine was a reasonable royalty?

20 A. Taking the 621 million royalty base times  
21 the 3 percent royalty rate, it is 18.6 million.

22 Q. Now, Mr. Reed, a couple more questions.  
23 What was the result or what would the result be had you  
24 not apportioned the damages the way we just discussed?

25 A. Well, if I applied the 1 percent rate for



1 the entire time period per patent and started for the  
2 '180 patent in March of 2007, if I didn't apply the 10  
3 percent discount and if I didn't adjust the pricing for  
4 the professional and business versions, the total would  
5 be \$704 million.

6 Q. Okay. Now, Mr. Reed, are you asking the  
7 jury to give \$704 million?

8 A. No, I'm not. My analysis of a reasonable  
9 royalty is the \$240 million number through December 2009  
10 that I have been addressing throughout my testimony  
11 today.

12 Q. And why are you not asking for the \$704  
13 million?

14 A. Because I don't believe that appropriately  
15 takes into account these various apportionment issues  
16 and other adjustments that I think are consistent with  
17 the Georgia-Pacific analysis.

18 Q. Now, Mr. Reed, do you understand that  
19 Microsoft is contending that a lump sum payment would  
20 have been made in this case?

21 A. Yes, I do.

22 Q. And have you done a calculation of what  
23 a lump sum payment would have been under your  
24 analysis?

25 A. I have, yes. It depends on a variety of

1 assumptions because the patents don't expire until 2020,  
2 so in my opinion if you are going to address a lump sum  
3 amount, you would have to take into account the  
4 royalties through the end of 2009, the 242 million; but  
5 then you would also have to take into account the  
6 potential royalties over the next 10 years approximately  
7 when the patents expired in 2020.

8 I did do a variety of different calculations,  
9 and there's quite a range because there is uncertainty  
10 about the future. But it could be as much as 942  
11 million as a net present value as of the end of 2009.

12 Q. And, Mr. Reed, why is that number so much  
13 larger than the 242 million we just discussed?

14 A. Because it includes the past amounts through  
15 December 2009, the 242 million; plus it includes  
16 discounted amounts for the period January 2010 through  
17 April of 2020. And that's a long time period for  
18 additional future potential royalties.

19 Q. Mr. Reed, are you asking the jury to give  
20 \$942 million dollars in this case?

21 A. No. In part because of the uncertainty  
22 about the future. I don't think a lump sum approach  
23 makes much sense, plus I don't think it would have been  
24 acceptable to SAIC or VirnetX based on my analysis and  
25 discussions with people like Mr. Munger.

1           So, I think the running royalty approach  
2 through December 2009 makes sense, and that's what I  
3 suggest is a reasonable royalty.

4           Q.       Just one last question, and it is going to  
5 be a little repetitive, what is the result of your  
6 analysis in this case as -- as it relates to a  
7 reasonable royalty?

8           A.       Well, my Georgia-Pacific analysis and my  
9 conclusion on a reasonable royalty through December of  
10 2009 for both of the patents is \$242 million in  
11 reasonable royalties.

12          Q.       Thank you, Mr. Reed.

13                   MR. CASSADY: I pass the witness, Your  
14 Honor.

15                   THE COURT: Cross examination.

16                   MR. SAYLES: Yes. May it please the  
17 Court.

18                   CROSS-EXAMINATION.

19                   BY MR. SAYLES:

20          Q.       Mr. Reed, I'm Dick Sayles. I'm one of the  
21                   lawyers for Microsoft.

22          A.       Hello, Mr. Sayles.

23          Q.       You are no stranger to the courtroom, are  
24 you, sir?

25          A.       Well, I certainly have testified across the

1 country in patent infringement matters, that's true.  
2 But this is my tenth time in a patent case in U.S.  
3 District Court.

4 Q. And you understand that when you testify  
5 that you must face cross-examination to examine your  
6 opinions. You know that, don't you?

7 A. Absolutely, that's correct.

8 Q. And you know that as I ask you questions  
9 here in the next hour or so, that I mean you no personal  
10 disrespect. You understand that, don't you?

11 A. I appreciate that, Mr. Sayles.

12 Q. But you understand that when you come to  
13 court and express opinions, they're subject to  
14 challenge?

15 A. I understand that, yes.

16 Q. Can I rely on your deposition testimony that  
17 you gave in this case?

18 A. I understand that you can, yes.

19 Q. Can I rely on the reports that you have  
20 written in this case?

21 A. Yes, sir.

22 Q. Mr. Reed, isn't it true that over the last  
23 14 years you have either appeared in court, written  
24 reports, or given depositions across the country?

25 A. Yes.

1 Q. You have given depositions, testified in  
2 court or written reports in lawsuits in Texas,  
3 California, Wisconsin, Pennsylvania, New Jersey,  
4 Delaware, Washington, Colorado, New York, Massachusetts,  
5 Virginia, Minnesota, Florida, Oregon, Illinois, Maine,  
6 Oklahoma, and New Mexico at least, haven't you?

7 A. I haven't provided testimony in all those  
8 states.

9 Q. I said you have written a report, appeared  
10 in court, or given a deposition in a lawsuit in those  
11 states at least, haven't you, sir?

12 A. Yes, I have.

13 Q. You know that I have your resume, right?

14 A. I would expect you to, yes.

15 Q. And in your resume you commonly and you are  
16 required to provide information about prior testimonies  
17 that you've given; isn't that so?

18 A. Yes.

19 Q. And would it be fair to say that a  
20 substantial part -- portion of your consulting work is  
21 done with lawyers related to lawsuits?

22 A. Yes.

23 Q. And a substantial part of your living is  
24 made from fees that you earn in consulting with lawyers  
25 in reports, depositions, and trial testimony. Is that

1 true, sir?

2 A. Yes.

3 Q. You do not have specific licensing  
4 experience in the area that is involved in this case, do  
5 you? By licensing experience, I mean experience in the  
6 industry?

7 A. I disagree with that.

8 Q. Is it correct, sir, that you have no  
9 industry experience in the software industry licensing  
10 other than as an expert in litigation matters?

11 A. I disagree with that.

12 Q. Would you look at Page 29 and 30 of your?  
13 deposition, please? Do you have it up  
14 there?

15 A. I'm not sure.

16 Q. I can get you a copy.

17 A. I'm not sure. I don't think I have a  
18 copy.

19 Q. We'll get you a copy in just a moment.

20 While we're getting to that,  
21 let me just keep moving here. I will come back to that.

22 You have consulted in lawsuits where you have  
23 either given a report, a deposition, or testimony in  
24 areas involving many technologies other than the  
25 software industry; isn't that so?

1           A.        I don't think that's so.  I have provided  
2 reports and analysis relating to the software  
3 industry.

4           Q.        You have given testimony, depositions and  
5 reports in many other technologies, too, haven't you?

6           A.        Yes, I do quite a bit of work in the high  
7 technology area.

8           Q.        Other than computer software; isn't that  
9 so?

10          A.        Yes, computer hardware and other high-tech  
11 technologies as well.

12          Q.        You have been involved in lawsuits that  
13 involve medical balloon catheters?

14          A.        Yes.

15          Q.        Plasma TVs?

16          A.        Yes.

17          Q.        Contact lenses?

18          A.        Correct.

19          Q.        Learning aids?

20          A.        Yes.

21          Q.        Mini-mag flashlights?

22          A.        That's correct.

23          Q.        Canine heartworm diagnostics?

24          A.        Yes, but that wasn't a patent case.

25          Q.        Math course materials?

1 A. Yes.

2 Q. Grape growing and raisin production?

3 A. Yes.

4 Q. Pet identification and recovery?

5 A. Yes.

6 Q. Water filtration?

7 A. Yes.

8 Q. Poultry processing and marketing?

9 A. That was also -- that was an antitrust case,  
10 but, yes.

11 Q. Okay. The list is longer, isn't it?

12 A. Yes. I have worked for 25 years in this  
13 industry.

14 Q. Mr. Reed, you testified that in this case  
15 that you believe the parties have entered into a running  
16 royalty, correct?

17 A. Correct.

18 Q. Now, a lump sum royalty is a common form of  
19 royalty in patent licensing, isn't it?

20 A. Yes.

21 Q. There are two competing methods primarily --  
22 there are a few others -- but those are the two primary  
23 methods; running royalty versus a lump sum. Isn't that  
24 right?

25 A. I would say those are the two primary,



1 yes.

2 Q. With a running royalty, whenever you sit at  
3 that negotiating table and enter into an agreement,  
4 there's really no guarantee of any payment in the future  
5 because the party that signs up on the license doesn't  
6 have to pay you if they don't use your technology.  
7 Isn't that so?

8 A. Yes, that's true.

9 Q. So with a running royalty there's that  
10 uncertainty that you will receive money going into the  
11 future?

12 A. That's correct.

13 Q. It depends on changes in technology or the  
14 decision of the party that has the license; isn't that  
15 right?

16 A. Yes.

17 Q. And common sense tells you that if you tie  
18 the payment that you receive to usage, that the more a  
19 feature is used, the more money you will receive.  
20 That's common sense, isn't it?

21 A. Yes.

22 Q. And it's also common sense that the less a  
23 feature is used for which you have a license, the less  
24 you should receive. Does that make sense?

25 A. It depends on how you measure use.

1 Q. And if you have a running royalty, and let's  
2 say in this case VirnetX or any party has a running  
3 royalty, there is an administrative cost to just simply  
4 keeping up with that. Is that recognized and known?

5 A. That is recognized, yes.

6 Q. Isn't it true that non-exclusive licenses  
7 typically command a lower rate than exclusive  
8 licenses?

9 A. Yes, that is something I took into  
10 account.

11 Q. Isn't it true that in this case had there  
12 been a negotiation, it would have been a non-exclusive  
13 license?

14 A. Yes.

15 Q. And in the real world, isn't it true that  
16 negotiation is a two-way street?

17 A. Absolutely.

18 Q. And here you have come down on the side of a  
19 running royalty based on what Mr. Munger told you would  
20 be VirnetX's preference. Is that right?

21 A. It's more than Mr. Munger. But, yes, Mr.  
22 Munger did tell me that.

23 Q. And that's certainly a large part of the  
24 basis for you coming down on the side of a running  
25 royalty; isn't it?

1           A.           It's a part of it, but there were a lot of  
2 documents and materials I considered.

3           Q.           I want to look at one of your slides for  
4 just a moment. Let's look at Slide 6 that you put up  
5 for the jury in your direct examination.

6                       In your slide you say that going this way  
7 would be patented technology. Do you see where that's  
8 in your slide?

9           A.           I assume you're moving that way  
10 (indicating)?

11          Q.           I'm sorry. You're exactly right. I'm above  
12 your head. I'm going from VirnetX to the Microsoft  
13 side?

14          A.           Correct.

15          Q.           And actually the truth is that there was no  
16 technology that was available in 2003 that had been  
17 developed by VirnetX. You know that, don't you?

18          A.           Well, I know that they were -- they were  
19 developing and working on it. But there wasn't a  
20 product.

21          Q.           When we say patent rights we're not -- in  
22 the hypothetical negotiation that we're talking about  
23 here, there's no technology that's going across the  
24 table; it's the right to develop that technology. Isn't  
25 that so?

1 A. I think that's fair, yes.

2 Q. And that means that if Microsoft had  
3 negotiated and entered into a license agreement,  
4 Microsoft would have had to have spent the money to  
5 develop it, whatever rights were in those patents.  
6 Isn't that right?

7 A. They wouldn't be developing the rights, they  
8 would be developing the technology.

9 Q. The technology. Because the technology  
10 didn't cross at the table like your slide indicates;  
11 isn't that so?

12 A. Right. It's the rights to the -- to use the  
13 patented technology.

14 Q. Now, one of the things that you told the  
15 ladies of the jury is that at a hypothetical negotiation  
16 we're even allowed to peek into the future a little bit.  
17 Is that right?

18 A. Yes, that's my understanding.

19 Q. But the parties also at a hypothetical  
20 negotiation have knowledge of what the facts are at the  
21 time, don't they?

22 A. Yes.

23 Q. And in 2003, you know that VirnetX -- SAIC  
24 at the time -- we're talking about SAIC, right in  
25 2003?

1           A.       Correct, and the VirnetX team is the way to  
2 think about it.

3           Q.       Okay. But SAIC was the company that would  
4 be at the table, right?

5           A.       Correct, and I would conclude the VirnetX  
6 team as part of that.

7           Q.       You know that in 2003 at the time of the  
8 hypothetical negotiation, and it would have been known  
9 to the parties at that table, that SAIC had struck out  
10 with the government. Yes; is that right?

11          A.       I'm not comfortable saying struck out.

12          Q.       Had failed to sell the government on their  
13 idea?

14          A.       I am aware of the testimony over the last  
15 several days in that regard.

16          Q.       And you heard that, right?

17          A.       I did, yes.

18          Q.       At the bargaining table, the parties would  
19 have known that SAIC had struck out with venture  
20 capitalists who are really investors. That would have  
21 been known at that table, wouldn't it?

22          A.       Yes.

23          Q.       And at that table it would have been known  
24 that SAIC had struck out with private businesses that  
25 they had tried to sell on this technology. Isn't that

1 right?

2 A. Yes.

3 Q. And the parties at that table would have  
4 known that the various governmental agencies that have  
5 been talked about here -- and I won't take the time to  
6 name them -- had passed on this technology. Isn't that  
7 so? They would have known that?

8 A. Yes. But if I pause because Mr. Munger did  
9 address other possibilities that he wasn't aware of.

10 Q. Now, you know that in this case what is  
11 accused is not Windows XP and Windows Vista as a whole.  
12 You know that, don't you?

13 A. Yes.

14 Q. You know that there are literally thousands  
15 of features to Windows XP. You're aware of that, aren't  
16 you?

17 A. I am, yes.

18 Q. And there are literally thousands of  
19 features of Windows Vista, you are aware of that too,  
20 aren't you?

21 A. Absolutely.

22 Q. And you're aware that these patents address  
23 specific features, aren't you?

24 A. Yes.

25 Q. You're aware that what these patents address

1 is a small part of the thousands of features in Windows  
2 XP, aren't you?

3 A. A small part of the number, but there's more  
4 to it than that.

5 Q. All right. Well, have you done an economic  
6 analysis of the other features that are attractive and  
7 useful to people who might use Windows XP?

8 A. Yes, that is something that I did.

9 Q. You realize that there are many features, in  
10 fact, hundreds if not thousands, of both Vista and XP  
11 that are not accused of infringing these patents, don't  
12 you?

13 A. Did you say hundreds or thousands?

14 Q. Yes, I did say that.

15 A. I just want to make sure it wasn't hundreds  
16 of thousands.

17 Yes, I do understand that hundreds or  
18 thousands.

19 Q. I'm not going to name them all, but do you  
20 know one of the non-infringe -- can you -- can you name  
21 some? Can you name some features in Windows XP that are  
22 non-infringing? Do you know the product well enough to  
23 do that?

24 A. Yes.

25 Q. Tell me -- tell me a few?

1           A.       Well, there would be print commands, file  
2 commands. There would be a variety of different  
3 functionalities that we would be aware of even in our  
4 everyday use. There would be a large number of APIs,  
5 and I address that in my report based on my input from  
6 Dr. Jones.

7           Q.       Did you analyze the economic value to the  
8 overall Windows Vista and XP system of say Photo  
9 Gallery just to pick one; did you do that?

10          A.       Not that API -- not specific APIs, no.

11          Q.       Did you analyze the economic component,  
12 aspect, or contribution of shadow copy, a feature of  
13 Windows XP and Vista?

14          A.       Not individually, no?

15          Q.       Do you even know what it is?

16          A.       I'm not sure I know exactly what that is.

17          Q.       Did you analyze the economic contribution in  
18 Windows XP and Windows Vista of the Welcome Center?

19          A.       Not specifically, no.

20          Q.       Did you analyze and consider the economic  
21 contribution to Windows XP and Windows Vista of the  
22 feature called Windows calendar?

23          A.       Not individually, no.

24          Q.       Now, I could go on with a long list, but I  
25 want to go and ask you the question that I intended to



1 ask you before.

2           With respect to these hundreds or potentially  
3 thousands of non-infringing features, have you tried to  
4 do an economic analysis of their value to the XP or  
5 Vista product? Have you done that?

6           A.       I approached it almost the reverse way to  
7 that.

8           Q.       I'm going to come to that in a few minutes.  
9 But I'm asking you now: Did you take the individualized  
10 features and analyze them from an economic standpoint to  
11 see what their contribution was to the attractiveness of  
12 Windows XP and Windows Vista to persons who might use  
13 it?

14          A.       I focused on the specific APIs associated  
15 with the VirnetX technology, and so it's the reverse  
16 side of that.

17          Q.       So the answer is, with respect to the  
18 hundreds, if not thousands, of non-accused  
19 functionalities, you did not do an economic analysis of  
20 them individually?

21          A.       Not individually, except for the two APIs  
22 that we have been discussing here.

23          Q.       Now, one of the things that you said you did  
24 and I told you I would come to it is you considered the  
25 home version of Windows XP and Windows Vista as opposed

1 to the higher-end versions, correct, the more expensive  
2 ones?

3 A. Well, in particular the professional and  
4 business versions, that's right.

5 Q. And the reason you did that is those business  
6 versions had individual features that contributed to the  
7 value of the XP and Vista product. Isn't that right?

8 A. Not exactly.

9 Q. Partly?

10 A. Well, it is not so much individual features,  
11 but all of the additional features that I could isolate  
12 when I compared it to the home versions of the Windows  
13 products.

14 Q. But you did not consider the higher cost of  
15 the -- the more advanced versions of XP and Vista  
16 because they contained additional features. Isn't that  
17 right?

18 A. I am confused by the question. I did  
19 consider the additional features in the professional  
20 versions, and that's why I didn't use the higher  
21 price.

22 Q. Right. Because those additional features in  
23 the professional versions are additional features that  
24 make the product attractive that are not accused in this  
25 case. Isn't that right?

1 A. Partly right.

2 Q. But when you got to the home version, you  
3 still had hundreds, if not thousands, of features that  
4 you did not account for in an economic sense. Isn't  
5 that so?

6 A. No. I believe I have taken into account  
7 those features, just not individually.

8 Q. Let me take you back to Exhibit No. 6 for  
9 just a moment again. I didn't quite finish the thought  
10 here.

11 So with the knowledge that I have gone through  
12 with you already about what the parties at both ends of  
13 the table would have known in 2003, that would also  
14 include valuations of the technology that is embodied in  
15 those patents. You've seen that, haven't you?

16 A. I have, yes.

17 Q. And those valuations ranged below \$18  
18 million in all cases, didn't they?

19 A. Not in all cases, but there certainly were  
20 some that were in the range up to 18 million.

21 Q. There were some that were in the range of  
22 2.7 million; isn't that so? You saw that?

23 A. I have certainly seen numbers like that. It  
24 depends on what group of technologies, though.

25 Q. All right. But except for SAIC's own

1 evaluation of its product with respect to the valuations  
2 that were put on by venture capitalists, potential  
3 customers and others who were approached, those values  
4 were all less than \$15 million. Isn't that right?

5 A. Let me be clear about the question, Mr.  
6 Sayles. You're saying except for the studies that were  
7 done for SAIC?

8 Q. Yes, SAIC putting its own price on its  
9 product that it's out there trying to sell to venture  
10 capitalists and others. You saw third-party valuations,  
11 didn't you?

12 A. Yes, that's why I'm confused. CSMG, the  
13 company that did the research on valuation, they were  
14 hired by SAIC. They came up with valuations that  
15 approached \$200 million.

16 Q. That's right. But no one accepted that  
17 figure; isn't that true?

18 A. I don't know that that's true.

19 Q. All right. I'll talk to you about some  
20 documents in just a moment.

21 But are you telling the ladies of the jury  
22 that in early 2003 after SAIC had had the difficulties  
23 that you've heard in this courtroom with its technology,  
24 that Microsoft had offered a lump sum payment of \$5  
25 million, that SAIC would have gotten up and left the

1 table. Is that what you're saying?

2 A. Yes, I am.

3 Q. If Microsoft had offered a lump sum payment  
4 at that time of \$10 million, are you telling the ladies  
5 of the jury that SAIC would have gotten up and left the  
6 table?

7 A. Absolutely.

8 Q. And are you telling the ladies of the jury  
9 that if \$15 million hit the table in the negotiation,  
10 that they would have gotten up and left the table, given  
11 the history of their failures of efforts to  
12 commercialize their product and get others interested in  
13 it?

14 A. Without a question.

15 Q. Now, let's talk about this for a minute.  
16 That is your opinion; isn't it?

17 A. I think there's documents that go to that  
18 issue, too, but certainly it's part of my opinion.

19 Q. Right. But what happens at a hypothetical  
20 negotiation is necessarily a matter of opinion; isn't  
21 it?

22 A. In part. Ultimately it becomes the jury's  
23 opinion.

24 Q. Right. But your job as an expert witness is  
25 to express your opinion after doing your analysis; isn't

1 that right?

2 A. Yes. And that's what I've done today.

3 Q. And that's what you do when you involve  
4 yourself in court proceedings is, you express opinions,  
5 don't you?

6 A. On some occasions, yes.

7 Q. And sometimes your opinions are accepted,  
8 correct?

9 A. Correct.

10 Q. Sometimes they're rejected; isn't that  
11 right?

12 A. Yes, that's true.

13 Q. And sometimes your opinion is somewhere in  
14 the middle; is that true?

15 A. That's been my experience.

16 Q. All right. And while we're on the subject  
17 of testifying, in the testifying experience you do have,  
18 you have appeared on both sides of the fence, haven't  
19 you?

20 A. I'm not sure what you mean by both sides of  
21 the fence.

22 Q. What I mean is in this case you're appearing  
23 on behalf of the patent holder, the Plaintiff and you're  
24 expressing an opinion on their behalf, aren't you?

25 A. I'm expressing an opinion that's associated

1 with the Plaintiff, yes.

2 Q. Correct. In your experience that you have  
3 given in your resume, you indicate that you've been on  
4 the other side of the coin; is that right?

5 A. Yes, I have also --

6 Q. The other -- I'm sorry.

7 A. I've also worked with the defendants in  
8 patent cases.

9 Q. So you've been on the other side of the  
10 fence?

11 A. Sometimes I'm on both sides of the fence in  
12 any particular case.

13 Q. But you've been on the other side of the  
14 fence, haven't you?

15 A. Yes, as you put it.

16 Q. And, in fact, you do understand that in a  
17 court of law where there's a jury, there is nothing  
18 unusual about a Defendant, in the position of Microsoft,  
19 talking about damages. You know that, don't you?

20 A. Yes, I do.

21 Q. And there's nothing unusual about a party  
22 like Microsoft offering damage testimony because you've  
23 been in that very same situation for a Defendant; isn't  
24 that so?

25 A. That's true, yes.

1 Q. And by doing that, it is in no way an  
2 admission or an acknowledgement that there has, indeed,  
3 been infringement; isn't that right?

4 A. That's correct.

5 Q. And it's in no way and it's not an admission  
6 that the patents are valid, is it?

7 A. That's up for the jury's determination.

8 Q. That's right. And just because we're here  
9 having a discussion about damages, that really doesn't  
10 have a bearing on those issues, does it?

11 A. I'm not sure what you mean by no bearing,  
12 but --

13 Q. Well, let me break it down and ask you a few  
14 specific questions. You've told us what you're here to  
15 testify about; but you're not here to testify about  
16 infringement, are you?

17 A. No.

18 Q. That is not your job and not your role, is  
19 it?

20 A. It's not.

21 Q. And with respect to the technical aspects of  
22 infringement, you don't have a position that you can  
23 express from an informed position, do you? That's not  
24 your job?

25 A. Correct.



1 Q. And the same thing is true with respect to  
2 validity, that's not your job, right?

3 A. Correct.

4 Q. Isn't it true that with respect to a party  
5 that receives a lump sum at the bargaining table, it  
6 removes the risk for them. Isn't that right?

7 A. I'm sorry, can I have the question again?

8 Q. For a party that agrees to and accepts a  
9 lump sum royalty and walks away from the table with the  
10 money that's paid in lump sum, it removes the risk for  
11 them, doesn't it?

12 A. It depends on what you mean by risk, but I  
13 agree that they certainly walk away with that money  
14 without any uncertainty about that.

15 Q. What I mean is in a lump sum royalty, the  
16 party that receives it, receives it and gets to keep it  
17 regardless of whether the party that pays it uses their  
18 technology or not. Right?

19 A. That's correct.

20 Q. And they receive -- they receive and keep  
21 the full amount of a lump sum even if the party who took  
22 the license uses it for a while and decides not to use  
23 it any longer; they get to keep the money, don't they?

24 A. That's correct.

25 Q. And in the high-tech area there is a lot of

1 risk that technologies change and that companies may  
2 stop using the technology that once was -- was once  
3 prominent that becomes outdated. That's a risk, isn't  
4 it?

5 A. Can be, yes, sir.

6 Q. With respect to the patented features that  
7 are in the '135 and the '180 patent, you are relying on  
8 Professor Jones for that, aren't you, to explain what it  
9 is?

10 A. Yes.

11 Q. And you have not performed any type of an  
12 economic survey --

13 MR. SAYLES: Let me strike that and start  
14 over.

15 Q. (By Mr. Sayles) You haven't performed a  
16 survey of any kind to see who is using the accused  
17 features of the '135 patent, have you?

18 A. Correct, I haven't performed a survey.

19 Q. And you haven't performed a survey to see  
20 who may be using the patented features embodied in the  
21 '180 patent either, have you?

22 A. Yes, sir -- I mean, I should be clear. I  
23 have not.

24 Q. And isn't it true that in your field of  
25 economics, that sometimes something that economists do

1 to determine the extent of a product's use is to do some  
2 sort of a survey?

3 A. Yes.

4 Q. In this case you are not expressing any  
5 opinion as to any lost profits, are you?

6 A. Correct.

7 Q. That's not in this case, is it?

8 A. Correct.

9 Q. You've mentioned the term "APIs." That's  
10 application programming interface?

11 A. That's my understanding --

12 Q. Okay. Your understanding may be better than  
13 mine, but isn't it true that an API is simply  
14 programming that allows someone to put an application  
15 onto that API and it will work, that's what it is?

16 A. That's my understanding, yes.

17 Q. And an API is like a plug in the wall in a  
18 way, and that's it is there; but until you plug in the  
19 lamp or you plug in the appliance, the plug is just  
20 there. That's true of an API; isn't it?

21 A. Yes, but having the plug there can have a  
22 lot of value.

23 Q. All right. But in this case in terms of who  
24 is plugging in to these APIs in the manner that is  
25 accused under the '135 and the '180, you don't really

1 have any economic data on that, did you?

2 A. No, there are -- there are some data.

3 Q. Well, let me ask you specifically. Do you  
4 understand that one of the accused features is this  
5 thing that's been talked about by Dr. Jones of DNS SRV.  
6 Do you remember that?

7 A. On discovery?

8 Q. Yeah. You don't have any knowledge about  
9 the extent to which that is used, do you?

10 A. I have important knowledge in that regard.  
11 I do.

12 Q. I'm going to refer you to -- if I can find  
13 it -- to your deposition, Page 167, Line 11 through 17.

14 MR. SAYLES: May I approach the witness,  
15 Your Honor?

16 THE COURT: Yes, you may.

17 THE WITNESS: What were the pages again?

18 MR. CASSADY: Mr. Sayles, would you give  
19 me a minute to grab my copy?

20 MR. SAYLES: Oh, did I get your copy?

21 MR. CASSADY: No, I didn't have a copy.

22 Q. (By Mr. Sayles) Page 167, Line 11 through  
23 17.

24 Do you see the question -- I'm sorry.  
25 Do you see the question that was asked of you at your

1 deposition:

2           And so based upon your research into this,  
3 you're similarly unable to quantify the number of users  
4 of DNS SRV auto discovery feature; is that true?

5           Your answer was, I think that is true. It's  
6 difficult to quantify that. There certainly is within  
7 the Office Communications and OCS, but you are asking  
8 outside of that.

9           Do you see that?

10          A.        You didn't read the "use" in that sentence.  
11 There certainly is use within. And that's what I was  
12 referring to on the next page of this deposition.

13          Q.        All right. You say that you looked at some  
14 use of OC/OCS; is that right? That's what -- that's  
15 what you say?

16          A.        Yes.

17          Q.        You did. But even with that, that use that  
18 you looked at was some sort of data that you deemed  
19 unreliable or unusable. Is that right?

20          A.        You may be thinking of different things. I  
21 am referring to what was on Page 168 of my deposition,  
22 which was important information; what I referred to a  
23 moment ago.

24          Q.        Is it correct that you don't have any  
25 evidence or information about customers purchasing

1 Windows XP or Vista because of DNS SRV auto discovery,  
2 one of the accused features here?

3 A. I think that -- well, I -- I'm not aware of  
4 that specifically, I think that's correct.

5 Q. And you don't have any evidence based on all  
6 of your investigation, of Microsoft retaining or gaining  
7 any market share because of its inclusion of any of the  
8 accused APIs, do you? Retaining or gaining?

9 A. Not specifically.

10 Q. You would agree that with respect to both  
11 the '135 and the '180 that the accused technology, it is  
12 fair to say, is not a main driver of sales?

13 A. I did say that in my report, that's true.

14 Q. You stand by that, don't you?

15 A. Yes.

16 Q. And with respect to PNRP plus grouping, we  
17 have heard some discussion about Windows Meeting Space  
18 earlier, but with respect to third-party developers  
19 making use of the PNRP plus grouping feature, you don't  
20 know of any third-party developers that have made use of  
21 that in Windows XP or Windows Vista, do you?

22 A. Yes, if you are talking about by virtue of a  
23 released product.

24 Q. The answer is, yes, you do not have any such  
25 information in terms of a released product? And that is

1 what I'm asking you about.

2 A. That would be correct, based on that  
3 clarified question, yes.

4 Q. And is it correct that you have no evidence  
5 and no economic information about any customers who  
6 purchased Windows XP or Windows Vista because of the  
7 accused features in those products?

8 A. The question is a little difficult because  
9 there is Microsoft deposition testimony addressing  
10 Microsoft's belief that these features were going to  
11 enhance the Windows platform and help sell additional  
12 copies of Windows.

13 Q. But what I want to ask you now is, as a  
14 result of your analysis that you've done in this case  
15 that you told the ladies of the jury about, have you  
16 been able to quantify in any sense how often or what --  
17 to what degree PNRP plus grouping combination is used  
18 versus the other APIs?

19 A. No.

20 Q. All right. Mr. Reed, you would agree that  
21 if Microsoft does not infringe, it shouldn't have to pay  
22 any damages, right?

23 A. That's my understanding of the law, there  
24 would not be damages.

25 Q. And in doing your analysis, you have to

1 assume, based on the information you've told us you  
2 gathered, that every copy of Windows XP and Windows  
3 Vista infringe. Isn't that right?

4 A. Yes.

5 Q. And you would apply a 1 percent royalty  
6 under the '135 patent to Windows Vista even though  
7 Windows Vista doesn't even ship with the accused APIs in  
8 it. Is that right?

9 A. That's the -- that's the phased in.

10 Q. Phased in?

11 A. That's correct, phased in.

12 Q. Mr. Reed, you weren't able to identify any  
13 developers -- let me stop there and back up.

14 When we talk about developers, we're talking  
15 about third-party companies that make applications that  
16 they sell that they can then run on something like  
17 Microsoft XP or Microsoft Vista. Is that what we're  
18 talking about there?

19 A. That's what developers would do, yes.

20 Q. And attraction of developers is important  
21 for a product; is that right?

22 A. Yes.

23 Q. And even though a home user might never use  
24 that API, they might be able to purchase some product  
25 that a third party has made that will work on their



1 computer because the API is there. Is that right?

2 A. Yes.

3 Q. You haven't identified any developers that  
4 indicated that they would stop developing applications  
5 for Windows XP or Windows Vista if the PeerNet APIs were  
6 not available, have you?

7 A. I have not, correct.

8 Q. Let's go back to the hypothetical  
9 negotiation?

10 table for just a moment. To reach a --

11 MR. SAYLES: We don't have to put it up  
12 for right now. Thank you.

13 Q. (By Mr. Sayles) Conceptually, I want you to  
14 think about the hypothetical negotiation in 2003. The  
15 hypothetical negotiation must be between a willing  
16 licensor and a willing licensee; is that right?

17 A. Yes.

18 Q. It's like the hypothetical negotiation has  
19 to be between a willing buyer and a willing seller.  
20 That's kind of the way you can say it too, isn't it?

21 A. That's fair, yes.

22 Q. And the parties must reach agreement,  
23 right?

24 A. Yes.

25 Q. And Microsoft's preferences would have as

1 much weight in the hypothetical negotiation as SAIC's  
2 preferences; isn't that right?

3 A. That's certainly something I took into  
4 account.

5 Q. And at a hypothetical negotiation SAIC  
6 wouldn't be able to force a running royalty onto  
7 Microsoft; they would have to obtain agreement in the  
8 hypothetical negotiation?

9 A. I think that's fair, yes.

10 Q. And SAIC's claim to preference that Mr.  
11 Munger told you they had for this running royalty would  
12 just be one of the factors among many when you sit down  
13 to negotiate. Is that right?

14 A. Yes, sir.

15 Q. Isn't it true that in general that when  
16 parties are at a negotiation, whether it's real or  
17 hypothetical, that if they have the opportunity to  
18 design-around the patented features, that less money  
19 changes hands, either at a running royalty or lump sum?

20 A. Other things constant, that's true, yes.

21 Q. And when we say design-around, there's  
22 nothing improper about a party that takes an approach  
23 that doesn't infringe a patent to get around it. Isn't  
24 that right?

25 A. Yes.

1 Q. There's nothing wrong with that? It happens  
2 all the time, doesn't it?

3 A. It's certainly something that would be  
4 evaluated in the hypothetical or the actual  
5 negotiation.

6 Q. Right. And that's something that is  
7 accepted. There's nothing wrong with it, is what I'm  
8 getting at?

9 A. There's nothing wrong with it, that's  
10 true.

11 Q. In this case you are aware and have looked  
12 at Microsoft licenses that were produced in this case  
13 that -- some 20 of them that had a lump sum royalty,  
14 didn't you?

15 A. Yes.

16 Q. And in the 20 that you looked at in which  
17 Microsoft paid a lump sum royalty, each license involves  
18 ten or fewer patents, correct?

19 A. I believe that's true, yes.

20 Q. And here there would be two -- or actually  
21 one but another one might be issued in the future. One  
22 patent, correct?

23 A. But it's going to be known the second one  
24 issues.

25 Q. So we'll call it two. And in the 20

1 Microsoft licenses that are lump sums, you know those  
2 patents related to software, don't you?

3 A. I believe that's true.

4 Q. And you know that the time frame of those  
5 licenses was between 1997 and 2007, don't you?

6 A. I don't recall the exact dates, but I think  
7 that's probably fair.

8 Q. And each license is what we call a bare  
9 patent license, is that right, of the 20?

10 A. I can't answer that question.

11 Q. Okay. You cannot? Well, let's tell the  
12 ladies of the jury what a bare patent license is. There  
13 are some licenses where parties who are discussing  
14 software deliver a product as well as the rights to use  
15 patented technology. Is that true?

16 A. Yes.

17 Q. And there's some agreements where the  
18 parties sit down and they deliver directions and knowhow  
19 and books and manuals. Is that true?

20 A. Yes. I can -- I can address the question.  
21 I think they're purported to be bare. They are sometime  
22 called naked patent licenses. I just can't address the  
23 question because I have other information that's  
24 confidential that informs me differently.

25 Q. Well, you know in this hypothetical

1 negotiation what Microsoft would be receiving would be  
2 no software, correct?

3 A. Correct.

4 Q. No product?

5 A. Correct.

6 Q. No technical documentation?

7 A. Correct.

8 Q. No source code that we've heard about,  
9 correct?

10 A. Correct.

11 Q. No computer programs?

12 A. Correct.

13 Q. Mr. Reed, I now want to direct your  
14 attention on to the subject of valuations that were made  
15 of the SAIC technology. Can we move to that subject?

16 THE COURT: Mr. Sayles, if you are about  
17 to change gears, let me ask how much longer you  
18 anticipate cross-examination?

19 MR. SAYLES: Your Honor, I think I have  
20 probably 45 minutes.

21 THE COURT: I think now it would be a good  
22 time for us to go ahead and break for the evening  
23 then --

24 MR. SAYLES: All right, sir.

25 THE COURT: -- if you are about to change

1 gears.

2                   So, ladies and gentlemen of the jury -- or  
3 ladies of the jury, I thank you for your attention  
4 today, and you have been very good jurors. I've been  
5 watching you closely, and you've been paying attention  
6 taking notes. And I know the Court and both parties  
7 appreciate that. So enjoy your evening off. We will  
8 reconvene at 9:00 o'clock in the morning. Drive  
9 carefully and we'll see you then. Remember my  
10 instructions.

11                   COURT SECURITY OFFICER: All rise for the  
12 jury.

13                   (Jury out.)

14                   THE COURT: All right. Please be seated.

15                   All right. Mr. Sayles, you have about 45  
16 more minutes of cross, and then do you anticipate a  
17 brief redirect, if any?

18                   MR. CASSADY: I will be as brief as I can,  
19 Your Honor. I'm not sure how brief.

20                   THE COURT: Fifteen minutes or so? I'm  
21 not going to hold you to it.

22                   MR. CAWLEY: I will hold him to it, Judge.

23                   THE COURT: He's got the hook.

24                   Okay. And then who will Plaintiffs have  
25 next after that? Do you know yet?

1 MR. CAWLEY: I believe after that we have  
2 some deposition excerpts, and then we intend to rest.

3 THE COURT: Okay. How many deposition  
4 excerpts? How long?

5 MR. CAWLEY: Well, in total it is 30  
6 minutes.

7 MR. CASSADY: Your Honor, I believe it's  
8 about -- well, actually I don't know what Microsoft's  
9 portions are. I think our portions were about 30 or 35  
10 minutes, and maybe Microsoft had about 10, 15 minutes.

11 THE COURT: Okay. Very good. Well, we  
12 should have the Plaintiff rested by well before noon or  
13 close to noon. So then Microsoft will be ready to move  
14 forward. You have got your witnesses all ready and  
15 everything?

16 MR. POWERS: We do, Your Honor.

17 THE COURT: And what are -- that will  
18 leave basically half a day Thursday, all day Friday.  
19 Probably finish on Monday, you're thinking; or do you  
20 think there is a chance on Friday?

21 MR. POWERS: I think Monday.

22 THE COURT: All right. Very good. All  
23 right. We will be in recess until 9:00 o'clock in the  
24 morning.

25 COURT SECURITY OFFICER: All rise.

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(Court adjourned.)

\* \* \* \*

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/ \_\_\_\_\_  
SUSAN SIMMONS, CSR  
Official Court Reporter  
State of Texas No.: 267  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date

/s/ \_\_\_\_\_  
JUDITH WERLINGER, CSR  
Deputy Official Court Reporter  
State of Texas No.: 731  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date



EXHIBIT F7

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION

VIRNETX \* Civil Docket No.  
\* 6:07-CV-80  
VS. \* Tyler, Texas  
\*  
\* March 11, 2010  
MICROSOFT CORPORATION \* 9:00 A.M.

TRANSCRIPT OF JURY TRIAL  
BEFORE THE HONORABLE JUDGE LEONARD DAVIS  
UNITED STATES DISTRICT JUDGE

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(Proceedings recorded by mechanical stenography,  
transcript produced on CAT system.)

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\* \* \* \* \*

P R O C E E D I N G S

COURT SECURITY OFFICER: All rise.  
(Jury in.)

THE COURT: Please be seated.

Good morning. Everybody ready to go

1 again?

2                   Very good.

3                   All right. You may proceed, Mr. Sayles.

4                   MR. SAYLES: May it please the Court.

5                   BRETT L. REED, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

6                   CROSS-EXAMINATION (CONTINUED)

7 BY MR. SAYLES:

8                   Q. Good morning, Mr. Reed.

9                   A. Good morning, Mr. Sayles.

10                  Q. Mr. Reed, you understand that Microsoft LCS  
11 and OCS is an accused product in this case, don't you?

12                  A. Yes, I do.

13                  Q. And you understand that that product is a  
14 product that is separate from Windows XP and Windows  
15 Vista, right?

16                  A. Yes.

17                  MR. SAYLES: Let's put up Slide 4 from  
18 Mr. Reed's presentation yesterday.

19                  Q. (By Mr. Sayles) All right. Mr. Reed, this is  
20 your slide, and I'm pointing to the group of products,  
21 Microsoft LCS/OCS, Office Communicator (OC), OC in  
22 Office Bundles, and OCS Microsoft ECAL Suite Bundles.

23                           Do you see those?

24                  A. Yes.

25                  Q. Now, you understand that not only are those

1 products separate products from Windows Vista and  
2 Windows XP, these products have hundreds, if not  
3 thousands, of features that are not accused of  
4 infringing in this case?

5 A. Yes.

6 Q. Can you name five of the features of, say, on  
7 Office Communicator that are not accused of infringing  
8 in this case?

9 A. I'm not sure I'll have the right terms to all  
10 of them, but one of them would be presence; another one  
11 would be essentially telephony capability over what's  
12 sometimes was a separate client access license or CAL.

13 Q. All right. I -- I would take it that you  
14 probably did not do an economic analysis of the  
15 hundreds, if not thousands, of features of this group of  
16 products that are not accused of infringing, did you?

17 A. Again, not in terms of the separate aspects,  
18 but I considered the functionality associated with the  
19 SRV auto-discovery capability compared to all the other  
20 features.

21 Q. All right. But in making an economic analysis  
22 of the contribution of the accused feature of this group  
23 of products, you did not analyze the economic value and  
24 the contribution of the non-accused features, did you?

25 A. No, I would disagree with that. In

1 particular, I could address the Office Communicator and  
2 the Microsoft Office Bundles, if you would like.

3 Q. What economic analysis did you do of the video  
4 conferencing feature?

5 A. That was one of the features that -- that was  
6 included in the overall product, because it includes all  
7 kinds of communication features, phone features, a lot  
8 of capability related to unified communication, but I  
9 didn't do it individually.

10 Q. All right. Now, I won't go through all of  
11 these. If I understand you correctly, if I went through  
12 five, ten, a hundred or even more, you would say you did  
13 not analyze them individually; is that right?

14 A. Yes. I was focusing on this feature compared  
15 to the overall product.

16 Q. All right. Yesterday, you showed some slides  
17 that you said that demonstrated Microsoft's focus on RTC  
18 and UC.

19 Do you remember that? You talked about that  
20 issue?

21 A. I talked about the issue. I'm not sure of  
22 what particular slide you had in mind.

23 Q. All right. Well, let's put up Slide 21 and  
24 I'll show you one of those.

25 This is one of your slides?

1 A. Yes.

2 Q. And do you see the date on that slide?

3 And I'm going to ask Chris to focus on the date on the  
4 left-hand side. Right there.

5 Do you see that?

6 A. Yes.

7 Q. April 10th, 2001, correct?

8 A. Correct.

9 Q. And the accused feature was first released in  
10 Windows XP in 2003; isn't that so?

11 A. The testimony I recall was a little uncertain,  
12 but my understanding is it wasn't until 2003 that the  
13 particular feature was -- was implemented and then  
14 released into the -- the development packs and  
15 ultimately in XP 2 for Windows XP.

16 Q. All right. My question is very simple, and I  
17 want to see if we're there.

18 The accused feature that was added to Windows  
19 XP was first released in 2003; is that right?

20 A. I -- I think, yes, it is. But certainly it  
21 was not in it in 2001.

22 Q. That's right.

23 In fact, what you have shown the jury and  
24 highlighted here are documents that were written when  
25 these features were in the planning stages; isn't that

1 right?

2 A. Yes.

3 Q. And there were hopes for them; is that right?

4 A. Very much so, yes.

5 Q. Not experience but hopes, right?

6 A. There was also a customer feedback about  
7 interest, but -- but hopes is a fair way of putting it.

8 Q. Let's look at Slide 22.

9 A document of a similar nature; is that right?

10 A. Yes.

11 Q. And can we look at the date on the left-hand  
12 side, please?

13 That's a date that is prior to the release of  
14 the accused feature, correct?

15 A. Yes.

16 Q. Let's look at Slide 23, the why-we-win slide.  
17 And I'm going to ask Chris to focus on the date on the  
18 left-hand side.

19 Another 2001 document. This is a discussion  
20 of the accused feature some two years before it was  
21 included in the Windows XP product, isn't it?

22 A. Putting aside the precise time in 2003, I do  
23 agree it was before it, yes.

24 Q. Let's look at No. 24.

25 And I'm going to ask that the date be brought



1 up.

2 July 9th, 2001. The same situation, isn't it?

3 A. Yes.

4 Q. All right. Now, yesterday, you were asked  
5 some questions about where you got information for the  
6 rates you used, and you said that you got it from  
7 various sources.

8 Do you remember that?

9 A. Yes.

10 Q. And I'm going to show you Slide 13 from your  
11 presentation.

12 And this is where you were discussing Factor 4  
13 of the Georgia-Pacific Factors that you explained to the  
14 jury, correct?

15 A. Actually, I don't think this slide was shown.  
16 But it is a slide I prepared.

17 Q. Well, do you recall that yesterday in your  
18 testimony you discussed Plaintiff's Exhibit 653 that's  
19 referenced at the foot of this particular slide?

20 A. Yes.

21 Q. And in doing so, you said that that was a  
22 document that you looked at that was an example of rates  
23 that you explored in your analysis; is that right?

24 A. I think I was addressing it more from a  
25 standpoint of rates that were being evaluated and

1 considered by SAIC, in this case VirnetX.

2 Q. All right. And to -- in order to assess the  
3 mental state of SAIC back in 2003 at the time of this  
4 hypothetical negotiation would take place?

5 A. No. You can see there's different time  
6 periods, and I evaluated all these different documents  
7 with these different time periods.

8 Q. Well, you did pull up Page 18 of Exhibit 653  
9 and talked about it to the jury, and I have your  
10 testimony here where you talked about it.

11 Do you remember talking about Page 18 of  
12 Exhibit 653?

13 A. Yes.

14 Q. All right. And as a matter of fact, that page  
15 was in some ways supporting or contributing to your  
16 opinions that you were explaining to the jury, or you  
17 wouldn't have used it as an example; is that right?

18 A. Sure. This is certainly a document that I  
19 considered.

20 Q. All right. Well, let's look at the cover  
21 page. As you said, this is a presentation that was done  
22 in 2009 by VirnetX, right?

23 A. Yes, sir.

24 Q. The Plaintiff in this case, right?

25 A. Yes.

1 Q. After this lawsuit was filed, right?

2 A. Yes.

3 Q. And it's an investor overview, and it's trying  
4 to get investors to invest in VirnetX, right?

5 A. Yes. That's what I took into account.

6 Q. And, in fact, the document even discusses the  
7 fact that this very litigation was pending in the  
8 document; is that right?

9 A. I don't recall that on this document, but I  
10 was certainly aware of that being stated in other  
11 VirnetX documents.

12 Q. Let's look at Page 16 of this document that  
13 you showed the jury yesterday. Right at the top, you  
14 can see summary of Microsoft litigation.

15 Do you see that? Do you see it?

16 A. I do, yes.

17 Q. So it is discussed in this document?

18 A. Yes.

19 Q. So, Mr. Reed, do you think that it's  
20 appropriate in supporting your opinion to rely on a  
21 document that was written after the lawsuit was filed by  
22 the company that is the Plaintiff, who is trying to get  
23 people to invest in what they're doing?

24 A. I think it's appropriate to consider it as  
25 long as you consider it with the right weight.

1 Q. All right. Mr. Reed, in this case, it's  
2 already been covered to some extent that the government  
3 funded the development of the '135 and '180 through the  
4 company called In-Q-Tel.

5 Do you remember that?

6 A. Yes, sir.

7 Q. You are familiar with that, aren't you? You  
8 are familiar with the In-Q-Tel contract, aren't you?

9 A. Yes.

10 Q. And the In-Q-Tel contract provided that the  
11 government would pay 3.55 million, and among other  
12 things, would receive an exclusive license to the  
13 patented technology.

14 Is that true?

15 A. I -- I don't know if it was exclusive. I  
16 don't recall that, but I do understand that there were  
17 rights that would be received.

18 Q. All right. Well, in evaluating license and  
19 contracts and agreements that are relevant to a  
20 hypothetical negotiation, it's important to know whether  
21 they're exclusive or non-exclusive, isn't it?

22 A. Absolutely.

23 Q. Because a non-exclusive license, like  
24 Microsoft would be getting, usually commands a lower  
25 price; is that right?

1 A. That is. And that's what I took into account.

2 Q. And there's been some testimony by Mr. Munger  
3 that I think you may have heard that he doesn't know one  
4 way or the other whether the government actually ended  
5 up using this technology; is that right?

6 Did you hear that?

7 A. Yes.

8 Q. Let's look at the first page of Exhibit 3122  
9 under the Paragraph 3, under contract type and payment.  
10 Right there, it says total cost to buyer of 3,552,870.

11 Do you see that?

12 A. Yes.

13 Q. So that's what the government paid for  
14 whatever is contained in this contract; is that right?

15 A. Besides other -- other adjustments, that's  
16 certainly what's specified in this paragraph.

17 Q. Let's go to Page 20 of this document. And  
18 down in Paragraph No. 2 at the bottom of the page, an  
19 allocation of principal rights, the second sentence,  
20 with respect to.

21 MR. SAYLES: Would you highlight that,  
22 Chris?

23 Q. (By Mr. Sayles) It says here that with respect  
24 to the subject invention in which the seller retains  
25 title, the government shall have a non-exclusive,

1 non-transferable, irrevocable, paid-up license to  
2 practice or have practiced for and on behalf of the  
3 government the subject invention throughout the world  
4 solely for government purposes.

5 Do you see that?

6 A. Yes.

7 Q. So whether the government did or did not use  
8 the patented technology, this agreement is a lump sum,  
9 paid-up in-full royalty of \$3.55 million to the  
10 government; isn't that right?

11 A. I wouldn't agree with that.

12 Q. That's what it says right there, isn't it?

13 A. I think the certain facts you mentioned are  
14 correct, but it's not really comparable to a  
15 hypothetical license.

16 Q. With respect to the venture capitalists and  
17 businesses that were approached, you heard the  
18 examination of Mr. Munger in which a long list of  
19 businesses looked at this technology and passed.

20 You heard that, didn't you?

21 A. Yes.

22 Q. And where a long list of venture capitalist  
23 investors looked at this technology and passed, you  
24 heard that, didn't you?

25 A. Yes.

1 Q. And if we look at Exhibit 3136 very quickly,  
2 this is an SAIC document that goes through -- and I'm  
3 not going to go through in detail -- but it's page  
4 after -- you can look in the notebook up there beside  
5 you.

6 MR. SAYLES: May I approach the witness  
7 to speed this up, Your Honor.

8 THE COURT: Yes, you may.

9 Q. (By Mr. Sayles) Let me show you 30 -- 3166,  
10 and I'll will just stay here for just a moment, and then  
11 I'll go back.

12 Do you see that on the left-hand column that  
13 this document lists page after page of business names,  
14 potential partners, venture capitalists? Do you see  
15 that?

16 A. Yes. And that the date of September 2000.

17 Q. That's a revision date.

18 Are you -- are you making some significance of  
19 this date? Are you saying that back earlier, as we  
20 heard yesterday from Mr. Munger, that these businesses  
21 weren't contacted?

22 A. No, I'm not saying the businesses weren't  
23 contacted. No.

24 Q. And venture capitalists?

25 A. I understand that they were contacted. The

1 date matters, though.

2 Q. And they passed on the technology. You heard  
3 all about that yesterday?

4 A. Yes, in that early time period, that's right.

5 Q. And as a matter of fact, you know that SAIC  
6 itself decided to pull the plug on the development of  
7 this technology in 2001, even though they had a patent  
8 application pending with patent claims that would later  
9 be issued on this very technology.

10 A. Yes, I understand that.

11 Q. You mentioned yesterday that at one point SAIC  
12 indicated that they valued their technology of their  
13 company at some \$200 million.

14 Do you recall that? Do you recall mentioning  
15 that?

16 A. Yes, but there was a valuation done for SAIC.

17 Q. They were actually convinced that the value of  
18 a company that would be formed and would take over this  
19 technology would be something more on the order of \$10  
20 million, weren't they?

21 A. Certainly aware that there were some  
22 considerations of that value range.

23 Q. So you mentioned the 200-million-dollar  
24 number, but you know the documents show that SAIC was  
25 convinced that the range of value was more like 10



1 million.

2           You know that, don't you?

3           A.    I know that there were different ranges  
4 discussed at different times.

5           Q.    Let's look at Exhibit 3128, and let's start  
6 with the cover.

7           This is an In-Q-Tel document in March and  
8 April of 2001. Do you see that?

9           A.    Yes.

10          Q.    All right. Let's go to Page 12. And in the  
11 very bottom paragraph, I want to highlight the portion  
12 that says SAIC's going-in position was they wanted a  
13 hundred to 200 million valuation for their spin-off.

14          Now let me stop right here. Spin-off means  
15 that you form a new company and put the technology in  
16 it. That's what that means, isn't it?

17          A.    Yes.

18          Q.    All right. The valuation of their spin-off.  
19 And we successful convinced them that a more appropriate  
20 valuation for the spin-off would be \$10 million.

21          Do you see that?

22          A.    Yes.

23          Q.    Let me show you -- as a matter of fact that --  
24 that's an In-Q-Tel document. You've seen SAIC documents  
25 where they themselves acknowledge a value in the 9- to

1 15-million-dollar range, haven't you?

2 A. Yes.

3 Q. If we look at 3198, you can tell from the  
4 cover that this is a document from SAIC's Edward J.  
5 Hendrick, Vice President, Business Development and  
6 Technological Commercialization.

7 Do you see that?

8 A. Yes.

9 Q. And if we go to the very last page to the last  
10 line in the table there, SAIC itself came up with a  
11 value of this technology in 2001 of about \$15 million  
12 for the whole kit and caboodle; is that right?

13 A. What was the timeframe again? I'm sorry Mr.  
14 Sayles.

15 Q. February of 2001.

16 A. Yes. I'm aware of this document.

17 Q. In fact, in 2001, in terms of SAIC being  
18 successful in getting anyone interested in this  
19 technology was kind of like sitting in a boat for hours  
20 and casting out your lure into the weeds and not getting  
21 a strike, wasn't it?

22 A. The testimony is that it was difficult to get  
23 investors. I acknowledge that.

24 Q. Did I describe it correctly just now in my  
25 question?

1           A.    I'm not sure about the analogy.  How many  
2 times would you cast into the weeds?

3           Q.    All right.  Let me show you Exhibit 3197.

4                    Let's go to the top.

5                    Do you recognize these names?  Edward  
6 Hendrick?

7           A.    Yes.

8           Q.    Mr. Gobien or Gobien (pronouncing)?

9           A.    Yes.

10          Q.    You understand these are SAIC personnel?

11          A.    Yes, I do.

12          Q.    Here they're discussing, in 2001, all these  
13 efforts they've been making to get interest in  
14 investment in their technology, and it says, and I'll  
15 quote:  Feels a little bit like finally getting a strike  
16 after hours of sitting in a boat casting into the weeds.  
17 That was SAIC's description of the situation they found  
18 themselves in, isn't it?

19          A.    Yes.

20          Q.    And down at the bottom, they actually made a  
21 call for prayer to save this, didn't they?

22                    Let me take you down to the sentence before  
23 Ed:  For those of you who are praying people, now is the  
24 time to invoke whomever you normally invoke.  Ed.

25                    That's Ed, Senior Vice President of SAIC; is

1 that right?

2 A. That's my understanding, yes.

3 Q. So it's fair to say that as of May 2001, after  
4 the patent applications were filed, after SAIC  
5 supposedly had disclosed its invention, they were down  
6 to what this memo says in terms of getting any interest  
7 in it; is that right?

8 A. At that time period before the patent issued,  
9 yes.

10 Q. But they had a patent application, and it was  
11 filed in 2000.

12 You understand that?

13 A. Yes.

14 Q. And you understand that if a patent is issued,  
15 the patent holder has priority at least to the date of  
16 the filing of the application.

17 You know that much, don't you?

18 A. Yes.

19 Q. You know who Mr. Kendall Larsen is today,  
20 don't you?

21 A. Yes, I do.

22 Q. He is the Chief Executive Officer and Chairman  
23 of the Board of VirnetX, the Plaintiff in this case; is  
24 that right?

25 A. Yes, sir.

1 Q. And back in 2003, VirnetX as a company had not  
2 been formed; isn't that right?

3 A. Yes.

4 Q. And Mr. Kendall Larsen was approaching SAIC  
5 and was negotiating with SAIC to try to buy the  
6 technology at issue; is that right?

7 A. Yes. At that time, associated with other  
8 companies, but yes.

9 Q. And so Mr. Kendall Larsen, now the President  
10 and CEO of VirnetX, back in the 2003 timeframe was  
11 horse-trading with SAIC to try to get this technology,  
12 right?

13 A. Yes.

14 Q. Right?

15 A. I'm not sure what you mean by horse-trading,  
16 but yes.

17 Q. Okay. Bargaining, negotiating, exchanging,  
18 I'll-take/will-you-give-type of information?

19 A. Yes, sir.

20 Q. Let's look at Exhibit 3193.

21 You've seen this document dated April 25th,  
22 2004 in your preparation and analysis of this case,  
23 haven't you?

24 MR. SAYLES: Let's highlight the date up  
25 here. Right there.

1 Q. (By Mr. Sayles) You've seen that, haven't you?

2 A. I believe so, yes.

3 Q. Now, under your theory and your opinions, the  
4 hypothetical negotiation that would take place would  
5 have been when?

6 A. Right about this time period.

7 Q. Okay. And so we have Mr. Larsen discussing in  
8 this document, as you know, various valuations for the  
9 technology he was trying to acquire and indeed did  
10 acquire; is that right?

11 A. Yes.

12 Q. If you would, would you turn to Page 2, in the  
13 third line down, right there, it says Larsen's cap table  
14 indicates our proposed ownership, post-funding.

15 Now, that indicates that this is a table  
16 prepared by Kendall Larsen, now the CEO and Chairman of  
17 the Board of the Plaintiff, correct?

18 A. Yes.

19 Q. And you have seen the table that's on Page 3  
20 of this document, haven't you?

21 MR. SAYLES: And let's blow this up and  
22 highlight this box right here (indicates).

23 Q. (By Mr. Sayles) Where it says post-money,  
24 technology, transfer pre-investment valuation  
25 10,384,614, you've seen that, haven't you?

1 A. Yes, I have.

2 Q. And when all the columns are added up,  
3 accounting for who gets what in terms of the stock,  
4 there is a valuation of a hundred percent of the  
5 ownership at 15,384,614, right?

6 A. Yes.

7 Q. For the whole technology, correct? A company  
8 that would own it in effect?

9 A. Yes.

10 Q. But you're saying right about this time, SAIC  
11 would have gone to the bargaining table and wouldn't  
12 have left without a running royalty that would yield  
13 \$240 million.

14 Is that your testimony, sir?

15 A. That's correct. Yield that royalty over the  
16 time period through 2009.

17 Q. I want to talk briefly about the protocol or  
18 license as they're called that you discussed in your  
19 direct examination.

20 Do you remember the MCPP license revenue and  
21 licenses so forth?

22 A. Yes.

23 Q. Let's go to Exhibit 3182.

24 And you recognize this as a table that was  
25 provided and developed in this litigation that

1 summarizes who the companies are, what is licensed, and  
2 what the net royalties paid are. And you're familiar  
3 with that, aren't you?

4 A. I am, yes.

5 Q. And for the MCPD that you referred to in your  
6 analysis, the total amount paid to Microsoft under all  
7 these licenses is set forth right there; is that right?  
8 6.679 million, correct?

9 A. Yes, after the credits. But that's the total  
10 to date.

11 Q. Well, if you're entitled to a credit, you get  
12 a credit, don't you?

13 A. Yes.

14 Q. Okay. Let's turn the page to WSPP license  
15 revenue. You mentioned WSPP in your analysis, didn't  
16 you?

17 A. I did, yes.

18 Q. And the total amount from all of the WSPP  
19 licenses that Microsoft has received as of the date of  
20 this document is \$120,000; is that right?

21 A. So far, that's correct.

22 Q. Let's look at the exchange server of 2007  
23 licenses.

24 You mentioned that, too, didn't you, in your  
25 analysis?



1           A.    Yes, I did.

2                    But this is an old table.  There's been an  
3 update.

4           Q.    Okay.  The old table -- the old table says a  
5 hundred thousand.

6                    Do you remember what the update is?

7           A.    Yes.  The update has additional royalties now  
8 being paid by this company, NitroDesk, but it's still  
9 very early in the program.  And NitroDesk has started  
10 paying royalties above the prepaid royalties.

11           Q.    And you mentioned the LCS revenue licenses as  
12 some of -- something that Microsoft licensed, and you  
13 referred to it and pointed to it in your analysis,  
14 didn't you?

15           A.    Yes.

16           Q.    And isn't it true that the total paid under  
17 all of those license, as of the date of this table, was  
18 \$610,000?

19           A.    Yes.

20           Q.    And, in fact, you know that these licenses are  
21 not bare patent licenses, but this involves the transfer  
22 of instructions and manuals and know-how.

23                    You know that, don't you?

24           A.    Yes.  That's something I took into account.

25           Q.    I want to -- you had a slide that you entitled

1 key licenses.

2 Do you remember that?

3 I'll call it up here in just a moment.

4 A. I think there's two slides with that title,  
5 but, yes, I do recall that.

6 Q. My system has failed me. Bear with me just a  
7 second here.

8 A. Yes, sir.

9 Q. Well, one of the key licenses was the SafeNet  
10 license; is that right?

11 A. Yes.

12 Q. And let me ask you -- tell us exactly, in  
13 total, how much money has been paid to SAIC under the  
14 SafeNet license that you consider one of the key  
15 licenses?

16 A. Zero has been paid on that license.

17 Q. Zero?

18 A. Yes.

19 Q. And that's because SafeNet has the right to  
20 terminate that license and did so; is that right?

21 A. That's correct.

22 Q. And the contract provided that they had the  
23 right to evaluate the viability of the technology first  
24 and then decide what to do, didn't they?

25 A. Yes.

1 Q. And so that rate of 20 percent that you put up  
2 on your slide, really, can't we say that's meaningless  
3 whether a party has a free look and they decide to pass?

4 A. I don't believe it's meaningless, no.

5 Q. Well, they could have agreed to any number,  
6 and since SafeNet exercised its rights to bail out, it  
7 really didn't yield any money; isn't that true?

8 A. Well, it didn't yield any money, but I don't  
9 agree to that number.

10 Q. There was one other SAIC license that you  
11 mentioned, and that was the SAIC VirnetX license; is  
12 that right?

13 A. Yes.

14 Q. Let me see if I have this straight. First of  
15 all, how much has been paid under the SAIC/VirnetX  
16 license agreement?

17 A. I believe I testified yesterday that nothing  
18 under the 15-percent royalty rate has been paid.

19 Q. There's a rate of 15 percent but zero has been  
20 paid, right?

21 A. To date, that's correct.

22 Q. And you're calling a key agreement an  
23 agreement -- let me see if I've got this straight --  
24 that is between VirnetX on the one hand and SAIC who,  
25 under the contracts, has a right to see -- receive some

1 of the proceeds in this litigation, right?

2 A. Yes.

3 Q. Just one more line of questions I want to ask  
4 you.

5 Yesterday, you mentioned some products that  
6 you looked at that were something, I think you referred  
7 to, as proxy products?

8 A. Proxy products?

9 Q. Did you look at some products that Gif Munger  
10 told you were in some way comparable to the patented  
11 technology in order to assess the value to be placed on  
12 it?

13 A. Are you referring to the information from  
14 Dr. Jones relating to some security VPN products to --  
15 for me to compare the pricing that would exist for the  
16 security products?

17 Q. That's right.

18 Can you state the name of those three  
19 products?

20 A. Well, I will have to refer to my report to  
21 know them, but they are relatively small products.

22 Q. Can you name -- by name the correct name of  
23 one of them?

24 A. Not without referring to my report right now.

25 Q. Have -- have you owned one, two, or three of

1 those products that you refer to?

2 A. No.

3 Q. Have you analyzed the capabilities of those  
4 products beyond what Dr. Jones told you was similar to  
5 the accused technology?

6 A. No.

7 Q. Do you know if there were any extra features  
8 in any of those three products over and above the  
9 accused features? Do you know?

10 A. I -- I expect that there is, yes. And that's  
11 consistent with what I understand from Dr. Jones.

12 Q. All right. And have you done an economic  
13 analysis of what the value or the contribution of those  
14 features that don't relate to the patented features  
15 might be in the price of those products? Have you done  
16 that?

17 A. I want to be clear we're talking about --  
18 we're talking about the three products that were used to  
19 verify the pricing that SAIC and VirnetX had in mind for  
20 security products, right?

21 Q. That's right.

22 A. No. For my purposes, that wasn't necessary.

23 MR. SAYLES: I'll pass the witness.

24 THE COURT:

25 THE COURT: All right. Cross --

1 redirect?

2 MR. CASSADY: Your Honor, may I confer  
3 with my colleagues real quick?

4 THE COURT: Yes.

5 (Pause.)

6 MR. CASSADY: May it please the Court.

7 REDIRECT EXAMINATION

8 BY MR. CASSADY:

9 Q. Mr. Reed, Mr. Sayles asked you a lot of  
10 questions yesterday and today about various documents  
11 related to valuations and marketing perspectives. And  
12 it sounded like what you wanted to say was I took them  
13 into account but, and we never got to hear the but.

14 What is -- what is the but?

15 A. Well, the but is that many of these documents  
16 occurred early in the time period before the '135 patent  
17 issued in late 2002 and certainly before the '180 patent  
18 issued in March of 2007.

19 So they really can't take into account the  
20 same framework of the hypothetical negotiation, which is  
21 you understand what the patents -- that the patents, in  
22 fact, issued; you understand what's covered by the  
23 patents; and you understand that Microsoft's products  
24 would be infringing those products.

25 Q. Mr. Reed, I apologize for interrupting.

1           Is a patent that has actually issued more  
2 valuable than one that is still just an application?

3           A.    Yes.

4           Q.    Unequivocally yes, correct?

5           A.    Yes.

6           Q.    Okay.  Now, Mr. Reed, Mr. Sayles asked you a  
7 couple of questions about the various companies that --  
8 I apologize -- that SAIC talked to about the technology.

9           Do you remember that?

10          A.    Yes.

11          Q.    In fact, he pulled up PX -- or sorry -- I  
12 think it's DX3136.

13          Do you remember this?

14          A.    3136?

15          Q.    I don't believe it's in your binder, Mr. Reed.  
16 It's on the screen.

17          This was a list of parties that SAIC had  
18 communicated with regarding the technology, correct?

19          A.    Yes.

20          Q.    Now, were you here for Mr. Munger's testimony  
21 on Monday morning?

22          A.    I was, yes.

23          Q.    Did Mr. Munger identify a party to which -- or  
24 VirnetX is currently negotiating a license with?

25          A.    Yes, he did.

1 Q. What party was that?

2 A. VeriSign.

3 Q. Is VeriSign listed as a party in this document  
4 to which SAIC was negotiating with?

5 And I'll direct you to Page 4.

6 A. Yes, it is.

7 Q. So VeriSign -- it's the same VeriSign that  
8 they are working with right now to have a license is the  
9 VeriSign in this very same document that Mr. Sayles  
10 showed you as a reason why the technology is not  
11 valuable?

12 A. I'm not sure -- can you ask the question  
13 again?

14 Q. Okay. This VeriSign here is the same VeriSign  
15 that Mr. Munger is negotiating with for a license?

16 A. Absolutely, yes.

17 Q. And this is the same document that Mr. Sayles  
18 tried to show you to say that the technology wasn't  
19 valuable?

20 A. Yes.

21 Q. Okay. Now, Mr. Reed, there were a lot of  
22 questions about your methodology in this case, and I  
23 just want to make sure something is very clear.

24 What did you use or what methodology did you  
25 use in this case?



1           A.    I used the Georgia-Pacific Factor Analysis  
2 from the case we mentioned, this famous case where  
3 patent damages and reasonable royalty analysis -- the  
4 Georgia-Pacific case.

5           Q.    Now, Mr. Reed, is that just some case that you  
6 picked out of the house?

7           A.    No.  It's a case from about 30-some-odd years  
8 ago that in every case where I evaluate patent -- patent  
9 infringement damages or reasonable royalties, I use the  
10 factors from that case.  And it's true also for other  
11 people like me who do damage analysis or reasonable  
12 royalty analysis.

13          Q.    And in every case you've been in, yourself and  
14 the other experts on the other side, use the  
15 Georgia-Pacific Analysis?

16          A.    Yes.

17          Q.    In fact, the expert in this case that  
18 Mr. Sayles will likely call later, he used the  
19 Georgia-Pacific Analysis, didn't he?

20          A.    That's correct.

21          Q.    Now, Mr. Sayles also brought up a number, a  
22 wide number of technology areas that you had worked in,  
23 correct?

24          A.    Yes.

25          Q.    Okay.  Now, did you ever hold yourself out as

1 a technical expert in those fields?

2 A. No. I rely on technical experts like  
3 Dr. Jones in this particular matter, but they would have  
4 expertise on the particular technologies like water  
5 filtration or even grape-growing.

6 Q. And so what is your expertise in these cases?

7 A. I bring the expertise of economic analysis,  
8 evaluating license arrangements, evaluating royalty  
9 rates, evaluating how to treat the royalty base and  
10 calculating the amount of reasonable royalties.

11 Q. Now, Mr. Reed, you were also asked about  
12 Windows Vista, and I believe Mr. Sayles asked you a  
13 couple of questions about how this doesn't infringe by  
14 itself.

15 Do you remember that?

16 A. Yes, I do.

17 Q. But did you hear Dr. Jones' testimony about  
18 the PeerNet APIs and whether or not they're included in  
19 this box?

20 A. Yes, relating to the '180 patent.

21 Q. And what did Dr. Jones say about Vista in the  
22 box with PeerNet APIs?

23 A. That it does infringe.

24 Q. Automatically just by being in the box?

25 A. Yes. With respect to the '180 patent, that's

1 exactly right.

2 Q. Okay. Now, Mr. Reed, you were also asked  
3 about the use of DNS auto-discovery.

4 Do you remember that?

5 A. Yes.

6 Q. And I distinctly remember you saying I have  
7 information of use.

8 Do you remember that?

9 A. Yes.

10 Q. Okay. What information of use for DNS  
11 auto-discovery do you have?

12 A. Well, that was information from the deposition  
13 testimony of Microsoft's Mr. Mu Han, who testified that  
14 Microsoft itself, Hewlett-Packard, and Intel, those  
15 companies were using the DNS SRV auto-discovery when  
16 they were running the OCS programs.

17 Q. And are those small companies, sir?

18 A. No. They are very large companies that are  
19 experts in this area.

20 Q. Okay. And is the jury going to hear that  
21 testimony later today?

22 A. I understand that that's true, yes.

23 Q. Now, Mr. Reed, you also were asked questions  
24 about the In-Q-Tel agreement.

25 Do you remember that?

1 A. Yes.

2 Q. And you said that the In-Q-Tel agreement was  
3 not comparable to a Georgia-Pacific Analysis; is that  
4 correct?

5 A. Correct, yes.

6 Q. What did you mean by that?

7 A. Well, it's not taking place in a negotiation  
8 where the patents are issued. You understand what --  
9 what the patents cover; you understand that the patents  
10 are going to be infringed by the licensee. So it's very  
11 different circumstances.

12 Q. And would -- a licensee who paid for a company  
13 to develop the technology, to invent new ways to do  
14 things, would they pay the kind of monies that Microsoft  
15 would pay here for an actual true patented technology?

16 A. No. Usually, when a company is investing at  
17 that early stage, they're providing funds and they're  
18 given certain rights. And in that case, they got  
19 non-exclusive rights relating to the government use.

20 Q. And finally, Mr. Reed, you were asked about  
21 the WSPP licenses.

22 Do you remember that?

23 A. Yes, I do.

24 Q. And you said something about it's little early  
25 to tell.

1           Is that what you said?

2           A.    Yes.

3           Q.    Okay.  What did you mean by that?

4           A.    What I mean by that is a lot of the companies  
5 that have entered into those license agreements are  
6 starting to introduce their software products, and one  
7 example is the NitroDesk that I mentioned.  It has a  
8 product that it's beginning to pay royalties on.

9           Q.    And so why would the low dollar amounts on the  
10 documents that Mr. Sayles showed you about the licenses  
11 not be relevant in this case?

12          A.    Because it's just reflecting an early stage.  
13 It would be as if you were looking at the Microsoft  
14 payments in 2003 before all the continued sales led to  
15 additional royalties -- additional royalty amounts.

16          Q.    Okay.  Thank you, Mr. Reed.

17                   MR. CASSADY:  No more questions, Your  
18 Honor.

19                   THE COURT:  Thank you.  Any recross?

20                   MR. SAYLES:  No further questions, Your  
21 Honor.

22                   THE COURT:  Thank you.  You may step  
23 down.

24                   All right.  Who will be VirnetX's next  
25 witness?

1 MR. CASSADY: Your Honor, I believe we  
2 have video depositions at this point. Would you like me  
3 to list the five video deponents, or are we going to go  
4 one by one?

5 THE COURT: I'm sorry?

6 MR. CASSADY: Would you like me to list  
7 them each one out right now, or would you like me to  
8 identify them one by one as we have the video?

9 THE COURT: You have five?

10 MR. CASSADY: We have five, and I believe  
11 the time is around 20 to 30 minutes.

12 THE COURT: Total.

13 MR. CASSADY: I believe.

14 THE COURT: Okay. Go ahead and identify  
15 all of them then.

16 MR. CASSADY: The jury will be seeing the  
17 videotape depositions of Microsoft employees Mohamed  
18 Khaki, Christian Huitema, Gurdeep Singh-Pall, Henry  
19 Sanders, and Mr. Mu Han.

20 THE COURT: Okay.

21 MR. CASSADY: M-U, H-A-N.

22 THE COURT: Those are all Microsoft  
23 employees?

24 MR. CASSADY: I believe they're either  
25 Microsoft employees or former Microsoft employees.

1 THE COURT: All right. And do you have  
2 the times for your portions and the time for  
3 Microsoft's?

4 MR. CASSADY: Your Honor, I will get an  
5 accounting at the break, and I will bring it to you.

6 THE COURT: All right. Very well.

7 MR. CASSADY: Apologize for that.

8 THE COURT: All right. You may proceed.

9 MR. CASSADY: Mr. Moreno.

10 (Video playing.)

11 QUESTION: Can you please state your name  
12 and address for the record.

13 ANSWER: My name is Mohamed Jawad Khaki.  
14 My address 901 197th Avenue Southeast, Sammamish  
15 Washington 98075.

16 QUESTION: What position do you hold at  
17 Microsoft?

18 ANSWER: I'm a corporate vice president  
19 with Microsoft.

20 QUESTION: How long have you been in that  
21 position?

22 ANSWER: I believe since year 2000, March  
23 or April. I can't remember exactly what time.

24 QUESTION: What was the information that  
25 was before you when you made the decision to go forward

1 and develop the PeerNet APIs?

2           ANSWER: We -- we saw peer-to-peer  
3 applications like Napster and other things like that  
4 that were being developed.

5           QUESTION: What other applications?

6           ANSWER: For example, Napster, Newtella.

7           QUESTION: What was --

8           ANSWER: Basically, applications that  
9 were sharing information from computer to computer.

10          QUESTION: Sorry. Was the other  
11 application that you mentioned Newtella?

12          ANSWER: Yes.

13          QUESTION: Were there any other  
14 applications that you were aware of at that time?

15          ANSWER: I can't remember at this time.

16          QUESTION: So if someone said to you,  
17 Mr. Khaki, there's this thing called Napster, and it's  
18 great, and there's this thing called Newtella, and it's  
19 great, too, we should provide support so that other  
20 developers can build more applications like this using  
21 Windows, is that what was before you when you made the  
22 decision?

23          ANSWER: What was before me is the  
24 interest of our customers. Because if we really do not  
25 have a clean support in the operating system, then there



1 would be uncoordinated development for these  
2 applications, which causes many times installation  
3 nightmare in our customers' minds, right?

4           So actually, by providing the support as  
5 soon as we had the support developed, we helped mitigate  
6 potential customer issues that could arise, if these  
7 applications assume popularity.

8           QUESTION: So you developed the PeerNet  
9 APIs, because you believed that it was the interest --  
10 in the interest of your customers?

11           ANSWER: Yes.

12           QUESTION: Was it important from a  
13 security point of view to include the PeerNet APIs in  
14 the operating system?

15           ANSWER: No.

16           QUESTION: Was it a big decision to go  
17 forward with the development of the PeerNet APIs?

18           ANSWER: No.

19           QUESTION: Why not?

20           ANSWER: Because it's a small investment  
21 in the relative scheme of things.

22           QUESTION: Why is that?

23           ANSWER: You know, my group was about 6,  
24 700 people at that time, right? So this is really not a  
25 very big investment.

1 QUESTION: Is the PeerNet API a  
2 subsystem?

3 ANSWER: PeerNet API is -- is, you know,  
4 a subset of the communications APIs that are in Windows.

5 QUESTION: Are the PeerNet APIs a small  
6 subset of the communication APIs in Windows.

7 ANSWER: Yes.

8 QUESTION: When you decided to develop  
9 the PeerNet APIs, did you believe that they would be  
10 adopted quickly or that it would take a long time for  
11 the PeerNet APIs to be adopted?

12 ANSWER: I don't remember what I believed  
13 at that time, you know. But we -- I did believe that  
14 making PeerNet APIs will help our developers develop  
15 applications that will deliver a good experience for our  
16 customers.

17 QUESTION: Did you think that this would  
18 help developers in the short-term or in the long-term?

19 ANSWER: If I did not really believe that  
20 it would help develop in the short-term, there would be  
21 no reason to actually make it available out-of-band.  
22 I believed firmly that it would help our development in  
23 the short-term. This is why we actually make it out  
24 available sooner so that our customers can benefit.

25 QUESTION: So you saw that the

1 peer-to-peer application category was taking off, and  
2 you decided to develop the PeerNet APIs for that  
3 category; is that correct?

4 ANSWER: We decided to develop the  
5 PeerNet APIs to make it easier for developers to develop  
6 peer-to-peer applications for our customers.

7 QUESTION: Did you have any alternatives  
8 to the PeerNet APIs at the time you decided to develop  
9 them?

10 ANSWER: I believe I've already  
11 answered -- I believe I've already answered this before,  
12 Counsel.

13 QUESTION: You can go ahead and tell me  
14 again.

15 ANSWER: You can repeat the question.  
16 And I remember saying that we recognized this was an  
17 important area, and we're innovators, so we innovated,  
18 and we did what we did.

19 QUESTION: What alternatives did you  
20 consider?

21 ANSWER: What alternatives do you think  
22 we should have considered?

23 I mean, I don't know what you are trying  
24 to ask me.

25 QUESTION: Did you consider any

1 alternatives to the PeerNet APIs when you considered  
2 that proposal?

3 ANSWER: I personally did not consider  
4 it.

5 QUESTION: So as far as you were  
6 concerned, there were no alternatives to the PeerNet  
7 APIs; is that correct?

8 ANSWER: As far as I was concerned, there  
9 was a proposal made to develop, and I approved that  
10 proposal.

11 QUESTION: That's not my question. My  
12 question is: As far as you were concerned, there were  
13 no alternatives to the development of the PeerNet APIs;  
14 is that correct?

15 ANSWER: As far as I was concerned, there  
16 was a proposal made to me of developing PeerNet APIs,  
17 and I approved that proposal. And I don't recall any  
18 other proposals being made to me for consideration in  
19 that area.

20 QUESTION: When you were considering  
21 whether to develop the PeerNet APIs, did you not take  
22 into account whether Microsoft would be the first  
23 company to provide a platform for peer-to-peer  
24 applications?

25 ANSWER: As I explained to you before

1 that what was the consideration for us to develop  
2 PeerNet APIs, perhaps I should take a couple of minutes  
3 to elaborate on what was in mind, if it's still not  
4 clear.

5           You know, there were applications being  
6 developed. Napster, Newtella, and all these things were  
7 coming out. And when you have these disparate  
8 applications coming out, they create a variety of  
9 support issues, potentially, for our customers, because  
10 there are inconsistent ways to implement some functions,  
11 not, you know, homogenized way of functionality.

12           So by having a standard set of APIs to  
13 support these emerging applications in the operating  
14 systems that they could all use, then it results in a  
15 good experience for our customers.

16           Our customers then could count on  
17 applications developed to a common infrastructure, the  
18 PeerNet infrastructure, and not -- and do away with the  
19 installation nightmares or version incompatibilities, et  
20 cetera, et cetera.

21           So our primary consideration really was  
22 to make sure that we have a good support in the  
23 operating system that enables third parties to develop  
24 applications written to a consistent set of interfaces  
25 so they don't create headache for our customers when

1 they use Windows.

2 (End of video clip.)

3 (Video playing.)

4 QUESTION: Can you please state your full  
5 name and address for the record.

6 ANSWER: My name is Christian Huitema.  
7 My address is 9645 Northeast 42nd Street in Clyde Hill,  
8 Washington.

9 QUESTION: What position do you hold at  
10 Microsoft?

11 ANSWER: I'm a distinguished engineer at  
12 Microsoft, and currently, I'm in charge of a small team  
13 that investigates new products.

14 QUESTION: What team are you in charge  
15 of?

16 ANSWER: It's -- the team is called  
17 the -- it's a part of what we call the Communication  
18 Innovation Center.

19 QUESTION: How long have you been the  
20 head of this team?

21 ANSWER: I am the head of that team -- I  
22 am the head of a small portion of that team for one  
23 year.

24 QUESTION: Was it a design goal of  
25 Grouping to prevent unauthorized people from

1 participating in group communications?

2           ANSWER: Yes, that only the authorized  
3 members can participate in the group.

4           QUESTION: Why is it important that only  
5 the authorized members can participate in the group?

6           ANSWER: We are providing a tool to  
7 application developers. Application developers make an  
8 assessment of whether this kind of provision is  
9 important or not for the application.

10           QUESTION: Can you tell by looking at a  
11 secure peer name that it must be resolved by PNRP rather  
12 than DNS?

13           ANSWER: Oh, yes. They have a very, very  
14 different syntax. A PN -- a DNS name will be something  
15 like ww.microsoft.com (sic), whereas a peer name -- a  
16 secure peer name, in particular, will include a sequence  
17 of 32 hexadecimal digits.

18           QUESTION: Is PNRP a nonstandard domain  
19 name service?

20           ANSWER: I would not use that term,  
21 because to -- we generally think of a non-standard  
22 domain name service as something that uses the DNS  
23 technology using names that are not standard, while PNRP  
24 does not use a DNS technology and does not really -- and  
25 does use a different set of names than the names used in

1 the DNS.

2           QUESTION: When you receive a response  
3 from a request to resolve a secure peer name by PNRP, do  
4 you have a high level of assurance that the response is  
5 genuine?

6           ANSWER: The answer is yes.

7           QUESTION: In the scenario where we're  
8 talking about a peer who has been invited to join the  
9 group, when that peer has received a response to his  
10 request to resolve the secure group name, will the peer  
11 be able to join the group?

12           ANSWER: The peer will be able to contact  
13 a member of the group, present the credential as were  
14 present in the invitation, present additional credential  
15 that are needed to validate the invitation, and if the  
16 verification of those credentials is accepted, if the --  
17 if the receiving peer can validate those credentials,  
18 then the peer will be accepted, but only then.

19           QUESTION: Once the peer has joined the  
20 group, will the peer then send a request to the group  
21 member that it contacted in order to join the group for  
22 the current set of records for the group?

23           ANSWER: Yes. That's what the protocol  
24 does. There is a synchronization protocol at that time  
25 to make sure that every member of the group has an



1 up-to-date copy of the records.

2 (End of video clip.)

3 (Video playing.)

4 QUESTION: Can you please state your name  
5 and address for the record.

6 ANSWER: Yes. My name is Sandeep Kishan  
7 Singhal. My address is 731 16th Avenue West in  
8 Kirkland, Washington.

9 QUESTION: So what is your position at  
10 Microsoft?

11 ANSWER: I'm currently director of  
12 program management for the Windows Networking Group.

13 QUESTION: And why were the PeerNet APIs  
14 developed as part of the Advanced Networking Pack for  
15 Windows XP?

16 ANSWER: We believed that, at the time,  
17 providing new APIs and the functionality that underlies  
18 those APIs would create new opportunities to create  
19 applications that would excite users and potentially  
20 drive deeper penetration and adoption and use of the  
21 Windows operating system by end users.

22 QUESTION: So does that mean that  
23 Microsoft created PNRP and Grouping so that developers  
24 would create applications using PNRP and Grouping, which  
25 would in turn cause more users to make use of Windows in

1 order to use those applications?

2           ANSWER: We believe -- the goal was to  
3 ensure that -- to provide incremental functionality to  
4 the Windows platform so that the developers could use  
5 PNRP and Grouping in combination with other technologies  
6 and functionality that are part of the Windows platform  
7 in order to drive and encourage the use of Windows by --  
8 by end users.

9           QUESTION: Who does Microsoft market PNRP  
10 and Grouping to?

11           ANSWER: Microsoft does not market PNRP  
12 and Grouping as those are not purchasable products that  
13 any audience can actually buy as a -- as a standalone  
14 product.

15           QUESTION: When Microsoft markets Windows  
16 based on PNRP and Grouping, who does Microsoft market  
17 to?

18           ANSWER: Microsoft does not market  
19 Windows on the basis of PNRP and Grouping as it does  
20 not -- as PNRP and Grouping are not features that end  
21 users or IT pros, who are the audience for Windows  
22 marketing, these are not features that those audiences  
23 would use directly.

24           QUESTION: How does Microsoft evangelize  
25 PNRP and Grouping?

1                   ANSWER: Microsoft makes those APIs  
2 available to developers in the operating system  
3 through -- by delivery in the operating system, provides  
4 sample code and libraries as part of its software  
5 development kits, provides a public website and  
6 documentation on MSDN and TechNet, and members of my  
7 team have spoken at various conferences to developer  
8 audiences to discuss the functionality that is provided  
9 by the APIs.

10                   QUESTION: Does Microsoft make any other  
11 efforts to evangelize PNRP and Grouping?

12                   ANSWER: Not that I'm aware of.

13                   (End of video clip.)

14                   (Video playing.)

15                   QUESTION: Can you please state your name  
16 and address for the record?

17                   ANSWER: Yes. I'm Sandeep Kishan  
18 Singhal. I live at 731 16th Avenue West in Kirkland,  
19 Washington.

20                   QUESTION: Throughout the development of  
21 Grouping and PNRP, what did Microsoft do to make sure  
22 that it wasn't infringing on third-party patents?

23                   ANSWER: As a matter of engineering of --  
24 of our engineering processes, we do not -- we do not --  
25 I'm not aware of any steps that we've taken to design

1 around existing patents.

2                   QUESTION: Did you do a review of  
3 existing patents to see if you might be infringing on  
4 third-party patents?

5                   ANSWER: I'm not aware of any such  
6 analysis.

7                   QUESTION: Is it not part of Microsoft's  
8 standard procedure to review third-party patents to make  
9 sure that Microsoft doesn't infringe on third-party  
10 patent rights?

11                   ANSWER: I'm not aware of any procedure  
12 that involves the review of third-party patents as part  
13 of the engineering process.

14                   QUESTION: Were there any efforts that  
15 you made during the development of P2P and PNRP to see  
16 to it that Microsoft didn't infringe on any third-party  
17 patent rights?

18                   ANSWER: Could you repeat the question,  
19 please?

20                   Are you referring to the PeerNet APIs in  
21 this question?

22                   QUESTION: Yes.

23                   ANSWER: And when -- when you are  
24 referring to the development, are you referring to the  
25 initial development or all development?

1                   QUESTION: All development.

2                   ANSWER: I can only speak to the time  
3 that I have spent with the PeerNet APIs since I have  
4 managed the teams that have been doing the design and  
5 development of the PeerNet APIs.

6                   So in the time that I have managed the  
7 team, I am not aware of any analysis -- any such  
8 analysis related to the PeerNet APIs.

9                   QUESTION: Weren't you concerned about  
10 potentially infringing on third-party patents?

11                   ANSWER: I'm not aware of any engineering  
12 policy that -- that includes performing such research or  
13 analysis, and therefore, I adhered to the engineering  
14 policies that were in place.

15                   QUESTION: Are you happy to let your  
16 engineers develop whatever products they're instructed  
17 to develop regardless of whether those products infringe  
18 on the patents of others?

19                   ANSWER: As I'm -- as part of the  
20 engineering process, we are not -- there is no step that  
21 I'm aware of that involves engineers reviewing  
22 third-party patents, and therefore, I do not have any  
23 knowledge as to whether or not the features that my  
24 engineering team is developing are -- do or do not  
25 involve third-party patents.

1                   QUESTION:  Isn't it part of your duty as  
2 the manager of a development team to make sure that your  
3 team doesn't develop software that infringes the patents  
4 of others?

5                   ANSWER:  It is my duty as an engineering  
6 manager to ensure that my team is delivering features  
7 and scenarios that meet the needs of our customers and  
8 partners in the ecosystem, to ensure that -- that those  
9 features and scenarios are delivered with the  
10 appropriate quality, and to ensure those features and --  
11 and scenarios are delivered in conformance with our  
12 stated schedules and release criteria.

13                   QUESTION:  Is it outside of your duty as  
14 the manager of a development team to make sure that your  
15 team does not develop software that infringes the  
16 patents of others?

17                   ANSWER:  I'm not aware of any step in our  
18 standard engineering process that includes the  
19 engineering team doing reviews of third-party patents.

20                   (End of video clip.)

21                   (Video playing.)

22                   QUESTION:  Mr. Sanders, have you ever had  
23 your deposition taken before?

24                   ANSWER:  Yes.

25                   QUESTION:  What is your current position?

1                   ANSWER: I run the development group  
2 responsible for the core Windows networking  
3 technologies.

4                   QUESTION: How long have you had that  
5 position?

6                   ANSWER: This position I'm in now,  
7 approximately since October of 2006.

8                   QUESTION: That's at Microsoft  
9 Corporation?

10                  ANSWER: Yes.

11                  QUESTION: At what stage, if at all, in  
12 the development process is there any consideration given  
13 to whether third-party patent rights might be implicated  
14 by your development of --

15                  UNIDENTIFIED ATTORNEY: Objection.

16                  QUESTION: -- a new product?

17                  ANSWER: We don't look at patents as part  
18 of our product development. We don't look at  
19 third-party patents, I should say. We may file some  
20 patents as a result of ours.

21                  QUESTION: In that process, from start to  
22 product release, is there some step in that process  
23 where an assessment is done as to whether the product  
24 under development may infringe a third-party's patent  
25 rights? And I'm asking just for a yes or no answer.

1 ANSWER: No.

2 (End of video clip.)

3 (Video playing.)

4 QUESTION: Good morning, Mr. Han.

5 ANSWER: Good morning.

6 QUESTION: Do you understand, sir, that  
7 you've been designated as a witness to testify on behalf  
8 of Microsoft Corporation today?

9 ANSWER: Yes.

10 QUESTION: Okay. Sir, you have said that  
11 Microsoft has found that customers are not using the RTC  
12 API; is that right?

13 ANSWER: Yes. Very few customers use it.

14 QUESTION: When you say very few, how  
15 many?

16 ANSWER: I remember AOL Messenger was  
17 using it at one time, and then they moved away from it.

18 QUESTION: And when was that?

19 ANSWER: They used it around 2002, 2003,  
20 and after that, I believe they moved away.

21 QUESTION: On what basis do you say that?

22 ANSWER: I know they switched it to a  
23 competing library from Global IP Sound. It was around  
24 that timeframe, but I cannot remember the exact year.

25 QUESTION: Are you aware of any other



1 customers that have ever used the RTC API?

2 ANSWER: There is one more. The name is  
3 Dessault.

4 QUESTION: Are they still using the RTC  
5 API?

6 ANSWER: I think they are.

7 QUESTION: Are you aware of any other --  
8 any others that are using the RTC API?

9 ANSWER: No.

10 QUESTION: Why aren't many customers  
11 using the RTC API, according to Microsoft?

12 ANSWER: Our main guess is that the RTC  
13 API requires a back-end system, such like LCS and OCS.  
14 Without these back-end systems, it's not very useful.

15 QUESTION: I just want to make sure that  
16 I understand. The -- is the RTC API still being made  
17 available?

18 ANSWER: Yes.

19 QUESTION: Why?

20 ANSWER: For customers like Dessault.  
21 They started using it. We cannot pull the plug under  
22 them.

23 QUESTION: Microsoft is still making the  
24 RTC API available via download from Microsoft's website,  
25 correct?

1                   ANSWER:  Yes.

2                   QUESTION:  So why is Microsoft still  
3 making the RTC API available via download for other  
4 customers?

5                   ANSWER:  We still hope that other  
6 customers may pick it up and then write their  
7 applications taking advantage of LCS/OCS back-ends.

8                   QUESTION:  Why does Microsoft have that  
9 hope?

10                  ANSWER:  Traditionally, Microsoft is a  
11 platform company.  We always want to offer platforms for  
12 other customers to either fill holes in our offering for  
13 things we do not do or to improve the integration with  
14 their existing systems.

15                  QUESTION:  It's Microsoft's hope that  
16 customers will, in the future, write applications to  
17 make use of the RTC API?

18                  ANSWER:  Yes, with -- if LCS and OCS get  
19 more popular in enterprise space, we're hoping that more  
20 developers may use it.

21                  QUESTION:  And how does customer use of  
22 the RTC API help Microsoft?

23                  ANSWER:  If they use this API to have  
24 better integration of their line of business  
25 applications with OCS or LCS, it benefits the final

1 customer, and customer satisfaction will benefit  
2 Microsoft.

3 QUESTION: How?

4 ANSWER: How? Satisfied customers will  
5 always come back to ask for more.

6 QUESTION: So is it Microsoft's belief  
7 that customer use of the RTC API will improve sales by  
8 Microsoft?

9 ANSWER: That's a hope.

10 QUESTION: So earlier you testified about  
11 the best immediate goal for the functionality in the RTC  
12 API, which is now in the UCC API. Do you remember that?  
13 You used the phrase best immediate goal?

14 ANSWER: Could you clarify best of media?

15 QUESTION: Best immediate goal. Do you  
16 remember testifying --

17 ANSWER: Oh, best immediate goal. Yes, I  
18 remember that.

19 QUESTION: So what is the long-term goal  
20 at Microsoft for the functionality of the RTC API that  
21 is now migrated into the UCC API?

22 ANSWER: Microsoft, as I -- as I said, is  
23 a platform company. We always want to have a portfolio  
24 of platforms to please our developer community.

25 Overall, that brings goodwill to us and

1 also better business for us.

2 QUESTION: How about AOL? Do you know  
3 whether AOL made use of the DNS SRV capability in the  
4 RTC API?

5 ANSWER: I know they don't.

6 QUESTION: Do you know when Microsoft  
7 began working on using DNS SRV requests in the RTC API  
8 to automatically provision clients?

9 ANSWER: The first time I can remember is  
10 LCS 2003.

11 QUESTION: Can you be more specific than  
12 that?

13 ANSWER: So in LCS 2003, we allowed the  
14 Admins to both do manual provisioning and auto  
15 provisioning of the client. And that involves using the  
16 SRV record for auto provisioning.

17 QUESTION: And when did that develop and  
18 begin?

19 ANSWER: That development began in around  
20 2001.

21 QUESTION: Can you describe why TLS is  
22 the default setting for server-to-server communications?

23 ANSWER: Because we believe the product  
24 should be secure by default. That's why we chose TLS as  
25 the default setting for server-to-server communication.

1                   QUESTION: Why do you believe, as a  
2 company, Microsoft, that the -- the communications  
3 should be secure by default?

4                   ANSWER: Overall, Microsoft is trying to  
5 develop applications that people can securely  
6 communicate with each other, because we recognize  
7 security is a customer demand. That's why we want to  
8 design our software to be secure by default.

9                   QUESTION: Has customer demand for secure  
10 communications driven Microsoft's development of  
11 products making use of TLS in these OCS and LCS server  
12 scenarios?

13                   ANSWER: Security is actually a big  
14 topic. We know customers demand security. We have done  
15 a lot of work to make sure our software is secure, both  
16 from authentication and encryption, and also robust from  
17 attack point of view.

18                   We did a lot of work to make sure we ship  
19 secure product out of the gate. TLS is only one of the  
20 tools we use to meet that goal.

21                   QUESTION: Focusing just on the use of  
22 the DNS SRV records capability, from the user's  
23 perspective, okay, when Communicator or Messenger is  
24 communicating with OCS or LCS servers, are TLS  
25 connections transparently created in response to DNS SRV

1 requests?

2                   ANSWER: From the user's perspective, all  
3 the four roles I mentioned earlier, this operation is  
4 transparent.

5                   (End of video clip.)

6                   MR. CASSADY: Your Honor, we have an odd  
7 scenario. We've got six depositions that were actually  
8 not videotaped. So with your permission, I'd like to  
9 put Mr. Caldwell on the stand --

10                  THE COURT: All right.

11                  MR. CASSADY: -- to read the answers, and  
12 I'll read the questions to them.

13                  THE COURT: All right. Very well.

14                  MR. CASSADY: May I explain to the jury  
15 that process?

16                  THE COURT: Yes, you may, but first, do  
17 you have your times for your videos?

18                  MR. CASSADY: One moment, Your Honor.  
19 May I confer with my colleagues?

20                  THE COURT: Yes, uh-huh.

21                  (Counsel confer.)

22                  MR. CASSADY: Your Honor, 22 minutes for  
23 VirnetX, and 8 minutes for Microsoft.

24                  THE COURT: All right. Thank you.

25                  MR. CASSADY: And, Your Honor, for the

1 reading of the depositions, we'd like to wait for the  
2 transcript to determine the time to split up for  
3 Microsoft and VirnetX --

4 THE COURT: Okay.

5 MR. CASSADY: -- with your permission.

6 THE COURT: All right.

7 MR. CASSADY: Ladies of the Jury, this is  
8 a little bit of an odd situation. Most of the time, we  
9 try to videotape our depositions, but a few of the  
10 depositions in this case were not videotaped.

11 So you don't know how long I've wanted to  
12 do this with Mr. Caldwell, but I've got him on the  
13 stand, and he's going to read the answers to the  
14 questions I ask him.

15 MR. CALDWELL: It's on Microsoft  
16 employees.

17 MR. CASSADY: Yes.

18 So Mr. Caldwell is various Microsoft  
19 employees. From the transcript, I think you'll  
20 understand.

21 (Deposition of Ryan Kim.)

22 QUESTION: Please state your name and  
23 address for the record.

24 ANSWER: Ryan Kim, 1149 268th Way  
25 Southeast, Sammamish, Washington, 98075.

1 QUESTION: What position do you hold at  
2 Microsoft?

3 ANSWER: Software design engineer.

4 QUESTION: How long have you been in that  
5 position?

6 ANSWER: In current position, I think  
7 with the current team, about two years.

8 QUESTION: When you were developing  
9 Windows Meeting Space, were you required to examine  
10 patents of third parties to make sure that your product  
11 wasn't infringing on those patents?

12 ANSWER: We were actually told  
13 expressly -- excuse me.

14 We were actually expressly told not to  
15 look at patents.

16 QUESTION: You were told not to look at  
17 patents during the --

18 ANSWER: Development of Meeting Space.

19 QUESTION: Is that correct?

20 ANSWER: Yes.

21 QUESTION: Who told you not to look at  
22 patents during the development of Meeting Space?

23 ANSWER: It's a pretty well-known  
24 practice inside Microsoft for developers.

25 QUESTION: Is there a handbook or a --



1 some other document that states that developers are not  
2 supposed to look at patents?

3           ANSWER: I'm sure it's written down  
4 somewhere. I can't remember where that could be. I  
5 remember -- I just remember being told verbally that  
6 should be the case.

7           MR. CASSADY: This is the second  
8 deposition.

9           (Deposition of Mu Han.)

10          QUESTION: Can you please state your name  
11 and address for the record?

12          ANSWER: My name is Mu Han; first name  
13 M-U; last name, H-A-N. My home address is 7204 153rd  
14 Avenue Northeast, Redmond, Washington, 98052.

15          QUESTION: Do you understand that the  
16 testimony you give today is on behalf of Microsoft and  
17 that you speak for Microsoft?

18          ANSWER: Yes.

19          QUESTION: What was the earliest version  
20 of the RTC API to use DNS service records for creating  
21 TLS connection?

22          ANSWER: So first, we do not use SRV  
23 records to create TLS connections. We use SRV records  
24 to discover the servers.

25                 The first version of RTC API, it will be

1 the API we shipped together with LCS 2003.

2 QUESTION: How is it that the use of DNS  
3 server records makes customers happy?

4 ANSWER: So say if we do not use SRV  
5 record at all, the client can query a record in the  
6 certain format. The format we use SIP.domain.

7 If the admin configures the server in  
8 this way, if the name of a server is -- for example,  
9 SIP.Intel.com, the OC and OCS will just perform just as  
10 well.

11 However, if admin feels like it's too  
12 limiting to name their server as SIP.domain, they have  
13 two choices -- three choices.

14 One choice is that they can tell the --  
15 every user to say: You need to manually configure the  
16 server name; for example, SIP.NorthAmerica.Intel.com.  
17 Then every user needs to type in the server name in the  
18 UI in order to connect.

19 Or the admin may have to push registry  
20 file to every client so that the user does not have to  
21 input this name, but the client will remember this name.  
22 And the third option is that they can ask us to support  
23 DNS record. So if we do not offer this option, they  
24 have to go through some configuration on the client to  
25 make this thing happen.

1 QUESTION: Does Microsoft itself use the  
2 OCS products?

3 ANSWER: Yes.

4 QUESTION: When Microsoft employs OCS,  
5 does Microsoft make use of the DNS service records  
6 functionality?

7 ANSWER: Yes.

8 QUESTION: Does Microsoft recommend to  
9 customers that they also use the DNS service record  
10 functionality as Microsoft does?

11 ANSWER: It's a feature we spent time to  
12 enable in the product. We definitely want people to use  
13 it. Yes, I -- we would recommend it -- excuse me -- we  
14 would recommend people to use it.

15 QUESTION: Did Microsoft always use the  
16 OCS products with the DNS service record functionality  
17 for initiating SI -- SIP connections?

18 ANSWER: We always used the DNS record to  
19 discover the servers.

20 QUESTION: Did Microsoft use LCS 2005  
21 with the DNS service records functionality?

22 ANSWER: Yes.

23 QUESTION: Last time when we deposed you  
24 for your 30(b)(6), you said that at any given time,  
25 Microsoft has about 50,000 people actively using LCS

1 clients; is that correct?

2 ANSWER: There might be more now using  
3 OC.

4 QUESTION: How many more would you expect  
5 there to be?

6 ANSWER: I don't know. I have to  
7 double-check the latest usage report. Maybe around 80K  
8 or even more.

9 QUESTION: By 80K, do you mean 80,000 or  
10 more?

11 ANSWER: Yes.

12 QUESTION: Who are Microsoft's biggest  
13 customers, as far as OCS products are concerned?

14 ANSWER: There are many big customers. I  
15 don't know who would be the biggest.

16 QUESTION: Who are the many big customers  
17 that you are referring to?

18 ANSWER: For example, HP is a big  
19 customer. Intel is a big one. The U.S. Government is a  
20 big one. Merrill Lynch, UBS, Shell. There are many  
21 others.

22 QUESTION: Can you name some of the  
23 others?

24 ANSWER: Lionbridge, Deloitte & Touche,  
25 Boeing, Global Crossing, Sprint, Swisston. I don't

1 remember others, but I can think of them up.

2 QUESTION: Right. But it happens that  
3 using DNS service records is the way that Microsoft  
4 does -- does use to discover its service, right?

5 ANSWER: That's correct.

6 QUESTION: And do Microsoft customers  
7 also use the DNS service records to discover their  
8 servers?

9 ANSWER: I know some of them do --

10 QUESTION: Which ones -- I apologize.

11 ANSWER: -- but I don't know how many of  
12 them will use it.

13 QUESTION: Which ones do?

14 ANSWER: I know HP uses it. I know Intel  
15 does. I have not checked with any others.

16 MR. CASSADY: And just for the record,  
17 we're starting the third deposition. And this --

18 MR. CALDWELL: Also Mu Han.

19 MR. CASSADY: Also Mu Han.

20 (Deposition of Mu Han.)

21 QUESTION: Let me direct your attention  
22 to topic 31 of the Seventh Notice. For the record,  
23 topic 31 states: Any analysis by Microsoft relating to  
24 modifications to Office Communicator that have been  
25 consider or implemented relating to design-arounds for

1 any of the asserted patents.

2           What analysis has Microsoft done relating  
3 to modifying Office -- OCS products as design-arounds  
4 for the asserted patents?

5           ANSWER: Excuse me. Are you asking about  
6 No. 7?

7           QUESTION: No. 31.

8           ANSWER: Oh, 31. I'm sorry.

9           So I don't know exactly what the asserted  
10 patents are, so it would not be possible for me to  
11 answer this question.

12           QUESTION: So what did you do to prepare  
13 on topic 31?

14           ANSWER: I just -- based on my knowledge  
15 in this area specifically, because through all this  
16 reading the document, I know you are focusing on SRV  
17 record. I know in this space, we have not done anything  
18 regarding any patents.

19           QUESTION: Did you do anything else?

20           ANSWER: So based on our knowledge at  
21 that time, there are already other products using SRV  
22 record, and SRV mechanism has been out there for awhile,  
23 so we didn't bother.

24           MR. CASSADY: And this is the next  
25 deposition of Rajesh Jhavar.

1 (Deposition of Rajesh Jhawar.)

2 QUESTION: Good morning, sir. If I could  
3 have you state your name for the record, please.

4 ANSWER: Sure. Rajesh Jhawar.

5 QUESTION: Could you spell that.

6 ANSWER: R-A-J-E-S-H is the first name,  
7 and the last name is J-H-A-W-A-R.

8 QUESTION: What's your current title?

9 ANSWER: It's director of finance.

10 QUESTION: What does Exhibit 22 reflect  
11 relating to the ship to and ship from locations?

12 ANSWER: This would represent all the  
13 licenses which were billed in the United States.  
14 Different channels would be treated differently.  
15 For the FPP, it would be all the units that are sold in  
16 the United States.

17 For the VL, it would be all the licenses  
18 that are -- all the customers that are located in the  
19 United States and the portion of licenses that are  
20 attributed to their employees in the United States when  
21 the contract with them was set.

22 So when the contract with the VL customer  
23 is signed, you identify how many of their employees are  
24 based out of the United States. So it represents those  
25 numbers of licenses for the VL customers.

1           For the OEM system builder and named  
2 customers, it would be the number of licenses that they  
3 purchased in the United States.

4           For MNA, which is where a majority of  
5 other covered accounts -- I'm sorry -- which is where  
6 the majority of the difference comes in, it is the  
7 location of the -- of the OEM that is being billed.  
8 So all the Dell licenses, the Hewlett-Packard licenses  
9 would show up in the United States regardless of where  
10 that license actually was used. Dell could buy an  
11 authorized -- Dell could buy from an authorized  
12 replicator in China, but that would still show up as a  
13 license shipped out of the United States in this  
14 schedule.

15           QUESTION: And the covered OEM products,  
16 how are those handled with respect to Exhibit 22?

17           ANSWER: It's essentially the same. It  
18 is where the OEM is billed, covered OEM. The biggest  
19 difference is, they have locations all across the world,  
20 and so the computer may end up landing anywhere in the  
21 world.

22           You would see a much larger number in the  
23 U.S. or in Japan, which is where a number of other  
24 covered OEMs that -- are based or maybe China, which is  
25 where another is based. You would see a tendency to see



1 more licenses showing up in the geographies where there  
2 is a presence of large OEMs.

3 QUESTION: Let me have you take a note --  
4 a look at the last page of Exhibit 22.

5 There's a few notes, and I want to direct  
6 you to the third note that says: In schedules with U.S.  
7 in the title, U.S. revenue and licenses are defined by  
8 the attributes credited worldwide area in MS sales.

9 Do you see that?

10 ANSWER: I do.

11 QUESTION: What is the attribute credited  
12 worldwide area in MS sales?

13 ANSWER: So the attribute credited area  
14 would indicate where the revenue is credited in our MS  
15 sales revenue database.

16 And as I -- excuse me -- and as I had  
17 mentioned before, in the case of covered OEMs, largely,  
18 and to a certain extent, named, but primarily covered,  
19 what is credited for the United States is not  
20 necessarily what is produced, consumed, or shipped in  
21 the United States.

22 QUESTION: How would you be able to break  
23 that down? Where would you look?

24 ANSWER: We -- we don't have a reasonable  
25 basis for estimating breakouts of that.

1 MR. CASSADY: And this is the next  
2 deposition.

3 (Deposition of Vadim Eydelman.)

4 QUESTION: Can you please state your name  
5 and address for the record.

6 ANSWER: My name is Vadim Eydelman, and  
7 my address is 1628 West Lake Sammamish Parkway  
8 Northwest, Bellview, Washington, 98008.

9 QUESTION: Are you familiar with DNS  
10 service records?

11 ANSWER: Yes, I am.

12 QUESTION: Are those -- those also called  
13 DNS SRV records?

14 ANSWER: Yes, they are.

15 QUESTION: Does LCS make use of DNS SRV  
16 records?

17 ANSWER: Yes.

18 QUESTION: What does it use DNS SRV  
19 records for?

20 ANSWER: DNS SRV record used to discover  
21 the service -- a server. Sorry.

22 QUESTION: Does LCS 2003 make use of DNS  
23 SRV records?

24 ANSWER: LCS server does not make use of  
25 the records; it's the client it communicates to, LCS

1 2003 server. Yeah, it was making use of server records.

2 QUESTION: Do clients connecting to LCS  
3 2005 also make use of DNS SRV records?

4 ANSWER: Yes.

5 QUESTION: Do clients connecting to LCS  
6 2005 SP1 make use of DNS SRV records?

7 ANSWER: Yes.

8 QUESTION: Do clients connecting to OCS  
9 2007 make use of DNS SRV records?

10 ANSWER: Yes.

11 QUESTION: Do clients connecting to OCS  
12 2007 R2 make use of DNS SRV records?

13 ANSWER: Yes.

14 QUESTION: Are all of the clients that  
15 are connecting to the various LCS and OCS servers using  
16 DNS SRV records in the same way?

17 ANSWER: Oh, all the clients that I know  
18 about do. There may be -- other clients that I don't  
19 know about may be using some other methods and also is  
20 one of the methods may be server can be discovered.  
21 There are other methods do the same.

22 QUESTION: So Windows Messenger would use  
23 DNS SRV records to connect to an LCS 2003 server in the  
24 way that you described?

25 ANSWER: It can use DNS SRV records, but

1 it can use other means of doing the same.

2 QUESTION: Is there any change in the way  
3 that Windows Messenger would use DNS SRV records to  
4 connect to an LCS 2003 server and an LCS 2005 server?

5 ANSWER: At some point in time, we  
6 introduce new records. We use separate records for  
7 internal connections and separate records for external  
8 connections, and that would be the difference.

9 I don't remember whether we introduced  
10 this new record in LCS 2005 SP1 or OCS 2007 R2. So that  
11 was the change.

12 QUESTION: Does that change the -- the  
13 functionality that DNS SRV records perform?

14 ANSWER: No, it does not change the major  
15 function, the ability to discover the server.

16 MR. CASSADY: And this is the next  
17 deposition.

18 (Deposition of Matt Rossmeissl.)

19 QUESTION: Good morning. If I could  
20 first have you state your name for the record.

21 ANSWER: Matt Rossmeissl.

22 QUESTION: Any reason why you can't  
23 testify fully today?

24 ANSWER: No.

25 QUESTION: Okay. And we'll get into the

1 specifics a little bit later of what is meant by accused  
2 Microsoft software, but, generally, you do have  
3 knowledge of production, importation, exportation, and  
4 distribution channels related to some Microsoft  
5 software; fair to say?

6 ANSWER: Yes, that's fair to say.

7 QUESTION: So, presumably, at some point,  
8 Microsoft sales force is talking directly with a  
9 customer, and they reach some sort of agreement. Is  
10 that how it works?

11 ANSWER: Yes.

12 QUESTION: Then what happens? Are they  
13 still -- are there still steps that are taken before  
14 your organization becomes involved in the transaction?

15 ANSWER: At the time that a customer  
16 decides to do the purchase, they will -- for the  
17 Enterprise Agreement Program that we're speaking about,  
18 there will be an agreement and order form which the  
19 customer and sales team work on together, and they will  
20 involve the operations team sometimes while they're in  
21 the process of creating that -- before it's finalized  
22 and executed by the customer.

23 And in all cases, after it has been  
24 executed by the customer, and then -- then sent to the  
25 regional operating center for -- for processing.

1                   QUESTION:  What does the regional  
2 operating center do once it receives -- once it receives  
3 that completed agreement?  And I'm talking still about  
4 the Enterprise Agreement Program.

5                   ANSWER:  There are many things that we  
6 do.  We will check the agreement for completeness, make  
7 sure that it has all of the fields that we need in order  
8 to enter it into the systems and record it.

9                   If there has been any level of what we  
10 call field empowerment, which is the flexibility that  
11 the field has to make deals in order to meet the needs  
12 of a customer, we ensure that those have the appropriate  
13 level of authorization and sign off internally, and we  
14 will then enter it into our licensing and billing system  
15 to record the contract and the transaction and make the  
16 software available to the customer and bill the  
17 customer.

18                   QUESTION:  You testified that you make  
19 the software available to the customer after you've  
20 entered the order into the licensing and billing system.

21                   How is the software made available to the  
22 customer?  And, again, I'm still talking with respect to  
23 the Enterprise Agreement Program.

24                   ANSWER:  The software is made available  
25 to the customer in the Enterprise Agreement Program by

1 put -- by making the software available on download  
2 sites. And depending on what the customer has elected  
3 with physical CD and DVD-based software, that is shipped  
4 to them.

5 QUESTION: Do customers sometimes elect  
6 not to get the physical CDs or DVDs and opt only to  
7 download the software?

8 ANSWER: Yes. Sometimes customers in the  
9 Enterprise Agreement Program elect to do that.

10 QUESTION: How many regional operating  
11 centers or ROCs are there currently within your  
12 organization?

13 ANSWER: The three main regional  
14 operating centers in my organization are -- was the  
15 question how many there are?

16 QUESTION: Yes.

17 ANSWER: There's three.

18 QUESTION: Where are they located?

19 ANSWER: In Dublin, Ireland, Nevada, and  
20 Singapore. There are other entities that we call  
21 regional operating centers in some other places where we  
22 will do processing, but those are the -- those are the  
23 three main ones.

24 QUESTION: How do you determine which of  
25 the three main centers that you have just identified

1 receive the executed customer agreements?

2 ANSWER: We don't decide that. The  
3 customer decides that.

4 QUESTION: So the customer places the  
5 order with one of the operating centers, and then the  
6 operating center takes it from there with the steps you  
7 have described?

8 ANSWER: For the Enterprise Agreement  
9 Program, customers will decide where they want to do the  
10 purchasing activity in -- through which of the three  
11 regions that I mentioned, and they will then send the  
12 agreement to that regional operating center.

13 QUESTION: What about with respect to the  
14 media that is ordered through the ROC in Nevada? Where  
15 is that manufactured and shipped from?

16 ANSWER: For the Enterprise Agreement  
17 Program, orders that are placed with the Americas  
18 Operations Center in Nevada.

19 That software is manufactured in Puerto  
20 Rico and fulfilled from there. It's fulfilled from  
21 there to a disk -- to a separate -- a second  
22 distribution and manufacturing center, which is a vendor  
23 facility in the United States, and then distributed to  
24 the customer.

25 QUESTION: When you say it's fulfilled in



1 Puerto Rico, what do you mean by that?

2           ANSWER: It's the -- for the enterprise  
3 agreement program, orders that go through the Americas  
4 Operations Center, the software itself for physical  
5 product distribution, that physical product is  
6 distributed on CD or DVD media, and that media is  
7 replicated in Puerto Rico.

8           QUESTION: And once it's replicated in  
9 Puerto Rico -- so replicated in Puerto Rico, you mean  
10 it's actually physically put onto the CDs or DVDs,  
11 right?

12           ANSWER: That's correct. The software  
13 bits themselves are put on the CDs and DVDs in Puerto  
14 Rico.

15           QUESTION: Okay. And what happens with  
16 those CDs and DVDs from the Puerto Rico state?

17           ANSWER: For the Enterprise Agreement  
18 Program, orders that are received through the Americas  
19 Operations Center, the media is replicated in Puerto  
20 Rico and then distributed to a vendor in the United  
21 States that assembles what we call the licensing kits  
22 themselves, puts the CDs and DVDs into boxes and  
23 wrappers and things like that and then ships them to the  
24 end customer.

25           QUESTION: Mr. Roscizewski, I'd like to

1 hand you what has been marked as Rossmeissl Exhibit 5.  
2 This is a document that is Bates stamped MSFSTVX 585545  
3 through 547. And if I could have you take a look at it  
4 when you receive it.

5 MR. CALDWELL: Witness reviews exhibit.

6 ANSWER: I have received it, yes.

7 QUESTION: And underneath this title,  
8 Objective of Project -- Project Columbus, the first  
9 sentence states: The high-level object of Columbus is  
10 to enable manufacturing of a hundred percent of  
11 commercial media for the Americas region in Puerto Rico  
12 by July 2006.

13 Do you see that?

14 ANSWER: I do see that, yes.

15 QUESTION: Do you believe that that  
16 objective has been obtained as of this time, as of the  
17 time we're sitting at February 2009?

18 ANSWER: Yes. I believe that -- that  
19 today a hundred percent of the commercial media for the  
20 Americas region, as it's described here in this  
21 document, comes from Puerto Rico.

22 QUESTION: And what is meant by a hundred  
23 percent of commercial media for the Americas region?  
24 Does that mean that of the commercial media that are  
25 ordered out of the AOC, the Americas Operations Center,

1 a hundred percent of that would be manufactured in  
2 Puerto Rico?

3           ANSWER: For the commer -- for what we  
4 call the commercial product or program offerings,  
5 which -- which go through the Americas and which  
6 physical media is requested by the customer, yes, a  
7 hundred percent of that comes from the Puerto Rico  
8 manufacturing center.

9           MR. CASSADY: That concludes our  
10 depositions, Your Honor.

11           THE COURT: And you'll get me the times  
12 on those?

13           MR. CASSADY: I will, Your Honor.  
14 Immediately, I'll get you the time.

15           THE COURT: All right. Thank you.

16           All right. Who will be your next  
17 witness?

18           MR. CAWLEY: Your Honor, at this time,  
19 VirnetX rests its case in chief.

20           THE COURT: All right. Very well. Thank  
21 you.

22           All right, Ladies of the Jury. I have  
23 a -- I'm going to go ahead and give you your morning  
24 break at this time. I'm going to give you 20 minutes.

25           So we'll be in recess until 11:10.

1 COURT SECURITY OFFICER: All rise.

2 (Recess.)

3 COURT SECURITY OFFICER: All rise.

4 (Jury in.)

5 THE COURT: Please be seated.

6 MR. CASSADY: Your Honor, before the  
7 Defense calls its next witness, we would like to go  
8 ahead and officially enter exhibits into the record.

9 THE COURT: All right. Uh-huh.

10 MR. CASSADY: We're going to enter the  
11 exhibits from yesterday. I believe a list has already  
12 been presented last night to the Defendants.

13 MR. SAYLES: Yes.

14 MR. CASSADY: We enter this as the next  
15 set of exhibits.

16 THE COURT: All right. I believe that  
17 will be Plaintiff's Exhibit List No. 3.

18 Be admitted.

19 MR. CASSADY: And then, Your Honor, we  
20 would like to admit demonstrative exhibit -- Plaintiff's  
21 Demonstrative Exhibit 15 and 16. These are two slides  
22 from Mr. Reed's presentation.

23 THE COURT: All right. Any objection?

24 MR. SAYLES: Yes. The objections are the  
25 same as those previously made.

1 THE COURT: Okay. Overruled.

2 MR. SAYLES: And that the Court has  
3 considered.

4 THE COURT: All right. Those will be  
5 admitted.

6 MR. CASSADY: Thank you, Your Honor.

7 THE COURT: Okay. Defendants have any  
8 evidence they wish to offer?

9 MR. POWERS: We do, Your Honor.

10 We have a similar list for yesterday, and  
11 one exhibit, I think, was not technically moved in  
12 yesterday, which is DX3544, which are the excerpts from  
13 the book we used with Dr. Jones.

14 THE COURT: Any objection to that  
15 exhibit?

16 MR. CALDWELL: May we approach, Your  
17 Honor, just for a moment?

18 THE COURT: Yes, you may.

19 (Bench conference.)

20 MR. CALDWELL: This is the book that was  
21 on the screen when we approached yesterday and moved off  
22 the topic of tunneling. I mean, I guess we don't really  
23 necessarily object to the book coming in, but I think we  
24 object to if there's going to be any sort of use of it  
25 for that use of tunneling and what-not in argument or

1 anything of that nature.

2 MR. POWERS: Well, if it's in, it's in.  
3 But what he testified to is that's just one of several  
4 ways that the IP addresses -- one, it's totally  
5 appropriate. It's not at all inconsistent with Your  
6 Honor's instructions.

7 THE COURT: Okay.

8 MR. CALDWELL: Okay. The book can come  
9 in.

10 THE COURT: All right.

11 (Bench conference concluded.)

12 THE COURT: All right. Is there any  
13 objection to 3544?

14 MR. CALDWELL: No, Your Honor.

15 THE COURT: All right. Be admitted.

16 MR. POWERS: Thank you, Your Honor.  
17 And similarly, Defendant's Illustrative Exhibits 1  
18 through 7, which were those charts I used with Dr. Jones  
19 as well, we would move as illustrative exhibits as well.

20 THE COURT: Any objection?

21 MR. CALDWELL: No, Your Honor, not as  
22 illustrative exhibits.

23 THE COURT: All right. Be admitted.

24 MR. POWERS: We have a similar list to  
25 hand up.

1 THE COURT: Defendant's Exhibit List  
2 No. 3, you may tender that to the Clerk.

3 Any objection to those exhibits being  
4 admitted?

5 MR. McLEROY: No, Your Honor.

6 THE COURT: All right. Be admitted.

7 All right. Who will be your first  
8 witness?

9 MR. SAYLES: May it please the Court, at  
10 this time, Microsoft calls Gurdeep Pall.

11 THE COURT: All right. Mr. Pall, let me  
12 inquire, before we begin the testimony, did you get the  
13 times for those depositions that were read in yet?

14 MR. CASSADY: Your Honor, we are  
15 attempting to divvy them up. I don't think we have  
16 them.

17 THE COURT: All right.

18 MR. CASSADY: I apologize. One second,  
19 Your Honor.

20 Your Honor, we don't have it calculated  
21 just yet. I will get it to you at the next break.

22 THE COURT: Let me have that after lunch.  
23 And, Mr. Sayles, we will go till about 12:00 o'clock, so  
24 whenever you get to a stopping place, somewhere close to  
25 that.

1 MR. SAYLES: Yes, Your Honor.

2 May it please the Court.

3 THE COURT: Proceed.

4 GURDEEP SINGH-PALL, DEFENDANT'S WITNESS, PREVIOUSLY

5 SWORN

6 DIRECT EXAMINATION

7 BY MR. SAYLES:

8 Q. Good morning, sir.

9 A. Good morning, sir.

10 Q. Would you tell the ladies of the jury your  
11 name, please?

12 A. My name is Gurdeep Singh-Pall.

13 Q. And where do you live?

14 A. I live in Medina, Washington.

15 Q. And what is your current position with  
16 Microsoft?

17 A. I am Corporate Vice President at Microsoft.

18 Q. And what group do you have responsibility for  
19 as Corporate Vice President?

20 A. I am responsible for Unified Communications  
21 and Speech at Microsoft Group.

22 Q. Now, I know that you wouldn't just tell us  
23 this about yourself, but we're in Court and it's  
24 important for the jury to know about your background and  
25 your responsibilities, so I want to ask you.



1           How many people are on the team that you  
2 supervise?

3           A.     Approximately 1200 people.

4           Q.     And who is the current Chief Executive Officer  
5 of Microsoft?

6           A.     The current Chief -- Chief Executive Officer  
7 is Mr. Steve Ballmer.

8           Q.     How many people are there between you and  
9 Mr. Ballmer in the reporting process at Microsoft?

10          A.     Two people.

11          Q.     Don't get too close. Try that again.

12          A.     Two people.

13          Q.     And you said that you were Corporate Vice  
14 President, and we've heard that Microsoft has more than  
15 80,000 employees around the world.

16                 How many persons are there at the Corporate VP  
17 level?

18          A.     100.

19          Q.     What do you do within the Unified  
20 Communications Group?

21          A.     I am responsible for setting the product  
22 direction, the strategy. I talk to customers, and I  
23 overall manage these efforts at Microsoft.

24          Q.     Would you tell us just briefly about your  
25 family, please?

1           A.    Yes, sir.  I am married.  I have two children,  
2 a five-year old and an eight-year-old boy.

3           Q.    And where were you born?

4           A.    I was born in India.

5           Q.    And where were you educated?

6           A.    I did my high school and undergraduate work in  
7 computer engineering in India.

8           Q.    And then where did you go to college?

9           A.    I finished my undergraduate degree in India,  
10 and then I came to the United States to attend the  
11 master's program at the University of Oregon.

12          Q.    Before we get to that, what university did you  
13 go to in India?

14          A.    The university is called BIT or Birla  
15 Institute of Technology.

16          Q.    And within India, is that a well-known school?

17          A.    Yes, sir.  It's a well-known school in  
18 engineering.

19          Q.    And you told the ladies and gentlemen of the  
20 jury that you came to the U.S. and went to the  
21 University of Oregon.

22                    When was that?

23          A.    I came to the United States in August of 1987.

24          Q.    And did you receive a degree from the  
25 University of Oregon?

1           A.    Yes, sir.  I received a master's in computer  
2 and information sciences in December of 1989.

3           Q.    Did you have to do a master's thesis?

4           A.    Yes, sir.

5           Q.    And what was it on?

6           A.    My master's thesis was a topic called  
7 distributed real-time systems.

8           Q.    And when did you join Microsoft for permanent  
9 employment?

10          A.    I joined Microsoft on January 8th, 1990.

11          Q.    And when you joined in 1990, what was your  
12 position?

13          A.    I basically joined as a computer programmer.  
14 The official title at the time was Software Design  
15 Engineer.

16          Q.    Did you end up working in the Microsoft  
17 networking technologies area?

18          A.    Yes, sir.  I started working on networking  
19 area pretty much soon after that.

20          Q.    And from what period of time did you work on  
21 the Microsoft networking technologies?

22          A.    From just about after I joined to 2002, I  
23 worked on Windows networking technologies.

24          Q.    And did you develop any technologies when you  
25 were working in the Windows networking area?

1           A.    Yes, sir.  I worked on several technologies  
2 like remote access, or what sometimes people might  
3 remember as dial-up networking, the ability to dial up  
4 to the internet.

5                    I worked on VPN technologies.  I worked on  
6 technologies like TCP/IP, which is the language spoken  
7 on the internet, and I worked on Wi-Fi, which is  
8 wireless technology being used today.

9           Q.    Did you have the opportunity early in your  
10 career to work on these various technologies you've  
11 described?

12           A.    Yes, sir.  I worked on many of these  
13 technologies quite early in my career.

14           Q.    Again, I want to ask you about some of your  
15 honors and awards, and it's necessary to do this.  
16 Were you named by Information Week as one of the 15  
17 innovators and influencers who will make a difference in  
18 2008?

19           A.    Yes, I was.

20           Q.    What is Information Week?

21           A.    Information Week is one of the top  
22 publications in the computer industry.

23           Q.    Have you authored or co-authored any papers  
24 that were presented in any esteemed or important forums?

25           A.    Yes, sir.  Last year, I authored a paper,

1 which -- I co-authored a paper, which was published by  
2 Harvard Business Review in the breakthrough ideas of  
3 2009.

4 Q. And where was that presented, sir?

5 A. That paper was selected -- of the other ideas,  
6 only three were selected, and this paper was presented  
7 at World Economic Forum in Davos, Switzerland.

8 Q. The ladies have heard a little bit about  
9 internet standards.

10 And would you remind us what the IETF is?

11 A. Sure. IETF stands for the Internet  
12 Engineering Task Force, and the role of this  
13 organization, which was founded by the U.S. Government  
14 in the 1980s, is to make sure that all the computers on  
15 the internet are speaking a common language so that they  
16 can talk to each other.

17 Given that there are more than a billion  
18 computers on the internet today, it is very important  
19 that the language and the rules that are obeyed by all  
20 the computers are standardized. And this group is  
21 responsible for standardization of these languages.

22 Q. During periods in your career, have you been  
23 active with the IETF?

24 A. Yes, sir. I was very active in the IETF from  
25 about 1994 to about 1998, and I represented Microsoft in

1 specific areas for that.

2 Q. Have you authored or co-authored any matters  
3 that have become standards of the IETF?

4 A. Yes, sir. I've got five standards in the  
5 IETF, which I have co-authored or authored. I think  
6 four of them are what they call informational standards  
7 or de facto standards. And one of them, which is a VPN  
8 standard was an industry standard.

9 Q. Was the industry standard you just mentioned  
10 the first VPN protocol industry standard?

11 A. Actually, that was the second one. The first  
12 one was PPTP, which was even before the industry  
13 standard.

14 Q. All right. Now, we're going to get to PPTP in  
15 more detail in a few minutes, but is that something that  
16 you had involvement with in the development?

17 A. Yes, sir. I was one of the co-authors of that  
18 standard as well.

19 Q. Microsoft has been discussed by the lawyers in  
20 the case, but we need to tell the ladies of the jury in  
21 the form of evidence about Microsoft.

22 When was Microsoft founded?

23 A. Microsoft was founded in 1975.

24 Q. And by whom was it founded?

25 A. It was founded by Bill Gates and Paul Allen.

1 Q. And what was the vision or reason for the  
2 formation of Microsoft?

3 A. In the early '70s, Intel Corporation designed  
4 a computer chip which is very small, and when Bill Gates  
5 and Paul Allen saw that computer chip, they realized  
6 that a whole new set of capabilities would be for  
7 computers and what are going to become pervasive in our  
8 society.

9 And they decided that they were going to  
10 create a business on how to create software on top of  
11 this computer chip to benefit everyday people.

12 Q. Based on your 20 years of experience at  
13 Microsoft and your knowledge of Microsoft's history,  
14 would you say it's been a successful company?

15 A. Microsoft has been an amazing American success  
16 story.

17 Q. And -- and by what measure would you say that  
18 it's been successful?

19 A. Today, more than a billion people around the  
20 world use computers for everything from social to  
21 business, entertainment. And I think Microsoft has  
22 played a part in that resolution.

23 And I think by that measure, Microsoft has  
24 been a very successful and impactful company.

25 Q. And what has been Microsoft's focus on its

1 customers?

2       A.    I think customer focus or empowering our  
3 customers, making them more powerful, allowing them to  
4 do more things with their computers, allowing them to  
5 make the computers easily -- to use their computers  
6 easily, and allowing them to trust their computers for a  
7 lot of important things they do in their lives, I think  
8 has been a core company value right from the beginning,  
9 and certainly when I joined Microsoft.

10               And we take customer focus very, very  
11 importantly.  When you give us feedback from customers  
12 on things that are not working well, we work hard to  
13 improve those things.  And it's an ongoing cycle.

14       Q.    We are here about certain security measures  
15 with regard to computer software.  I'd like to direct  
16 your attention to the -- to the issue of security.

17       A.    Yes, sir.

18       Q.    Is security important at Microsoft?

19       A.    Security is very, very important at Microsoft,  
20 and I assume, in this context, security of the computers  
21 and the software that we use every day.  That is very  
22 important to Microsoft.

23       Q.    And could you explain to us what security  
24 means in the context of computer software?

25       A.    Sure.



1           Security is a very broad term. You know, in  
2 the same way -- you know, we all live in homes. When we  
3 think about the security of our home, we have to think  
4 about many things. We have to make sure that there is a  
5 latch on the windows. We have to make sure there's a  
6 lock on the door. We have to make sure that the keys to  
7 the lock are given to people we trust.

8           We need to make sure sometimes that there is a  
9 burglar alarm in the house. Sometimes to make sure that  
10 there is a smoke detector in the house.

11           In the same way, security in computers is a  
12 very broad term which includes many, many important  
13 pieces. It includes things like the password you type  
14 in. It includes permission on who can look at what  
15 information. It includes making sure that when the --  
16 when the communications are happening across the  
17 internet, you know, in many cases, they need to be  
18 secure.

19           Security is about making sure that you don't  
20 have these computer viruses which come into your  
21 computer and then take out information from your  
22 computer and send it to the bad guys.

23           It's about making sure sometimes that you  
24 don't get spam e-mail, which sometimes all of us get.  
25 So security is a very broad term.

1 Q. And in your time at Microsoft, from 1990  
2 forward, has security been important in these particular  
3 regards?

4 A. Yes, sir.

5 Security has been important pretty much  
6 throughout, certainly in my career at Microsoft. And  
7 we've always taken it very seriously.

8 And I will also say that, you know, security  
9 is something which is important in the past; it's  
10 important today; and it will be important tomorrow. And  
11 the problem of security keeps changing, because the bad  
12 guys keep evolving and becoming, you know, more and more  
13 sophisticated in the bad things they do.

14 So as a result of it, when we are building  
15 computer programs and software, we have to keep up with  
16 the bad guys. So it's been important in the past, and I  
17 think it's going to be important in the future as well.

18 Q. Can you give an example of some of your  
19 personal work in the area of computer software security?

20 A. Yes, sir. When I was involved in the IETF  
21 from 1994 to 1998 or so, during that time, I wrote an  
22 informational RFC called Microsoft Point-to-Point  
23 Encryption, which was about scrambling the information  
24 when it was going across either full networks or across  
25 the internet so that the bad guys couldn't get hold of

1 it.

2 Q. I'd like to now direct your attention to  
3 Plaintiff's Exhibit 233, and it's in the book beside  
4 you, and we're going to call it up on the screen.

5 First, let's start at the top with the title.  
6 Are you familiar with this document by Bill Gates in  
7 January of 2002, entitled, Trustworthy Computing?

8 A. Yes, sir. I'm familiar with this document.

9 Q. And were you aware of it at the time it was  
10 released?

11 A. Yes. I read this document when Bill Gates  
12 sent it out in 2002.

13 Q. Now, I would like you, if you would, to put a  
14 context of how this trustworthy computing document came  
15 up.

16 What was going on at the time?

17 A. In 2002, we were seeing the increase of  
18 computers, lots of people starting to use computers.  
19 The internet really starting to have lots more people on  
20 it, and, you know, at that time, Bill Gates, you know,  
21 who was already an inspiring and already demanding  
22 leader, wanted to make sure that our focus on the area  
23 of security was maintained.

24 And in this particular case, he wrote a  
25 document which went out to all the Microsoft employees.

1 And I believe it was -- it was published outside of  
2 Microsoft as well.

3           But the document really said that so far,  
4 we've been talking about security of software in  
5 computers. He said it is time now to elevate the  
6 conversation from security to conversation about trust.  
7 He says if our users are using these computers for  
8 everything from banking to healthcare to communicating  
9 with their children, communicating with teachers, we  
10 have to have our users trust their computers so they can  
11 use these things as much as they want without worrying  
12 about these things.

13           And I think that was a -- that was the key  
14 point of trustworthy computing.

15           Q. I want to call your attention to the first  
16 sentence where it says: As I've talked with customers  
17 over the last year, from individual consumers to big  
18 enterprise customers, it's clear that everyone  
19 recognizes that computers play an increasingly important  
20 and useful role in our lives.

21           Is that what was going on in 2002?

22           A. Yes, sir. That was going on.

23           And, specifically, one of the things he was  
24 referring to was, we saw a rise in computer viruses  
25 where the bad guys were writing programs which would

1 come on to a computer and then extract information and  
2 actually use our computer to do bad things with other  
3 computers.

4           And I think that was one of the specific  
5 points that Bill Gates was referring to.

6           Q.    Let me bring you down to the second paragraph  
7 where it begins six months ago.

8           It says right here: Six months ago, I sent a  
9 call-to-action to Microsoft's 50,000 employees,  
10 outlining what I believe is the highest priority for the  
11 company and for our industry over the next decade.

12           Now, can you put that in context for us?

13           A.    Yes. You know, this was Bill Gates reminding  
14 us again how important the area of security is,  
15 informing us that we have to now think about trust with  
16 our customers, and -- and also saying that this is not  
17 just a Microsoft problem.

18           This is a problem -- the trust and making sure  
19 that we can establish trust is something which is for  
20 the entire industry, the software industry, the computer  
21 industry, the networking industry. Those were the  
22 industries, which I think were also in the scope for  
23 this -- for this document.

24           Q.    Now, Mr. Pall, I'd like to shift your  
25 attention to the subject of PPTP.

1           First of all, we've had a lot of letters and  
2 initials here. Remind us what that stands for.

3           A.    Yes. PPTP stands for point-to-point tunneling  
4 protocol.

5           Q.    And is that something that you worked on?

6           A.    Yes. I co-authored the PPTP standard in the  
7 IETF.

8           Q.    Did the PPTP become a commercial product?

9           A.    Yes. PPTP became a commercial product as part  
10 of Windows NT 4.0, which was a version of Windows  
11 software which shipped in August of 1996.

12          Q.    Is a VPN -- well, just tell us, what is a VPN?

13          A.    Yes. Virtual private network.

14                There have been lots of descriptions. I  
15 thought I would try a description of my own.

16                Let's say, you know, we have a home on a  
17 street, and down the street is a school. Now, we know  
18 our home is safe and, you know, the school is safe.  
19 Let's say your children -- now, the street you live on,  
20 there are people who you don't know are on that street  
21 coming and going whenever they want to. There are  
22 people driving fast on the street.

23                What if you could create a secret passage from  
24 your home to the school, which is like a tunnel, where  
25 nobody could see when the children are going or coming

1 from the school, and nobody could hear what they are  
2 saying.

3           That really was the idea of PPTP. How do you  
4 create a secret passage across the public internet from  
5 where you are to where the computers that you need to  
6 use are.

7           Q. Would you tell the ladies what circumstances  
8 caused you to become interested and involved in this  
9 development?

10          A. Yes. One of the first assignments I worked on  
11 at Microsoft was a product called remote access service.

12           Now, I thought I would give you a little bit  
13 of a story around that.

14           When I joined Microsoft, I noticed a very  
15 strange thing I had not seen before. I noticed that  
16 regardless of what time of the day, whether it was 11:00  
17 p.m., sometimes 2:00 a.m., 7:00 p.m., whatever time of  
18 the day you came in, the parking lots were always full.  
19 And part of the reason was that the kind of people who  
20 join Microsoft really like to work all the time, and I  
21 think they had no social life outside of work.

22           But another very important part was that there  
23 was no technology which allowed people to work from  
24 home. So if they wanted to work, the only option for  
25 them was to drive into work, park their cars, go to

1 their offices, sit in front of the computers and work.

2           The very first product I worked on which was  
3 released to customers in December of 1991, was a product  
4 called remote access service, which allowed people from  
5 their homes, using their phone lines with a modem, they  
6 could connect to their work networks and work from home.  
7 That was end of 1991.

8           And over the next three or four years, we saw  
9 that the parking lot started to becoming empty, and a  
10 lot of people were now working from home. It was the  
11 same idea that led to the PPTP invention.

12           Q.    Go ahead.

13           A.    What we saw in 1995 or so was the type of  
14 company mission was a high-speed internet connection,  
15 which is now very common in our home. Many homes now  
16 you can see that.

17                    What we saw was that was a very fast  
18 connection. We saw that is a fast connection to the  
19 internet instead of a phone line. What if we allow the  
20 people at home to connect across the internet to their  
21 working network and come to work as if they were at  
22 work.

23                    And this was the fundamental idea that allowed  
24 us to work on PPTP.

25           Q.    Now, before we get into how it worked, let me



1 just asked you, you said it was a commercial product.  
2 What was the first release date to the public of this  
3 PPTP VPN?

4 A. It was in August of 1996.

5 Q. Some three and a half years before the patent  
6 applications in this case?

7 A. As of the proceedings of this case, that is  
8 correct, sir.

9 Q. And tell the ladies of the jury what Windows  
10 NT 4.0 is, just so we can get a little context here.

11 A. Windows NT 4.0 is just a version of Windows.  
12 I think you're familiar with Windows 95, Windows 98,  
13 Windows XP. So Windows NT 4 was a version of Windows  
14 which shipped or was commercially available to our  
15 customers in August of 1996.

16 Q. And was PPTP included in any other versions of  
17 Windows besides NT 4.0?

18 A. Yes. After we first shipped it in -- Windows  
19 NT 4.0, it shipped as part of Windows 98, which as the  
20 name suggests, was in 1998. It shipped in NT 5 Beta 1.  
21 Beta is the test copy of the software. It shipped in NT  
22 5 Beta 2.

23 At that point, the marketing people changed  
24 the name of NT 5 to Windows 2000. It shipped in Windows  
25 2000 Beta 3. And then of course, it shipped in Windows

1 2000 and products after that, like XP.

2 Q. Up to 2000, can you give the ladies a sense of  
3 approximately how many copies of various versions of  
4 Windows were sold that included PPTP?

5 A. Sir, I -- it's been a long time. I don't have  
6 any exact numbers on that. I could tell you  
7 approximately.

8 Windows NT 4.0 delivered millions of copies of  
9 that software. Windows 98, which was our more popular  
10 version of Windows, there were tens of millions of  
11 Windows 98 software copies available for customers, but  
12 I cannot be more precise than that, sir.

13 Q. Now, you have told us about working from home  
14 to the office. Could PPTP be used in any other settings  
15 or context?

16 A. Yes, sir. There were three ways that PPTP  
17 could be used, and we considered all those three ways  
18 when we designed PPTP standard.

19 The first way is that you have a computer at  
20 home, and you have a high-speed connection, and you just  
21 connect from that computer easily and securely to your  
22 work network.

23 The second way it could be used is, if you  
24 have a branch office of a company, and you have their  
25 main office, those two networks in those offices could

1 be connected over a PPTP VPN as well.

2           And then the last way it could be used is that  
3 if you were still using a modem to connect to your ISB,  
4 like AT&T, AT&T would create a virtual private network  
5 to the company that you worked for.

6           So you dial into the modem, and they would  
7 automatically take all the communications, put them over  
8 the VPN, and connect you to your corporate network.

9           Q. Let me ask you to take a look at Exhibit 3290  
10 that's in your book, and we'll put it up on the screen  
11 here.

12           Let's look at the title. First, just tell the  
13 ladies of the jury what the nature of this document is.

14           A. This is a document from Microsoft which  
15 describes the virtual private networking capabilities in  
16 Windows NT 4.0 product.

17           Q. Now, since it references Windows NT 4.0, would  
18 that take us back to 1996, in terms of what's being  
19 described?

20           A. Yes, sir. This document refers to the product  
21 which shipped in August of 1996.

22           Q. Now, does Microsoft carry on its website  
23 informational documents such as this?

24           A. Yes. You can go back many years later, 10  
25 years later, and still find these documents on the

1 microsoft.com website.

2 Q. I want you to look right down here in the  
3 right-hand corner. There's a date of February 1, 2008.  
4 Does that mean that it's describing technology that was  
5 invented in 2008, or what is the significance of that  
6 date?

7 A. I think this date probably represents when  
8 this document was downloaded from the Microsoft website.  
9 This is not a document which describes when this was  
10 written, because NT 4, the product shipped in August of  
11 1996.

12 Q. Now, I'm going to ask you to explain to the  
13 ladies of the jury how the PPTP VPN worked. Would the  
14 diagram on Page 5 of the document be helpful in doing  
15 that?

16 A. Sure, sir.

17 Q. I'm talking about the diagram that is the  
18 second one right here (indicates).

19 A. Sure. This describes one of the three ways I  
20 said PPTP can be used.

21 In this diagram, I think an easy way to think  
22 of it, let's say this is the Microsoft corporate hub or  
23 our corporate network in Washington. And let's say  
24 Microsoft has -- not let's just say -- Microsoft has a  
25 big office in Dallas, and let's say that is the branch

1 office.

2           What this diagram is showing is that users  
3 working in Dallas, in the Dallas office, through a  
4 secure connection, can communicate with any user in  
5 Redmond who's sitting on Microsoft's private network.  
6 And of course, the other way around as well.

7           Now, what is, I guess, particularly  
8 interesting about this particular connection is that if  
9 there was a bad guy on the internet, which is  
10 represented as this cloud, if there was a bad guy  
11 looking at all the packets that are going back and  
12 forth, when they look at -- I'm sorry. I didn't realize  
13 it's actually tracing the red marks. I was touching the  
14 screen. I apologize for that.

15           If the bad guy comes in and starts looking  
16 at -- I wonder if there is a way to remove that?

17           Yes. So if a bad guy comes in on the  
18 internet, which is the cloud, they will not be able to  
19 see which person is sitting on a computer in the Dallas  
20 branch office who is communicating with which user  
21 sitting in Redmond. They will not be able to see that.  
22 All the packets going back and forth are going to be  
23 scrambled, and the IP addresses, which are belonging to  
24 the user sitting in Dallas on the private network will  
25 not be visible to any bad guy on the internet.

1 Q. Did the PPTP that you've just described for us  
2 provide what we've been calling data security?

3 A. Yes, it did, because it scrambled all the  
4 communications.

5 Q. And what is data security? Is that the  
6 message?

7 A. Data security is really how the packets which  
8 are going on the internet and all the information they  
9 contain, how that is scrambled so that if a bad guy can  
10 look at that information, they will not be able to tell  
11 what is it that I'm -- what is being sent, communicated  
12 across that particular connection.

13 Q. And were the IP addresses on the computers in  
14 the branch office and the IP addresses at the corporate  
15 hub, were they visible or hidden?

16 A. They were always hidden.

17 Q. Did PPTP, the server, put any restrictions on  
18 who could access it?

19 A. Yes, sir. PPTP --

20 Q. Would you describe what you mean by that,  
21 please.

22 A. I'm sorry, sir.

23 PPTP servers only allowed authenticated and  
24 permitted users to connect.

25 Q. Could you tell us the significance of PPTP at

1 the time it was introduced in 1996?

2 A. PPTP was a very important invention in 1996.  
3 It really allowed people to work effectively and  
4 securely from home.

5 Because previously, the only thing they could  
6 do was use the phone line with a modem, and these modems  
7 were these things which made these operatic sounds when  
8 they connected, but they were very slow.

9 And with PPTP, you could connect with the  
10 speed of the high-speed internet, if you had that. And  
11 so it was a very important development.

12 Q. And was PPTP designed to allow a user to only  
13 use it with specific programs?

14 A. No. PPTP was designed so that wherever you  
15 were, whatever program you were using on your computer,  
16 you would be able to use it just as if you were sitting  
17 on your computer at work. That means any program which  
18 was running, which needed to connect to other computers  
19 could work all the time.

20 Q. Did you file for any patents on PPTP?

21 A. No, sir. We did not file for any patent.

22 Q. Why not?

23 A. Sir, in the mid-1990s, it was a very important  
24 time in the industry. The internet was just starting to  
25 take off, and there was a lot of excitement in the ITF

1 on creating standards which allowed lots of users to use  
2 the internet.

3           And when I was working in the ITF on  
4 standards, I decided that it was more important for  
5 Microsoft to contribute towards the establishment of  
6 standards, that anybody in the industry could use rather  
7 than patent these technologies.

8           And that approach really worked out because we  
9 saw many, many companies build products which were now  
10 were being used on the internet with PPTP.

11           Q.    And was -- that almost answers the next  
12 question.   Was PPTP successful?

13           A.    PPTP was very successful, both in terms of  
14 users using the product and these capabilities and also  
15 in terms of the number of companies that started  
16 supporting the standard in '96, '97, '98 and so on.

17           Q.    Was PPTP easy to use for the user that might  
18 wish to do so?

19           A.    PPTP, for a user who uses this product on a  
20 daily basis, was a very, very easy VPN to set up.

21           Q.    I'd like to call your attention now to  
22 Defendant's Exhibit 3121, and let's take a look at the  
23 cover of that.

24                    Can you tell the ladies of the jury just what  
25 the document is?



1           A.    Yes, sir.  This is a document called Microsoft  
2 Windows NT Server, and it's what we call a White Paper,  
3 which means it describes the Microsoft virtual private  
4 networking capabilities.

5                   And it says:  Using Point-to-Point Tunneling  
6 Protocol for Low-Cost, Secure, Remote Access to the  
7 Internet.

8           Q.    And what were these White Papers for?

9           A.    They were there for our customers to read, to  
10 understand these capabilities, and then start thinking  
11 about how they will deploy these capabilities in their  
12 networks.

13          Q.    Let's turn the page and look at the copyright  
14 date.

15                   MR. SAYLES:  It's very small print at the  
16 top line.  Can you pull up the top line and make it big?

17          Q.    (By Mr. Sayles) Copyright 1996.

18          A.    Yes, sir.  It's showing that this document is  
19 copyrighted in 1996, which would be -- I'm sorry --  
20 which would be accurate, given that Windows NT server  
21 shipped in 1996.

22          Q.    All right.  I want to turn to Page 3 of the  
23 document.  And the last sentence there, I'd like to  
24 highlight that and have you read it, the last sentence  
25 of the paragraph.

1           A.    Yes, sir.

2                    This -- basically, this sentence says that VPN  
3 technology gives users an economical and  
4 easy-to-implement solution for creating secure and  
5 encrypted communications across the internet.

6           Q.    And was that an accurate description that was  
7 in this White Paper?

8           A.    That -- that was a very accurate description  
9 of the product.

10          Q.    Let's turn to Page No. 6.

11                   And when we get there, I will take you to the  
12 last sentence of the middle paragraph, right here  
13 (indicates).

14                   Would you tell us what this says?

15          A.    Yes, sir.

16          Q.    Or read it.

17          A.    Yes.  This sentence is:  All of this makes  
18 Microsoft's multi-protocol VPN the easiest way for  
19 businesses to securely and economically extend their  
20 private networks across the internet to remote users.

21                   It's basically reasserting that this VPN is  
22 secure, it is easy, and can be deployed very easily.

23          Q.    All right.  Let's go to the next page, Page  
24 No. 7.  And I want to point to the providing for easy  
25 implementation and that first paragraph before the first

1 bullet point.

2 A. Yes, sir.

3 This paragraph says: Providing for easy  
4 implementation. Microsoft virtual private networks have  
5 been designed to make their implementation easy for  
6 network administrators. Benefits of using a VPN include  
7 the following.

8 Q. Now, you were in the courtroom when Dr. Short  
9 described for the jury in some detail the instructions  
10 for creating an IP SEC tunnel.

11 Do you recall that?

12 A. Yes.

13 Q. First, is a PPTP the same thing as a IP SEC  
14 tunnel that he was going through the instructions for?

15 A. No, sir, it is not.

16 Q. Is a PPTP easier to set up than what he went  
17 through here in Court?

18 A. Definitely.

19 Q. And is the technology the same?

20 A. No. It's a different technology. And I'd  
21 like to say one more thing on that.

22 Q. Would you explain that, please?

23 A. Yes. I think a lot of the documents which  
24 were shown to you are the documents that a car mechanic  
25 would use for repairing your car. Those are not the

1 documents that if you drive a car every day, you would  
2 need to read if you drive a car.

3           End users who use these products are like --  
4 like me, who just sits in the car and drives it and  
5 takes it anywhere. I don't even change my oil myself.  
6 That's why we have mechanics who do those things. And  
7 those documents are really written for the mechanics,  
8 not for the end users.

9           For the end users, it was really, really easy  
10 and relatively easy for the mechanics as well. And any  
11 VPN will need to have mechanics who set it up and make  
12 it -- try and make it easy for users who drive the car.

13           Q. All right. Let's turn to Page 11 of this  
14 document where it says: Making PPTP Easy to Use. And  
15 let's look at that whole paragraph there.

16           It says: Microsoft's multi-protocol VPN  
17 enabled by point-to-point tunneling protocol, PPTP, is  
18 the easiest way for businesses to securely and  
19 economically extend their private networks across the  
20 internet to remote users.

21           Ease of use has been built into VPN from its  
22 inception for both the server and client personal  
23 computer. For network administrators faced with rolling  
24 out new technologies, ease of use means rapid and  
25 effective adoption.

1           Could you explain that just in short and in  
2 laymen's words?

3           A.    Yes, sir.

4           You know, this is really the same point, that  
5 PPTP VPN was really easy to install and much, much  
6 easier to use. And, you know, this is from my own  
7 experience using the product, the experience of  
8 customers that I met, people I've talked to who use the  
9 product.

10           So it's just reinforcing the point that -- how  
11 easily this VPN can be created by any user and used on a  
12 daily basis, just like getting in your car and driving  
13 it.

14           Q.    I want to refer you to Page No. 20 of this  
15 document, while we're on it, to the bullet point that is  
16 entitled AutoDial.

17                   MR. SAYLES:   Would you block that  
18 paragraph for me?

19           Q.    (By Mr. Sayles) Read that.

20           A.    AutoDial makes it easier and faster for remote  
21 users to connect to their corporate networks.

22           Q.    Okay. We have a new word here. Tell us what  
23 AutoDial is.

24           A.    AutoDial literally stands for automatically  
25 dial. And the idea was, how you can automatically

1 connect your modem or your VPN when you start using your  
2 computer.

3 Q. And did you personally have a role in  
4 developing AutoDial?

5 A. Yes, sir. I came up with the idea of AutoDial  
6 when, you know, discussing things with my colleagues. I  
7 don't remember the exact date, but it was early 1995.  
8 And of course, you know, they said, "If you think that's  
9 a really nice idea, why don't you go build it and show  
10 us."

11 And I built the first prototype of AutoDial.  
12 And when I showed it to them, they said, great, let's  
13 make it part of the product. So that's when we made it  
14 part of the product.

15 Q. And did AutoDial ship with NT 4.0 in August of  
16 1996?

17 A. Yes, sir. AutoDial feature shipped with  
18 Windows NT 4.0 in August of 1996.

19 Q. And so this was also a technology actually  
20 sold to customers?

21 A. Yes, sir. This was a technology sold to  
22 customers from that point on.

23 Q. And what was the main benefit or use of  
24 AutoDial?

25 A. The main benefit was that prior to AutoDial,

1 users would first have to dial their modem or make their  
2 VPN connection and then start using their applications,  
3 like e-mail or start the browser or other applications.

4           With AutoDial, we were able to -- for most  
5 cases, we were able to make the connection into a single  
6 step. The user would just have to start their browser  
7 or their e-mail, and automatically, the VPN would get  
8 established securely without them having to even go make  
9 the connection first.

10           So two steps reduced to one step, which made  
11 it even easier to use.

12           Q. Did PPTP win any awards?

13           A. Yes, sir. PPTP won an industry award.

14           Q. I'm going to show you Exhibit 3270, and do you  
15 recognize this magazine?

16           A. Yes, sir. When we got the award, I remember  
17 seeing the cover of this magazine in color, and I think  
18 it looked a lot better back then. But, yes, the PPTP  
19 was recognized with an award of PC magazine.

20           Q. Was PC magazine an important magazine in your  
21 industry at the time?

22           A. It was one of the leading publications in  
23 computers in the '90s.

24           Q. And let me show you the date at the top. It's  
25 December the 17th. We can't see it until it's pulled

1 up. And that's when this was published, right?

2 A. Yes, sir. This award was given out by this  
3 magazine on December 17, 1996.

4 THE COURT: Mr. Sayles?

5 Q. All right. And let's go --

6 THE COURT: Mr. Sayles, it's a little  
7 after 12:00.

8 MR. SAYLES: Oh.

9 THE COURT: Would this be a good time to  
10 stop?

11 MR. SAYLES: It would, Your Honor. I can  
12 come back to this after lunch. No problem.

13 THE COURT: Very well.

14 Ladies of the Jury, we'll take our recess  
15 at this time. Please remember my instructions, and we  
16 will see you back here at 1:30 today. 1:30.

17 COURT SECURITY OFFICER: All rise.

18 (Jury out.)

19 (Lunch recess.)

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CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/ \_\_\_\_\_  
SUSAN SIMMONS, CSR  
Official Court Reporter  
State of Texas No.: 267  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date

/s/ \_\_\_\_\_  
JUDITH WERLINGER, CSR  
Deputy Official Court Reporter  
State of Texas No.: 731  
Expiration Date: 12/31/10

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Date

EXHIBIT F8

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION

1			
2			
3	VIRNETX	*	Civil Docket No.
4		*	6:07-CV-80
5	VS.	*	Tyler, Texas
6		*	March 11, 2010
7		*	1:30 P.M.
8	MICROSOFT CORPORATION		

TRANSCRIPT OF JURY TRIAL  
BEFORE THE HONORABLE JUDGE LEONARD DAVIS  
UNITED STATES DISTRICT JUDGE

APPEARANCES:

12	FOR THE PLAINTIFFS:	MR. DOUGLAS CAWLEY
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14		MR. JASON D. CASSADY
15		MR. LUKE MCLEROY
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20		MR. ROBERT M. PARKER
21		Parker, Bunt & Ainsworth
22		100 East Ferguson
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24		Tyler, TX 75702

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23		Ms. Judith Werlinger, CSR
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(Proceedings recorded by mechanical stenography,  
transcript produced on CAT system.)

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APPEARANCES CONTINUED:

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\* \* \* \* \*

P R O C E E D I N G S

COURT SECURITY OFFICER: All rise.

(Jury in.)

THE COURT: Please be seated.

MR. CASSADY: Your Honor, I have those

1 times for you.

2 THE COURT: All right. Very well.

3 MR. CASSADY: The read depositions were  
4 22 minutes for VirnetX.

5 THE COURT: Okay.

6 MR. CASSADY: And three minutes for  
7 Microsoft.

8 THE COURT: Great. Thank you.

9 All right. Mr. Sayles, you may proceed.

10 GURDEEP SINGH-PALL, DEFENDANT'S WITNESS, PREVIOUSLY

11 SWORN

12 DIRECT EXAMINATION (CONTINUED)

13 BY MR. SAYLES:

14 Q. Mr. Pall, just before we took our lunch break,  
15 we were about to talk about Exhibit 3270, which is the  
16 award in PC Magazine. Let's take a look at that.

17 First of all, let's go to Page 23. And at the  
18 top here is: Winner, point-to-point tunneling protocol.  
19 Is that what you've been describing to the jury, the  
20 invention that we've been through, to some extent?

21 A. Yes, sir.

22 Q. Right here, I see a couple of names. Who are  
23 these people that are named here?

24 A. Bill Verthein, who's the first name, was one  
25 of the co-inventors with me for this protocol. Tom

1 Stoner and Tim Mortsof worked for U.S. Robotics,  
2 actually at that time, Bill Verthein, Tom, and Tim  
3 worked for U.S. Robotics.

4 Q. I don't see your name on there. Could you  
5 explain that for us, please?

6 A. Yes, sir.

7 When the magazine told us that we were going  
8 to get this award, they asked for the names of people at  
9 Microsoft who had worked on these technologies, and  
10 because there were several of us, we decided not to take  
11 any one name, but instead call it the PPTP Development  
12 Team, which is the team I managed who developed this  
13 technology.

14 Q. All right. Now, let's take a look at what the  
15 award says, starting in the first column with the line  
16 that begins the point-to-point tunneling protocol.

17 A. Yes, sir.

18 It says the point-to-point tunneling protocol,  
19 PPTP, jointly developed by Microsoft and U.S. Robotics,  
20 is a new protocol specification that enables secure  
21 remote access to corporate networks across the public  
22 internet.

23 Q. In one sentence, is this a pretty good  
24 description?

25 A. It's a pretty good description. I would add

1 easy to it.

2 Q. Let's go down this same column to the sentence  
3 beginning with in effect.

4 A. Yes.

5 It says: In effect, PPTP makes the internet a  
6 part of your intranet, and with excellent security.

7 Q. All right. And then let's go across to the  
8 third column towards the bottom, right before the  
9 acknowledgement to Microsoft, beginning with using PPTP.

10 A. Using PPTP, network administrators can extend  
11 a virtual private network from their Windows NT server  
12 throughout the internet while locking out unauthorized  
13 users.

14 Q. Is this a way of saying that there's VPN  
15 security?

16 A. Yes, sir.

17 Q. Now, if you would, I -- I want to bring the  
18 page out. I notice there are a couple of finalists  
19 here, and one of them is Windows Microsoft NT 4.0. It's  
20 right there.

21 A. That's a funny story, sir.

22 Q. Could you tell the ladies of the jury what  
23 that is and how it came about?

24 A. When PC Magazine was looking at all the  
25 products and saying which products deserved the award,

1 they actually gave the award to PPTP. The product that  
2 actually included PPTP was the finalist, and it did not  
3 get the award. So it's kind of like the supporting  
4 actor wins the Best Actor Award, what happened in this  
5 case.

6 I certainly, you know, had some fun with  
7 people on my team, because I worked inside the Windows  
8 NT Development Team at the time.

9 Q. So you were on both teams?

10 A. I was on both teams, yes.

11 Q. And here in the runner-up portion, there's a  
12 sentence that begins NT Server 4.0.

13 A. Yes. And it starts off by saying: Important  
14 new enhancements, such as point-to-point tunneling  
15 protocol.

16 Q. All right. Now that we have talked about PPTP  
17 and how it worked, I want to ask you about one other  
18 subject, and then after that, we're going to show the  
19 ladies of the jury how it all works, all right?

20 A. Yes, sir.

21 Q. But first, let me ask you about L2TP, another  
22 set of letters.

23 Could you tell us what that is?

24 A. Yes, sir.

25 When people working on PPTP most of 1995, we



1 got the work done and we presented it to the IETF early,  
2 either March or April of 1996. And we presented it to  
3 the IETF and invited everybody to participate in the  
4 formalization of that standard.

5           And at that time, one of Microsoft's  
6 competitors also was working on a VPN protocol called  
7 L2F or Layer Two Framing. So the area directors for the  
8 IETF told me and the person from Cisco to say the only  
9 way we're going to standardize either one of your  
10 protocols is if you work together on a combined  
11 standard.

12           And we took PPTP and L2F and we started  
13 working on a new VPN standard called L2TP. You can  
14 almost add those two names together to get L2TP, which  
15 stands for Layer Two Tunneling Protocol.

16           Q.    And this was a VPN, also?

17           A.    Yes, sir.

18           Q.    Was it adopted as a standard?

19           A.    That was adopted as a standard in the IETF and  
20 is broadly used in the industry.

21           Q.    I want to show you Exhibit 3066, if I could.  
22 And this is discussing -- the title is: Securing L2TP  
23 using IP SEC.

24                    Do you see that?

25           A.    Yes, sir.

1 Q. Now, the important part I want to refer you to  
2 is on Page 21.

3 Would you turn to Page 21 and reference --  
4 Paragraph 6 references Footnote 1.

5 A. Yes, sir.

6 Q. Tell us what we've got here.

7 A. What you see is the first reference -- in this  
8 internet standard document is a reference to the Layer  
9 Two Tunneling Protocol, L2TP, RFC 2661, which is the  
10 internet standard for L2TP. And it shows that this  
11 document was written and published in August of 1999.

12 And the G. Pall you see there is Gurdeep Pall,  
13 myself.

14 Q. Okay. Now, have you prepared a demonstration  
15 to show the ladies of the jury how the PPTP would be  
16 implemented using AutoDial?

17 A. Yes, sir. I have prepared a demonstration to  
18 show, as I was saying earlier, driving the car using the  
19 VPN. So I'm prepared to show that, sir.

20 MR. SAYLES: May I ask Mr. Pall to step  
21 down, Your Honor, and explain what the setup is that's  
22 going to be the demonstration?

23 THE COURT: Yes, you may.

24 Q. (By Mr. Sayles) Mr. Pall, would you come  
25 around, and the first thing I'm going to ask you to do

1 is describe what we have set up here.

2 A. Yes. In order to demonstrate this for you  
3 today, we have created a VPN network right inside the  
4 courthouse.

5 What we have here are these three computers,  
6 which would be like the computers you would have in your  
7 workplace. And this is a separate network, what would  
8 be your work network. And this network is connected to  
9 the internet and is connected through this router.

10 What we have here across the room is a --  
11 pretty much the internet. So the cloud you saw, it  
12 lives somewhere here on this wire.

13 Q. Is this a simulation of it to demonstrate?

14 A. Yes, sir. This is a simulation, and this is a  
15 very common practice that we do when we meet customers,  
16 and we show them how they can use our products. So this  
17 is a very, very common way that is used for selling  
18 Microsoft products.

19 We have a customer in the room, we set this  
20 up, and we let them experience the product themselves so  
21 they can decide if want to buy it. So this  
22 configuration really simulates when actually we deploy  
23 the product on the internet.

24 So this black line is the internet. And let's  
25 say that the internet comes to the connection in your

1 house, and this computer represents the computer in your  
2 house. And you're sitting on a desk at home, and you  
3 say I want to connect to my workplace, can I do it over  
4 a VPN?

5           So what I'm going to show you is this  
6 computer, which is running NT 4.0. It's particularly  
7 special to me, because I have a lot of nostalgia around  
8 1996 when we built this technology. To be frank with  
9 you, we had to go find special computers which could run  
10 this software, and we found them. We set it up. This  
11 software is not even supported by Microsoft, but we  
12 thought it was important for you to see in August of  
13 1996 how easy it was for you to set up a VPN connection  
14 and use it from the home.

15           So what I'm going to do here -- and I think we  
16 are going to project it on the screen -- if you don't  
17 mind, I'm going to sit here with my back to you, and I'm  
18 going to show you the system working.

19           MR. SAYLES: Your Honor, may I step from  
20 behind the podium for a moment?

21           THE COURT: Yes, you may.

22           A. The first thing I'd like to do -- Dr. Short,  
23 in his demonstration, showed you that using this ping  
24 command, you can see if the VPN is actually working or  
25 not. So first, I will show you a case where the VPN is

1 not working to prove to you that I do not have a  
2 connection, a virtual connection, from this computer to  
3 my work network.

4 Q. Tell us what you just typed in before you hit  
5 enter.

6 A. I just tried to ping a computer on my work  
7 network. And ping basically sends a message, and you  
8 get the echo back from that computer that are reachable.

9 And what you're seeing here is the computer  
10 telling me destination host unreachable. It means that  
11 the computer that you are trying to contact is actually  
12 not reachable right now.

13 Now, I'm going to show you how easy it is for  
14 you to make a VPN connection. Again, I'm not telling  
15 you that I'm a car mechanic and for you to go fix the  
16 car. I'm showing you every day, if you are sitting at  
17 home, what you would need to do to make a VPN connection  
18 to your workplace.

19 I'm going to click on this little icon, and  
20 I'm going to say dial, and that is it. That is all you  
21 had to do to make the VPN connection. It goes by really  
22 fast. And I will say that on the internet, it may take  
23 two or three or four seconds more, but still, it's very  
24 fast.

25 In fact, when we started working on it, it

1 happened so fast that we put in the beep sound to tell  
2 you that you are now connected. That's the beep sound  
3 you just heard.

4 Now that the VPN is set up, I can try to ping  
5 the server at my work network. And you will see this  
6 time around, it's not destination host unreachable. You  
7 are actually getting a reply back from that computer,  
8 which proves to you that the connection to your  
9 workplace is now established.

10 So that's it. You saw me click -- right click  
11 on that icon and select, and that's it. The VPN  
12 connection was established.

13 Now that I'm connected, I can also connect to  
14 the worldwide web or the server, which is on my work  
15 network, and I can see that website.

16 So all this has happened without auto-dialing  
17 it. I will show you AutoDial and how that can make it  
18 even easier. But you notice I had to do two things. I  
19 had to first connect, and then I started the browser or  
20 I started the window and typed in ping.

21 So this is basically how easy it is to make a  
22 VPN connection with PPTP back in August of 1996. This  
23 is a secure connection. Nobody can just connect to that  
24 server.

25 And here I disconnected the VPN. Let me try

1 it one more time to show you how easy it is.

2 I'm connected. And it shows you who you're  
3 connected to and the line speed -- the speed at which  
4 you are connected.

5 Now, I'm going to show you how AutoDial works.  
6 Just to prove to you again that I don't have a  
7 connection now, because I disconnected it, you can see I  
8 cannot see the network again.

9 With AutoDial, all I have to do is simply  
10 connect. I'm on the browser, and I'm trying to see a  
11 website which is at work.

12 I was not connected. I connected to the  
13 website, and in the process of connecting to the  
14 website, under the covers, the computer, using AutoDial,  
15 made a VPN connection to my workplace and allowed me to  
16 see the web page at my workplace.

17 So AutoDial took those two steps and made them  
18 into one step.

19 To me, either one of those two ways is very,  
20 very easy. It's an extremely simple way, and this is  
21 about driving the car. This is what a user would do  
22 every day to connect to their workplace. This is not  
23 about an oil change. This is not about repairing the  
24 car.

25 It is about design for users who will use it

1 without knowing anything about the technology, but they  
2 can do it easily and safely. That really is my  
3 demonstration.

4 Q. All right. Would you please retake the  
5 witness stand?

6 A. (Complies.)

7 Q. Mr. Pall, I now want to change the subject for  
8 a few minutes. Now that we've talked about TTPP (sic),  
9 and we've seen how it works, I want to shift your  
10 attention to real-time communications and unified  
11 communications.

12 Can you tell us what that is, please?

13 A. Real-time communications and unified  
14 communications, they are both -- they are two terms  
15 which refer to the same thing.

16 It's the ability -- it's a technology which  
17 allows you to make phone calls over the internet to  
18 connect with video conferencing with people who are in  
19 other places. You can do chat or instant messaging.

20 These set of technologies which allow you to  
21 communicate in what we call real-time, which means  
22 instant -- instantaneously with another person across  
23 the network is what we call real-time communications, or  
24 more recently, unified communications.

25 Q. Now, I'm going to ask you some questions about



1 API-associated real-time communications, but before we  
2 do that, tell us what an API is, please.

3 A. Yes.

4 API stands for application programming  
5 interface, and, you know, one way to think about APIs,  
6 it's kind of like, you know, if your software was like a  
7 tool shed. I have a friend who is really into -- he's  
8 got a workshop and he likes to work on it.

9 He's built a really big tool shed, and inside  
10 his tool shed, he's got lots and lots and lots of tools.  
11 He's got tools he uses all the time like a hammer, and  
12 he's got tools which are tucked away in a drawer, which  
13 I don't even think he knows about.

14 So an operating system, similarly, has a lot  
15 of tools in it, thousands and thousands of tools. And  
16 an API is a very simple way to think of -- you know,  
17 tool is a very simple way to think about what an API  
18 would be. Tools help you build things. APIs help you  
19 build applications.

20 Q. Are there literally thousands of APIs in  
21 Windows XP and Windows Vista?

22 A. There are thousands and thousands of APIs.

23 Q. Now, with respect to real-time communications,  
24 did Microsoft create any APIs associated with that?

25 A. Yes. We created what we call RTC APIs with

1 that capability.

2 Q. And what are they used for?

3 A. They are really used by programs who can use  
4 these tools to build applications like chat, phone calls  
5 over the internet, et cetera.

6 Q. And when were these first shipped?

7 A. The first RTC APIs shipped in Windows XP in  
8 August of 2001.

9 Q. To your knowledge, did any third-party  
10 developers create any applications that used the RTC  
11 APIs?

12 A. Yes. There were a few that I can recall now.  
13 I know there weren't many. There were a few. I  
14 remember Dassault the sole systems which was making  
15 design software. I remember -- I guess AOL used it. I  
16 had forgotten about it. I learned -- it reminded me  
17 today during the Court.

18 And the third was Reuter's also built an  
19 application on RTC APIs.

20 Q. Were RTC APIs that were included in Windows  
21 Vista?

22 A. No. RTC APIs were not included in Windows  
23 Vista.

24 Q. Why not?

25 A. What we found was that people who were --

1 sorry -- developers who were writing programs on top of  
2 RTC APIs were really using them with Live Communications  
3 Server or Office Communications Server. So we realized  
4 there is no value in having RTC APIs in Windows XP,  
5 frankly, anymore.

6 So when the next version of Windows Vista --  
7 Windows, which was Windows Vista, was released, we took  
8 those APIs out of Windows, and we made them part of  
9 Office Communications Server and Live Communications  
10 Server.

11 Q. And what were they called?

12 A. They were called UCC APIs, Unified  
13 Communications Client APIs.

14 Q. And is OCS a different piece of software from  
15 Windows Vista?

16 A. Yes, sir. It is a completely different  
17 product than Windows Vista.

18 Q. Now, let's talk about another product. Let's  
19 talk about Office Communicator and Office Communications  
20 Server.

21 Do you have knowledge of those?

22 A. Yes, sir. Those are the products that I'm  
23 currently managing that are being developed by my team.

24 Q. And what is Office Communications Server?

25 A. Office Communications Server, along with

1 Office Communicator, allows users, wherever they are, to  
2 make phone calls over the internet, to do video  
3 conferencing with their colleagues, to share their  
4 stream with their colleagues, do instant messaging,  
5 check whether their colleagues are online or not.  
6 So the Office Communicator application works together  
7 with Office Communications Server to enable this  
8 capability for users.

9 Q. Can you give us some examples of the types of  
10 things Office Communicator can do, and have you prepared  
11 a graphic that helps with that?

12 A. Yes, I have, sir.

13 MR. SAYLES: I'm going to ask for 2.1.

14 A. Yes. I don't have the clicker, so I will have  
15 to count on somebody clicking for me.

16 Q. All right. Let's --

17 A. So this is a user who is sitting either on the  
18 desk at work, or they could be sitting at home in front  
19 of their computer. And let's say they want to do some  
20 work.

21 You can see on the computer there's an  
22 application which we've drawn. That application is  
23 Office Communicator. And now this user can -- could you  
24 click, please?

25 They can do video conferences with the people

1 sitting at work or people that want to communicate with  
2 who actually may be sitting in their own homes as well.

3           So here they can chat, do video conferencing  
4 with that person. They can make phone calls over the  
5 internet, and they can also do instant messaging or chat  
6 from the computer.

7           And then last, they can also share their  
8 screen or the computer that they have with the other  
9 person that they are communicating with, because  
10 sometimes, you know, when you're talking to somebody,  
11 you want to point to things and say, you know, take a  
12 look at this, and why don't you change that. And if you  
13 have screen-sharing, you can do those things.

14           Q. All right. This is Office Communicator.

15           Can you tell us what Office Communications  
16 Server allows you to do?

17           A. Office Communications Server is really the  
18 server, which, of course, as an end user you never see,  
19 but it's what the Office Communicator program connects  
20 to, to actually enable this capability.

21           Q. And let's look at Graphic 2.2.

22           Is this Office Communications Server?

23           A. Yes, sir.

24           What you see here is a user's computer running  
25 Office Communicator, and let's say that the user is Sue

1 who works at Chevron. And what you see across the  
2 internet cloud is the Office Communications Server, and  
3 you see the IP addresses for both those computers here.

4 Q. All right. Now, you've heard -- you've been  
5 in the courtroom and you've heard that part of what the  
6 VirnetX party is complaining about here is a way in  
7 which Office Communicator connects to Office  
8 Communications Server.

9 You're aware that they make that claim?

10 A. Yes, sir.

11 Q. How does Office Communicator connect to Office  
12 Communications Server?

13 A. Yes, sir.

14 Could you please advance the slide?

15 Yes. So let's say Sue is sitting at home and  
16 wants to -- starts up the computer, start up Office  
17 Communicator. And when the computer -- when the  
18 application Office Communicator stops on Sue's machine,  
19 the Office Communicator tries to find Office  
20 Communications Server across the internet.

21 And now Sue has typed in the name  
22 sue@chevron.com. So Office Communicator is trying to  
23 find the Office Communications Server for Chevron, the  
24 company Chevron.

25 And the way it does that is really in four

1 different ways. The reason we have four ways is because  
2 we want to give options to our new customers on  
3 different ways that they can do things. So these are  
4 four ways that the Office Communicator will try.

5           The first one is the manual entry of server  
6 name or address, which means that Sue can go in to  
7 Office Communicator and type in the name of the server.

8           For example, they could type in  
9 server1.chevron.com.

10           So Sue could always do that. And what I'm  
11 showing you actually is the order in which these  
12 different options applied by the Office Communicator  
13 software.

14           So it first goes in and says, did the user  
15 type in a name for the server?

16           No. If the answer is no, then it's going to  
17 go to the next option.

18           Did the IT manager or IT administrator, which  
19 I like to call here, the car mechanic. The car mechanic  
20 actually automatically adds a name to Office  
21 Communicator so that Office Communicator knows which  
22 server to talk to. That is the second option that the  
23 software tries.

24           If those two options don't work, then we try  
25 something called DNS SRV requests, which is basically

1 Sue's computer, our Office Communicator on Sue's  
2 computer, is talking to the DNS server on the internet  
3 to say, I need to connect to an Office Communications  
4 Server for chevron.com. Please tell me what is the  
5 server for chevron.com.

6           And DNS server would send back a name and say  
7 that is the name that you need to connect to. And then  
8 the Office Communicator will connect again to the DNS  
9 server and say, well, thank you for giving me the name,  
10 but I really need the IP address, because that's the  
11 only way I can talk over the internet.

12           And then it gets that IP address and makes the  
13 connection.

14           If that scheme also does not work, so one  
15 didn't work; two didn't work; three didn't work, then  
16 Office Communicator automatically assumes a name. It  
17 says, you know, one didn't work; two didn't work; three  
18 didn't work. Let me try a name which has chevron.com,  
19 and it adds a standard, well-known name to chevron.com,  
20 and it tries to connect to that server.

21           So that's how those four different options  
22 that Office Communicator uses are used.

23           Q. Now, you've been in the courtroom, and you  
24 understand that the focus of VirnetX is only on the  
25 third way to find a server?



1           A.    Yes, sir.  The discussion and the focus in  
2 this case is on the third way.  Of the four ways, the  
3 third way of how Office Communicator finds Office  
4 Communications Server.

5           Q.    But you're saying there are these three other  
6 ways that are not even accused in this case?

7           A.    Yes, sir, that's what I'm saying.

8           Q.    And how long have you been aware of DNS SRV?

9           A.    Yes, sir.

10                  DNS SRV requests have been part of internet  
11 standards in the IETF since the mid-'90s.  In fact, the  
12 standard for DNS SRV requests was written sometime in  
13 October of 1996.

14                  So I just want to be very clear that DNS SRV  
15 requests -- requests are not invented in any way here.  
16 They were invented in the IETF by some people who were  
17 doing work for and contributing to the internet.

18                  So these have been around for a long time.  
19 Again, almost 14 years, DNS SRV requests have been used  
20 by products from Microsoft and other companies, so they  
21 have been around a long time.

22           Q.    All right.  We've been talking about sending  
23 requests.

24                  Can you explain what secure requests are and  
25 unsecure requests?

1 A. Yes, sir.

2 After the first way doesn't work, the second  
3 way doesn't work, and you get to the third way, Office  
4 Communicator asks for four different names from the DNS  
5 server.

6 The first name -- and the reason it's four is  
7 there are two names which are available on the internet,  
8 and two names that are available inside the work  
9 network, because you could be starting Office  
10 Communicator either inside your work or outside your  
11 work. And so there's two inside and outside.

12 And then you have secure and unsecure. So  
13 when you do two times two, you end up with four names  
14 that Office Communicator asks for from the DNS server.

15 Q. Have we shown that graphically?

16 A. Yes.

17 So, basically, there are four different DNS  
18 SRV requests that are sent out by Office Communicator to  
19 the DNS server.

20 Q. Is it important to send both secure and  
21 unsecure requests?

22 A. Certainly, they are part of the product, but  
23 I'm not aware of any customer who uses the unsecure  
24 requests anymore.

25 Q. And would you have been able to take out a

1 not-send request for unsecure connections?

2 A. Yes, sir. You can easily take out -- if you  
3 could build the slide, please.

4 You could easily take out the unsecure name  
5 request from the product, and, you know, this thing  
6 would just work as well.

7 Q. And does Microsoft make any recommendations as  
8 to how customers should deploy OCS?

9 A. Yes. Our recommendations are the customer  
10 should only use secure methods for connecting between  
11 Office Communicator and Office Communications Server.

12 Q. All right. Would you tell the ladies of the  
13 jury what is it about OCS -- OC/OCS that makes it a  
14 useful and valuable product to a user?

15 A. Yes, sir.

16 Office Communicator has become a very  
17 important application in today's workplace. You know,  
18 as we see increasingly, people are working from home;  
19 people are traveling on business; people are working  
20 with other companies across the country; people are  
21 having meetings without needing to travel there with the  
22 audio-conferences, et cetera.

23 Office Communicator is designed to make people  
24 as connected with each other, even if they're not  
25 physically in the same place.

1           So that's a very -- that's a tall order, but  
2 that is something that is very important in today's  
3 times and something that, you know, this product does  
4 really, really well. That is the value of Office  
5 Communicator.

6           Q. Let me show you Exhibit 3111. 3111. Let's  
7 start with the cover.

8           Just tell us what this is, please.

9           A. Yes, sir.

10           This is a marketing material of documents that  
11 describes the Microsoft Office Communicator 2007  
12 product.

13           Q. And if we just turn to the second page, the  
14 table of contents, and go down the list, let's say on  
15 Page 11, contact; tagging; below that, present status.  
16 And the list goes on.

17           MR. SAYLES: Can you blow that up just a  
18 little bit?

19           Q. (By Mr. Sayles) Does this describe some of the  
20 uses and benefits?

21           A. Yes, sir. It goes into, you know, what are  
22 the capabilities of Office Communicator, which our users  
23 can use when they're using the product.

24           Q. And then over on the second page, there's  
25 working together in real-time and office on the road.

1 It's actually Page 3.

2 A. That is correct, sir. That is a very  
3 important part of our Office Communicator.

4 Q. Now, I want to turn to Page 8, and the jury  
5 has seen this before in the case, and I want to refer  
6 you to the paragraph that says anywhere access.

7 Do you see that?

8 A. Yes, sir.

9 Q. It says anywhere access lets you work remotely  
10 without the need for a virtual private network, (VPN),  
11 to connect to your corporate network.

12 Do you see that?

13 A. Yes, sir.

14 Q. What does that mean?

15 A. What that means, sir, is that Office  
16 Communicator can connect to Office Communications Server  
17 without a VPN. It connects directly across the internet  
18 securely, but does not need a VPN.

19 Q. Is there a VPN utilized in this product?

20 A. No, sir.

21 As a company which invented the first -- one  
22 of the first VPNs and has done more VPN work after that,  
23 we have a lot of VPN technology within the company.

24 If you wanted a VPN, we could have printed a VPN. This  
25 is not a VPN. This is just a direct connection, sir.

1 Q. And why isn't a VPN needed in this situation?

2 A. In our configuration, we thought that you  
3 simply need to connect from Office Communicator and just  
4 communicate with the people that you want to, and you do  
5 not need a VPN for that particular connection.

6 We were not trying to hide IP addresses. We  
7 were not trying to do any of that. So whenever we are  
8 building products, we don't use things that we don't  
9 need. And we decided that we could build a product  
10 which can be used without VPNs. It won't require all  
11 the extra servers. It would be cheaper for our  
12 customers. So we did not use a VPN. We did not need a  
13 VPN.

14 Q. All right. Were you -- you were in the  
15 courtroom when Dr. Jones testified that what this  
16 document is saying is that you don't need to use a  
17 separate VPN product like PPTP, because this product is  
18 forming a VPN that will provide the security that you  
19 need.

20 Did you hear him give that interpretation?

21 A. I heard him give that interpretation, sir.

22 Q. Is that at all accurate?

23 A. Respectfully, sir, I completely disagree. For  
24 someone who has worked on these products right from the  
25 beginning, that was the first time I've heard an

1 interpretation of that comment.

2 Q. Now, one final area, just a couple of  
3 questions.

4 Now, you heard Mr. Munger testify about his  
5 company's policy with regard to third-party patents, and  
6 you were in the courtroom when various Microsoft  
7 personnel were asked about third-party patents, right?

8 A. Yes, sir.

9 Q. I want to ask you, what is your personal  
10 practice with regard to third-party patents?

11 A. Sir, my personal practice is that we -- we are  
12 in the business of innovating and creating software. We  
13 work ethically. We work -- we respect intellectual  
14 property, which is patents and technology from other  
15 people.

16 When we work, we are creating, innovating,  
17 writing new software, which comes out of the minds of  
18 our engineers, and that is how we work on a day-to-day  
19 basis.

20 As the people in the testimony were stating,  
21 we do not actively go out and look out for patents.  
22 It's kind of like, if you write songs, when you write a  
23 song, you don't go out and see has anybody else written  
24 a song like this before I send it out?

25 In the same way, we create an environment for

1 people that are innovating. They are innovating in a  
2 way they're not borrowing or stealing ideas. We have  
3 focused on innovating, creating products, and -- and,  
4 therefore, we build the products and we ship those  
5 products.

6           There are times when we find out, when we are  
7 building the products or even before we build the  
8 products, that some company has some intellectual  
9 property, like patents or software, that is in the area  
10 that we are going to build products in.

11           In those cases, we will proactively reach out  
12 to those companies and license that technology for use  
13 in our products. I have done that myself. There's a  
14 company called Scitechnics in 2006, we needed some  
15 important technology. We negotiated with them. We got  
16 the rights to license that technology, and that is part  
17 of Office Communicator today.

18           Now, when you are building products in this  
19 way, every now and then somebody will come to us, maybe  
20 after we've shipped a product, and say that it seems  
21 that the products that you have may be covering some  
22 area that is -- that is something that we may have a  
23 patent on.

24           At that point, we give consideration to that  
25 patent. In some cases, when it is relevant, we will



1 license that patent, or we will put up -- we will change  
2 the product to not use that patent. If we cannot  
3 negotiate with that, and, you know, that's sort of how  
4 we work.

5           If -- of course, if somebody comes and tells  
6 us that here's the patent, why don't you take a look at  
7 it, we will ask them to show us where the patent is --  
8 is -- our product is using it. And if they cannot  
9 convince us, or we are not convinced, then we keep  
10 shipping the product the way it is.

11           So, you know, it's really -- the business of  
12 software is really like song-writing. You're writing  
13 songs; you do your best; you create those songs; and you  
14 share them with the public.

15           Of course, somebody could come back four years  
16 later and say, hey, it's like your song is similar to my  
17 song. At that point, we have practices where we  
18 negotiate with them, really find if there is we infringe  
19 or not, and then take the appropriate steps.

20           Q. All right. Thank you, Mr. Pall.

21           MR. SAYLES: I pass the witness.

22           THE WITNESS: Thank you, sir.

23           THE COURT: Cross-examination.

24           MR. CAWLEY: May I approach, Your Honor?

25           THE COURT: Yes, you may.

1 CROSS-EXAMINATION

2 BY MR. CAWLEY:

3 Q. Afternoon, Mr. Pall.

4 Let me start by asking you a few questions  
5 about the demonstration you showed us.

6 A. Yes, sir.

7 Q. I notice that for the first time today, some  
8 of these beige computers came to the courtroom.

9 Why did you bring those kind of computers  
10 here?

11 A. The main reason we got those computers was  
12 that this software that we demonstrated today was built  
13 in 1996, and, frankly, the software that was written in  
14 1996 doesn't work very well on computers that are  
15 available today. So these computers were -- we needed  
16 to go find these computers.

17 Q. So you wanted to show the jury the state of  
18 affairs for your product in 1996?

19 A. In case of PPTP, yes, sir.

20 Q. And did you run software on the computers that  
21 shows the jury how the system would have worked around  
22 1996?

23 A. Yes, sir.

24 Q. Well, let me draw something on the pad here  
25 from that time going forward.

1           Do you happen to remember when the patents in  
2 this case were filed, the first one?

3           A.    I believe it was in 2000, sir.

4           Q.    I think the evidence is pretty clear that it  
5 was February the 15th of the year 2000.  So that's what  
6 that line is going to represent.

7           A.    Sir, I cannot see the line.

8           Q.    I know.  Actually, I'm about to ask you or ask  
9 the Judge if he would let you step back down to this  
10 computer.

11          A.    Sure.

12          Q.    And you might as well, I guess, have a seat,  
13 because I'm going to ask you --

14                   MR. CAWLEY:  First of all, can we get the  
15 screen that has the computer back on the projector?

16                   Thank you.

17          Q.    (By Mr. Cawley) This is one of the computers  
18 you bought -- you brought -- excuse me -- to the  
19 courtroom that has software on it that you want to  
20 demonstrate to the jury how your product would have  
21 operated around 1996.

22          A.    Yes, sir.

23          Q.    In any event, that's well before the patent  
24 was filed in February of 2000.

25          A.    Yes, sir.

1 Q. All right. What is a BIOS?

2 A. BIOS is -- I think it's called Basic I/O  
3 System.

4 Q. Basic Input/Output System?

5 A. Yes, Basic Input/Output System.

6 Q. That's a basic component of a computer, isn't  
7 it?

8 A. Yes.

9 Q. If you don't have the BIOS on this computer,  
10 it wouldn't work, right?

11 A. It wouldn't work.

12 Q. It would be useless, correct?

13 A. It would be useless.

14 Q. Would you click the start button, please?

15 A. Yes, sir.

16 Q. Select programs.

17 A. (Complies.)

18 Q. Select administrator tools.

19 A. (Complies.)

20 Q. Select Windows NT diagnostics.

21 A. Yes, sir.

22 Q. What does that screen tell you?

23 A. Well, the screen shows me that, you know, this  
24 is Version 4.0 with 3081 of Microsoft Windows NT  
25 workstation.

1 Q. And where is the date of this BIOS?

2 A. The date of the BIOS is -- actually, I don't  
3 see it, sir. Is it here somewhere?

4 Q. System -- click the system tab, please.

5 A. There you go.

6 Q. What's the date of the BIOS on the computer  
7 that you were using to demonstrate to the jury how  
8 things worked in 1996?

9 A. The date says July 12th, 2000.

10 Q. July, 2000.

11 That's after the patent was filed, wasn't it,  
12 Mr. Pall?

13 A. Sir, all that shows is --

14 Q. Sir, I'm sorry. My question to you was, July  
15 is after the patent was filed, correct?

16 A. July is definitely after the patent was filed.

17 Q. All right, sir. And your system could not  
18 have even been built; this system with this version of  
19 BIOS before the patents were filed?

20 A. For this version of the BIOS, that is correct.

21 Q. All right, sir. Now let me ask you another  
22 question.

23 MR. CAWLEY: May I move over to this part  
24 of the courtroom, Your Honor?

25 THE COURT: Yes, you may.

1 Q. (By Mr. Cawley) We have three different  
2 computers here, right?

3 A. Yes, sir.

4 Q. And this -- these things with screens on them  
5 are actually monitors, correct?

6 A. That is correct, sir.

7 Q. And the computers are actually these things  
8 (indicates), one, two, three that are usually called  
9 towers.

10 A. Yes, sir.

11 Q. That's what I've heard them called anyway.  
12 So we have these three towers, and in front of you, I  
13 see the monitor and a keyboard, but I don't see a tower.

14 Where is the computer?

15 A. It's down here, sir.

16 Q. Oh, well, is there a reason that you set these  
17 three computers up on the table and put that one under  
18 the table where I don't think the jury can see it?

19 A. Yes, sir. I thought that putting it on the  
20 table would obstruct the view.

21 Q. I see.

22 A. And the reason I put those there is because  
23 I'm trying to simulate that this is the home.

24 Q. Excuse me for interrupting you, sir.

25 A. Yes, sir.

1 Q. Really, what I asked you was, the reason you  
2 put this one down here, and you say it's so you won't  
3 obstruct the view.

4 A. Yes, sir.

5 Q. Is that right?

6 Okay. Let me ask --

7 MR. CAWLEY: If I may approach this part  
8 of the courtroom, Your Honor?

9 THE COURT: You may.

10 MR. CAWLEY: And I'm going to have to ask  
11 some people to do some kind of unusual things here.

12 First of all, if I could ask Ms.  
13 Weiswasser to move to another chair temporarily; it will  
14 give me better access to the computer that's down on the  
15 floor.

16 MS. WEISWASSER: Your Honor, may I move.

17 THE COURT: Yes you may.

18 MR. CAWLEY: And can we move your purse  
19 or bag as well?

20 Thank you.

21 Q. (By Mr. Cawley) I apologize for the  
22 inconvenience, but not nearly as much as I am going to  
23 apologize to you, Mr. Pall, because I have a flashlight  
24 to help us here.

25 A. Sure.

1 Q. I am going to ask you to do something, and I  
2 say this sincerely, sir. I mean you no disrespect by  
3 this --

4 A. Sure.

5 Q. But I'm going to ask you to read a tag. And  
6 to show you that I'm not disrespecting you, I'm going to  
7 get down here with you.

8 A. Okay.

9 Q. You will have to get all the way down here.

10 A. Yes, sir.

11 Q. I'm going to ask you to read the tag, the top  
12 of the tag that's on the side of that computer.

13 A. Yes. Windows 2000 Professional 12 CPU.

14 Q. Windows 2000, is that right, sir?

15 A. Yes, sir.

16 Q. And isn't it true, you know, don't you, that  
17 the Windows 2000 product came out February 17th, 2000?

18 A. I disagree with that, sir.

19 Q. Well, I'll put a question mark by it, so we  
20 can have some testimony about it and some evidence.  
21 2/17/2000, question mark.

22 If there's evidence that that's the right  
23 date, that date is also after the patent was filed,  
24 isn't it, sir?

25 A. It's two days after, sir.



1 Q. Two days after, not 1996 for sure.

2 A. Not 1996.

3 Q. No, sir.

4 So you would agree with me that that computer  
5 that you were using to explain and demonstrate to the  
6 jury how your software existed in 1996 has a sticker on  
7 it that says Windows 2000, correct?

8 Correct, sir?

9 A. I disagree, sir.

10 Q. You disagree that the sticker is there?

11 A. No, I dis -- I agree that the sticker is  
12 there.

13 Q. Thank you, sir. That was my --

14 A. All I'm saying is that the software, which is  
15 running on the computer, was built in 1996 --

16 Q. My question --

17 A. -- in the software.

18 Q. I'm sorry. Maybe my question wasn't clear.

19 You agree, don't you, sir, that the computer  
20 that you used purporting to show the jury how this  
21 system would work in 1996 has a sticker on it that says  
22 2000, correct?

23 A. The hardware that I used has a sticker on it  
24 that says 2000.

25 Q. Yes, sir. Thank you.

1           Let me ask you some questions about AutoDial.

2           MR. CAWLEY: And, Your Honor, I've got a  
3 few questions here that have nothing to do with the  
4 demonstration, but then a few more that do. So if I  
5 could just ask Mr. Pall from where he sits now, it might  
6 save a little wear and tear on the carpet.

7           THE COURT: All right.

8           Q. (By Mr. Cawley) Now, Mr. Pall, you told us  
9 that you wrote AutoDial.

10          A. No, sir.

11          Q. Maybe I misunderstood.

12                 In fact, you wrote a prototype for AutoDial,  
13 but other people actually implemented the code, correct?

14          A. I had a team of people working for me who  
15 actually implemented the AutoDial code.

16          Q. All right, sir. That's what I asked you.  
17 And you haven't looked at the AutoDial technical  
18 documents since 1995 or 1996, correct?

19          A. Probably not after 1996.

20          Q. Okay. You know a man named Anthony Discolo?

21          A. Yes, sir. He was one of the developers in my  
22 team who, for a while, worked on AutoDial.

23          Q. He actually was one of the people who  
24 implemented AutoDial, wasn't he?

25          A. He was one of the programmers who worked on

1 AutoDial.

2 Q. And you know that his deposition was taken in  
3 this case?

4 A. I think I'm aware of that, sir.

5 Q. And that deposition will be played, part of  
6 it, for the jury probably on Monday.

7 And are you aware that Mr. Discolo testified  
8 in his deposition that AutoDial does not connect  
9 automatically. It only reconnects when the connection  
10 has been dropped.

11 Are you aware that he testified to that?

12 A. I'm aware of that, sir.

13 Q. Okay. And you are aware that he also  
14 testified that AutoDial's only function is to reconnect.

15 Are you aware of that?

16 A. I didn't read the whole deposition, but -- so  
17 I'm not aware of that completely.

18 Q. It doesn't sound like it surprises you, does  
19 it?

20 A. I am completely surprised, because AutoDial  
21 has nothing to do with that.

22 Q. You already told us Mr. Discolo was one of the  
23 people who wrote it, correct?

24 A. Yes, sir.

25 Q. Okay.

1 A. I was responsible for the feature.

2 Q. You were responsible for the idea, but he was  
3 the man that actually sat down and wrote it out,  
4 correct?

5 A. He was responsible for link failures.

6 Q. So this will be clear, you had the idea, but  
7 he was one of the people who actually -- who implemented  
8 it, right?

9 A. In my supervision --

10 Q. He was one of the people that actually  
11 implemented it, correct?

12 A. In my supervision, yes.

13 Q. Thank you, sir.

14 Now, let me move on to another subject. Get  
15 the easel out.

16 MR. CAWLEY: And that first board, if you  
17 could hand it to me.

18 Q. (By Mr. Cawley) Have you read the patents in  
19 this case, Mr. Pall?

20 A. I have not read the whole patents, sir.

21 Q. After all this time, you still have not even  
22 read the patents?

23 A. No, sir.

24 Q. Okay. But you have been in Court, and you've  
25 seen some of them, some of the claims, correct?

1 A. Yes, sir.

2 Q. And you've seen this claim, for example?

3 A. Yes, sir.

4 Q. Claim 1 of the '135 patent.

5 A. Yes, sir.

6 Q. And this part of the claim says that one of  
7 the things it describes is determining whether the DNS  
8 request transmitted in Step 1 is requesting access to a  
9 secure website.

10 A. Yes, sir.

11 Q. See that?

12 And 3 says: In response to determining that  
13 the DNS request in Step 2 is requesting access to a  
14 secure website automatically initiating VPN.

15 Do you see that?

16 A. Yes, sir.

17 Q. So you see that one of the features of Claim 1  
18 of the '135 patent is this determining feature.

19 MR. SAYLES: Excuse me.

20 Your Honor, I'm going to object to  
21 calling for a legal conclusion as to what one of the  
22 features of the patent is. He's a fact witness.

23 THE COURT: Overruled.

24 Q. (By Mr. Cawley) Do you need me to repeat my  
25 question?

1 A. Yes, sir.

2 Q. You see that some of the steps in Claim 1 of  
3 the '135 patent call for the system to determine whether  
4 a secure website is to be accessed to determine whether  
5 it's going to be a secure connection.

6 A. That's what it reads like.

7 Q. Okay. Sure. Now, let's go back to your  
8 system.

9 A. Yes, sir.

10 Q. Can you go ahead and reconnect the VPN if it's  
11 not connected?

12 A. (Complies.)

13 Q. And we heard that beep. Does that mean that  
14 the VPN is connected?

15 A. The second beep said it's connected, sir.

16 Q. Okay. Good.

17 Could you test it with the ping to be sure?

18 A. It's connected.

19 Q. Okay. Now, would you please disconnect the  
20 VPN.

21 A. (Complies.)

22 Q. And go ahead and close the ping window.

23 A. (Complies.)

24 Q. And close and open Internet Explorer.

25 A. (Complies.)

1 Q. Is that newly opened? I didn't see before.

2 A. I just opened it.

3 Q. Okay.

4 A. But I'll open it again.

5 Q. Okay. Now, instead of this time looking for  
6 your secure website -- you're familiar with eBay, right?

7 A. Yes, sir.

8 Q. And connecting to ebay.com is not a secure  
9 website, is it?

10 A. Connecting to ebay.com, if you're not  
11 connecting with https, it's not.

12 Q. Right. Okay. So type in your browser  
13 www.ebay.com.

14 A. (Complies.)

15 Q. And push yes to connect.

16 A. (Complies.) It's connected.

17 Q. Do we have a VPN?

18 A. You have a VPN, sir.

19 Q. We do have a VPN?

20 A. You have a VPN.

21 Q. Can you test it and show us?

22 A. The VPN is up, so -- but that page which  
23 you're trying to connect to actually doesn't exist  
24 there.

25 Q. Well, I know it doesn't exist there because

1 you have chosen not to set your system up -- hook your  
2 system up to the internet, right?

3 A. Yes, sir.

4 Q. Okay. But my question is, the first time you  
5 demonstrated this to the jury --

6 A. Yes.

7 Q. -- you connected to a secure website and got a  
8 VPN.

9 A. No, sir.

10 Q. You didn't get a VPN?

11 A. No. That was not the first time.

12 Q. Well, maybe not the first time, but you showed  
13 us typing in a secure website and getting a VPN,  
14 correct?

15 A. The second time, I typed in a website, and I  
16 got a VPN.

17 Q. And this time you've typed in eBay, which is  
18 not a secure website, and you still got a VPN, didn't  
19 you?

20 A. Yes, sir.

21 Q. In fact, if you close -- disconnect the VPN.

22 A. (Complies.)

23 Q. And open and close Internet Explorer. I  
24 should say close and open again.

25 A. (Complies.)



1 Q. It doesn't matter what you type in, does it?  
2 You're still going to get the VPN.

3 A. I think it depends on the configuration.

4 Q. Well, let's try it.

5 Please type in www -- type in  
6 www.thisisnotasecurewebsite.

7 A. (Complies.)

8 Q. Then connect.

9 A. (Complies.) It's not found.

10 Q. What?

11 A. It said it's not found.

12 Q. Not found? Do we get a VPN?

13 A. Yep.

14 Q. We still get a VPN.

15 So isn't it true, don't you agree, Mr. Pall,  
16 that the system you're demonstrating is not determining  
17 whether the VPN DNS request transmitted is requesting  
18 access to a secure website?

19 A. The system is not determining that  
20 specifically, sir.

21 Q. Yes, sir. Thank you.

22 I think I'm through with this demonstration,  
23 if you'd like to take the witness stand again.

24 A. Sure. (Complies.)

25 Q. Put this down so it won't be in the way.

1 MR. CAWLEY: Mr. Moreno, what do I need  
2 to push here to get back to your...

3 MR. MORENO: Right at the bottom.

4 MR. CAWLEY: Thank you.

5 Q. (By Mr. Cawley) Let me show you a document  
6 that we saw yesterday. It's Plaintiff's Exhibit 148.  
7 And you remember this document, don't you, sir? You saw  
8 it yesterday when Mr. Jones was testifying?

9 A. I think it -- yeah. It definitely was shown  
10 on the screen.

11 Q. He said that before the lawsuit was filed, he  
12 went to Microsoft's website and saw this section talking  
13 about serverless DNS technology.

14 Do you remember that?

15 A. Yes, I think I remember that.

16 Q. And then he testified that after the lawsuit  
17 was filed, this was changed and now appears as -- in  
18 Plaintiff's Exhibit 507 so that DNS was taken out, and  
19 serverless name resolution was put in.

20 You remember that?

21 A. I remember him talking about it.

22 Q. My question to you, Mr. Pall, is, were you  
23 responsible for this change?

24 A. No, sir. I --

25 Q. Do you know who was?

1 A. I have no idea, sir. It's not in my group.

2 Q. All right, sir. Thank you very much.

3 A. That is not an area that I work on.

4 Q. Let me move on to a different document that I  
5 think maybe you will be familiar with. It's Plaintiff's  
6 Exhibit 227.

7 Do you recognize this document?

8 MR. CAWLEY: Let's go to the next page of  
9 it.

10 A. I think maybe if I see the next page, maybe I  
11 will.

12 Q. (By Mr. Cawley) Yeah. Let's look at the next  
13 page.

14 A. I think I'm familiar with this document.

15 Q. It looks as though it's a presentation that, I  
16 guess, you presented, right?

17 A. I'm -- definitely, sir.

18 Q. And it's -- looks like the copyright date is  
19 2005. Is that about accurate?

20 A. Should be.

21 Q. And, in fact, you think this is some slides or  
22 graphs that you used in a presentation probably around  
23 August of 2005?

24 A. That would be about right. I don't remember  
25 the exact dates or timeframe.

1 Q. Okay. Let's go to the next portion of this  
2 document. Up at the top there, you indicated to your  
3 audience -- and who attended this presentation?

4 A. I don't specifically remember who attended --

5 Q. I don't mean their names; I mean what kind of  
6 people?

7 A. Is it Tech -- was it Tech Ready? Do you mind  
8 if -- what is the numbers, and I'll take a look at it,  
9 and I'll be able to tell you better.

10 Q. Sorry. It's 227.

11 A. 227.

12 Tech Ready is a present -- is a meeting that  
13 Microsoft has, I think, twice or thrice a year, and it  
14 is for what the Microsoft sales force -- where they come  
15 to Redmond or some other place and people present to  
16 them.

17 Q. Okay. And one of the things you told your  
18 audience back in August of 2005 was that RTC has high  
19 TDM and BDM value.

20 That's a little -- sounds like a little bit of  
21 code. Maybe you can help with us (sic). What's RTC  
22 again?

23 A. Real-time communications.

24 Q. All right. And that's one of the products we  
25 were talking about that's being accused in this lawsuit,

1 right?

2 A. You mean RTC API, sir?

3 Q. Yes, sir.

4 A. Yes. RTC doesn't necessarily mean RTC API,  
5 so...

6 Q. Okay. But let me ask you, what is TDM?

7 A. TDM means technical decision-maker.

8 Q. And why did you tell your audience that RTC  
9 has a high-technical decision-maker value?

10 A. This is an audience, which is the Microsoft  
11 sales force. So you have to -- you tell them that when  
12 you are talking to customers who are making decisions on  
13 products, you know, which we refer to as technical  
14 decision-makers, you know, this is the kind of stuff you  
15 should be talking about.

16 Q. Okay. And then you talked about BDM value.  
17 What's BDM?

18 A. I apologize for all these acronyms, but a BDM  
19 means business decision-maker.

20 Q. Okay. So why did you tell your audience that  
21 RTC has high business decision-maker value?

22 A. Because a typical -- let's say that you're  
23 working at Chevron, and Chevron has a sales force. The  
24 sales force is working in many different cities and  
25 perhaps even around the world.

1           The head of sales for Chevron would be the  
2 business decision-maker here. And they are really  
3 interested in making sure that their sales force can  
4 talk to each other and have the best software for  
5 communicating. So that would be BDM value.

6           Q.     So RTC has value both for customers who have  
7 got technical decisions to make and customers who have  
8 business decisions to make, fair?

9           A.     Yeah. That -- the way you articulated it  
10 sounds a little -- not how I would use it, but --

11          Q.     You don't disagree with me, though, do you?

12          A.     So I -- I think it's -- it's -- the way the  
13 sentence is constructed is just a little different than  
14 I would --

15          Q.     I see. You don't like the way I constructed  
16 the sentence, and you'd rather construct it some other  
17 way. Is that what you're saying?

18          A.     Sir, respectfully, I just want to make sure I  
19 understand what you're saying, and I didn't totally  
20 understand it.

21          Q.     Okay. Then let me repeat it. And if I ask  
22 you any question that you don't understand, please --  
23 please -- we'll probably move faster if you would just  
24 say, I don't understand, and I'll be glad to repeat the  
25 question.

1           So you've told us that RTC has high value for  
2 people who are technical decision-makers, correct?

3           A.    Yes, sir.

4           Q.    And it also has high value for people who are  
5 business decision-makers, correct?

6           A.    Yes --

7           Q.    Okay.

8           A.    -- sir.

9           Q.    And now a little below that, there's more  
10 highlighted language where you indicate that office RTC  
11 will do \$150 million as a group next year, correct?

12          A.    Yes, sir.

13          Q.    And then you say it's one of the fastest  
14 growth areas in the company. I guess the company is  
15 Microsoft, right?

16          A.    Yes, sir.

17          Q.    And that it's growing nearly 80 percent --  
18 what is Y/Y?

19          A.    Year over year.

20          Q.    Year over year. Okay.

21                So this area, not only were you going to do  
22 \$150 million as a group next year, but it was going to  
23 grow 80 percent year over year, correct?

24          A.    Yes, sir.

25          Q.    And you told the group that you have 900

1 people in the office RTC team representing one of the  
2 larger investments for IW, right?

3 A. Yes.

4 Q. IW is?

5 A. Information worker.

6 Q. Let's look at another document. This is  
7 another one I think you wrote, Mr. Pall, or at least  
8 used. It's Plaintiff's Exhibit 228. It's in the book  
9 in front of you, if you'd like to see it on paper.

10 A. Yeah, I recognize this document.

11 Q. Okay. Did you write this document?

12 A. Yes. I was one of the main authors of this  
13 document, sir.

14 Q. Okay. It says Gurdeep Singh-Pall. That's  
15 you, right?

16 A. Yes.

17 Q. And company, I guess that's other people who  
18 worked with you?

19 A. There are a few people who authored the  
20 document, and that's the short form of --

21 Q. Okay.

22 A. -- the way you're putting that.

23 Q. Well, I don't want to read it all, but let's  
24 go down to some of the highlighted language here.

25 Who was the audience for this -- this paper or



1 presentation?

2 A. The audience was my whole organization. This  
3 is a document that I'm writing to tell them about how we  
4 can think about the next versions of our products.

5 Q. And you wrote this document in 2008, correct?

6 A. One second.

7 Q. I think there's a --

8 A. I'm sorry. What's the number again?

9 Q. Yeah. I'm sorry. It's Plaintiff's  
10 Exhibit 228.

11 A. I guess I've written it -- I can't tell the  
12 exact time, but that's -- it would be either 2007 or  
13 2008.

14 Q. Okay. And you were projecting in the language  
15 we're about to read some goals that are relevant to  
16 where you wanted to be by fiscal year 2010, correct?

17 A. Yes, sir.

18 Q. And one goal you list is that the UC  
19 business -- and remind us what that is.

20 A. The unified communications products business.

21 Q. The unified communications product is a \$3.4  
22 billion business.

23 Is that -- did I read that right?

24 A. You read that right, sir.

25 Q. Okay. And what -- what's the next highlighted

1 portion, MOC 700 million?

2 A. MOC stands for Microsoft Office Communicator.

3 Q. Okay. That's one of the products accused in  
4 this case, correct?

5 A. Yes, sir.

6 Q. And you say that that alone is 700 million,  
7 right?

8 A. In the document, it says that, sir.

9 Q. Okay. And these numbers don't include your  
10 projections, if you even have any projections, for what  
11 might happen with Windows, do they?

12 A. No, sir. That's not my responsibility.

13 Q. Okay. So you weren't even including the  
14 Windows products in these projections.

15 A. No, sir. This is only about Office  
16 Communication Server and Microsoft Office Communicator.

17 Q. All right, sir. And isn't it true, Mr. Pall,  
18 that back in 2005, that you had about 300 people on the  
19 Live Communications Server team?

20 A. Yes, sir.

21 Q. And that at least at the time your deposition  
22 was taken, you had about 700 people on that team?

23 A. Yes, sir.

24 Q. And that the projected revenue for Office  
25 Communication Server for 2009 was \$422 million; is that

1 right?

2 A. Sounds about right.

3 Q. Okay. You also showed us some sections that  
4 we've seen before in the trial from Defendant's 3111.

5 Do you remember that?

6 Let's pull that up so you can be sure of the  
7 document we're talking about. Do you see 3111? Do you  
8 recognize that?

9 A. I recognize it, sir.

10 Q. And to save us all some time, it was in this  
11 document that we saw a few or maybe several references  
12 saying you can communicate securely with this product  
13 without the need for a VPN.

14 A. That is correct, sir.

15 Q. And this is the document about which Dr. Jones  
16 said he interpreted that to mean, you don't need to go  
17 out and buy a VPN product because you get it with this  
18 product, and you said that that wasn't what you think it  
19 means, correct?

20 A. I heard him say that, sir.

21 Q. Okay. Well, let me ask you this: When your  
22 deposition was taken, you told us that a VPN allows one  
23 machine to connect to a network that has many machines  
24 or may allow one network with many machines to connect  
25 to another network with many machines so that any

1 machine on either network can communicate with each  
2 other.

3 Do you remember that?

4 A. I don't remember the exact words, but it  
5 sounds right, sir, something --

6 Q. It's kind of a mouthful, but --

7 A. -- something -- what I would say, yeah.

8 Q. You didn't hear anything in there you  
9 disagreed with, right?

10 A. No.

11 Q. And you agree that, therefore, a VPN is more  
12 than just a point-to-point connection?

13 A. Yes, sir.

14 Q. Okay. And does this product that was being  
15 described in Defendant's Exhibit 3111 allow one machine  
16 to connect to a network that has many machines?

17 A. Yes, it does.

18 Q. Does it allow -- may it allow -- I don't mean  
19 it necessarily does, but can it allow one network with  
20 many machines to connect to another network with many  
21 machines?

22 A. Office Communicator does not, sir.

23 Q. Okay. You have other products that do?

24 A. Not in this context.

25 Q. Okay.

1 A. But Office Communicator does not.

2 Q. Now, in this document, we've seen several  
3 references that we talked about a minute ago saying that  
4 you can use this product without a VPN.

5 And it's your contention, is it not, that  
6 Microsoft Office Communicator 2007 does not use or  
7 create a VPN?

8 A. Sir, it's not my contention; it's what I  
9 designed the product to do.

10 Q. Well, I think we're about to get into some  
11 definitions here, but my question to you is, do you or  
12 do you not contend that Microsoft Office Communicator  
13 2007 does not set up a VPN?

14 A. Office Communicator 2007 does not set up a  
15 VPN.

16 Q. Okay. Thank you, sir.

17 Now, you remember that in your deposition, you  
18 were asked to list all the reasons why what Microsoft  
19 Office Communicator 2007 does is not a VPN.

20 Do you remember that?

21 A. I don't remember exactly, but if you would  
22 show it, I would --

23 Q. Would you like to read it in your deposition?

24 A. Sure.

25 MR. CAWLEY: I'm sorry, Your Honor. May

1 I approach, since I'm already here?

2 THE COURT: Yes, you may.

3 Q. (By Mr. Cawley) You told us, sir, that you  
4 don't create a VPN because there's no tunneling, no  
5 encapsulation, and no applications other than Office  
6 Communication can access connection when connected to  
7 Office Communication Server.

8 A. Could you tell me the page number, sir?

9 Q. Well, I didn't write it down in my notes.  
10 Let's -- let me see if I can find it.

11 MR. CAWLEY: I'm sorry, Your Honor. I  
12 thought I had written the page number down.

13 (Pause in proceedings.)

14 Q. (By Mr. Cawley) All right. Start -- take a  
15 look at your deposition, beginning on Page 97.

16 A. Yes, sir.

17 Q. You see that?

18 And you might just want to glance over that  
19 down through Page 100.

20 A. Yes, sir.

21 Q. So do you see generally what you said there in  
22 your deposition about why you believe you don't use a  
23 VPN?

24 A. Yes, sir.

25 Q. And you did mention three things, didn't you?

1           A.     Which three things specifically are you  
2 talking about, sir?

3           Q.     You mentioned tunneling, right?

4           A.     Yes.

5           Q.     You mentioned encapsulation, right?

6           A.     Yes.

7           Q.     And you mentioned that no other applications,  
8 other than Office Communication can access the  
9 connection when the connection is connected to Office  
10 Communication Server?

11          A.     Yes, sir.

12          Q.     Okay. And you said that those are the only  
13 three things that you knew of.

14          A.     And Office Communications may include all  
15 applications written on UCC APIs, which I consider part  
16 of Office Communicator.

17          Q.     All right, sir. But you were asked in your  
18 deposition under oath the reasons you could think of why  
19 you say your product doesn't create a VPN, and those are  
20 the three reasons you gave.

21          A.     Yes, sir.

22          Q.     Okay. That's all I'm trying to establish.  
23 Now, I understand, Mr. Pall, that you have a definition  
24 of what a VPN is, and I guess Microsoft has a deposition  
25 on -- a definition. Maybe your definition is

1 Microsoft's deposition -- definition. I don't know.

2 But right now, I'd like you to look at Judge  
3 Davis' definition of what a VPN is. And here it is.

4 Could you read that, sir? You don't have to  
5 read it out loud. I think we've heard it before.

6 A. (Complies.) Yes, sir.

7 Q. All right. Now, let me ask you this: Your  
8 three reasons.

9 First reason, no tunneling.

10 Do you see any reference to tunneling in Judge  
11 Davis' definition?

12 It's not there, is it?

13 A. I can read it in there, sir.

14 Q. Well, I'm not asking if you can read it in  
15 there. I think Judge Davis is probably pretty capable  
16 of saying what he means.

17 Do you see the word tunneling in there?

18 A. I don't see the word tunneling in there.

19 Q. All right, sir. Do you see the word, second  
20 reason, encapsulation? Do you see that in there?

21 A. I do not see encapsulation.

22 Q. And do you see any reference that multiple  
23 applications must be able to access over the  
24 communications link?

25 A. No, sir.



1 Q. All right, sir. Now, you remember you showed  
2 us a slide -- and in the interest of time, I won't  
3 bother to get it out, but it showed four different  
4 communications protocols or choices.

5 Remember what I'm talking about?

6 A. I think --

7 Q. Relating to the DNS SRV?

8 A. There were two fours there, sir.

9 The first four was how Office Communicator --  
10 the four ways that it can find a server, and then within  
11 the third way, there were four names that it looked for.

12 Q. All right, sir. But as far as the four ways  
13 that it could find a server goes, you were sitting in  
14 the courtroom, weren't you, during -- when Mr. Mu Han's  
15 deposition was read?

16 A. Yes, sir.

17 Q. And do you remember him saying that Microsoft  
18 always uses way three, the DNS RSV request?

19 A. I heard him say that, sir.

20 Q. Do you remember him testifying -- he didn't  
21 just say it; he testified -- that that's also true for  
22 Hewlett-Packard and Intel?

23 A. I believe that's what he said, that's right.

24 Q. And didn't you say in your deposition, sir,  
25 that the DNS RSV is the default?

1 A. I -- can you please show me that, sir? I'm  
2 not sure.

3 Q. Well, I don't know if it's worth the time, but  
4 isn't it true that it is the default, sir?

5 A. It's not the default.

6 Q. You don't disagree with that, do you?

7 A. Well, it's not the default.

8 Q. You think that it's not the default?

9 A. Well, the default way, if -- of the four ways  
10 that are there, if one doesn't work, two doesn't work,  
11 three doesn't work, the fourth is the default where it  
12 will assume a name and connect to that, sir.

13 Q. All right, sir. Let's -- let's go on to the  
14 last subject that I want to ask you about. And let's  
15 start discussing it by taking a look at Defendant's  
16 Exhibit 3066.

17 Do you have that in front of you, or can you  
18 see it on the screen?

19 A. Yes, sir.

20 Q. Tell us what this is again.

21 A. This is a document which talks about how to  
22 secure L2TP using IP SEC.

23 Q. Okay. And who prepared this document?

24 A. As in other IETF documents, the name of the  
25 authors are kept at the top right corner --

1 Q. Okay. Let's --

2 A. -- of the document.

3 Q. Let's go to that. Top right corner.

4 Someone from Intel, couple of people from  
5 Microsoft, someone from Cisco Systems, right?

6 A. Yes, sir.

7 Q. And tell us again the body that put this paper  
8 out?

9 A. IETF.

10 Q. And that stands for?

11 A. Internet Engineering Task Force.

12 Q. Okay. And this is the group of people you  
13 talked about that are working on the internet on a  
14 pretty constant basis, right?

15 A. Which group of people are you referring to,  
16 sir?

17 Q. Well, I thought you testified earlier that  
18 this is a group of people who is trying to make the  
19 internet work better.

20 A. Are you talking about these specific people in  
21 the document or --

22 Q. No, no, no. I'm talking about the  
23 organization.

24 A. Oh, the organization is focused on making  
25 internet standards to be right, yes, sir.

1 Q. So let's take a look at a piece of this  
2 document that we haven't seen, Page 28. Up at the top  
3 there -- not the first paragraph, but the second, I'm  
4 going to read you some language and ask you if you've  
5 read this before.

6 A. I can't --

7 Q. IETF invites any interested party to bring to  
8 its attention any copyrights, patents, or patent  
9 applications or other proprietary rights which may cover  
10 technology that may be required to practice this  
11 standard. Please address the information to the IETF  
12 executive director.

13 Do you see that sir?

14 A. Yes, sir.

15 Q. So you recognize, don't you, that this  
16 organization, the IETF, actively invites people to let  
17 them know if there may be patents.

18 A. In 2001, they were doing that, sir.

19 Q. Yes, sir. Okay.

20 That's in the document --

21 A. Yeah.

22 Q. -- that's in evidence, right?

23 A. Yes, sir.

24 Q. Okay. So now let's look at a document we've  
25 seen several times, Plaintiff's Exhibit -- I don't

1 know -- 2 -- 120.

2 This is a letter from SAIC to Microsoft.

3 And let's start in the upper left. It was  
4 addressed to Mr. Anoop Gupta, Corporate Vice President,  
5 Unified Communications Group.

6 Do you know Mr. Gupta?

7 A. I know Mr. Gupta, sir.

8 Q. And Mr. Gupta, he was -- was he in the Unified  
9 Communications Group when you knew him?

10 A. Yes, sir. He was my boss.

11 Q. He was your boss. Okay.

12 Mr. Gupta -- we don't actually know what  
13 Mr. Gupta did with this letter, but what we do know is  
14 over to the right-hand side, if we go to the far right,  
15 it appears, would you agree, that this was received on  
16 May 2nd, 2006, by Mr. Bradford Smith in the Microsoft  
17 Legal Department.

18 A. I trust that happened, sir.

19 Q. Do you know Mr. Smith?

20 A. I -- he's a distant colleague.

21 Q. Distant colleague.

22 A. I don't work with him closely.

23 Q. And then below that, it shows -- just below  
24 that -- where we were looking at, it says: From  
25 Bradford Smith to, and then by handwriting, it's written

1 in Marshall Phelps.

2 Do you know Mr. Phelps?

3 A. Yes, as, again, a distant colleague.

4 Q. Okay. At this time, May of 2006, he was the  
5 lead intellectual property lawyer for Microsoft, right?

6 A. I don't remember his exact title, but he was a  
7 pretty senior person.

8 Q. And he was in the Legal Department.

9 A. Yeah, I would think so. I --

10 Q. He was responsible for intellectual property  
11 matters, things like patents, correct?

12 A. I knew he was involved with that, that's  
13 correct.

14 Q. Okay. And then finally, we see just to the  
15 left of that, apparently, the inner office mail was  
16 working okay, because the next day, we see, received by  
17 Marshall Phelps on May 3rd.

18 Do you see that?

19 A. Yes, sir, I see that.

20 Q. Now, the letter, I'll remind you --

21 MR. CAWLEY: If we can go down into the  
22 body of it, in the first line or two --

23 Q. (By Mr. Cawley) -- offered an opportunity to  
24 enter into a mutually beneficial business arrangement.

25 And then below that, it identified by number the '135

1 patent.

2 Do you see that?

3 A. Yes, sir.

4 Q. And then near the end of the letter, it  
5 offered to license the letter.

6 A. License the letter, sir?

7 Q. License the letter. I guess that wouldn't get  
8 very far.

9 It offered to license the patent?

10 A. -- could you highlight that so that --

11 Q. Sure.

12 A. Yes.

13 Q. First of all, before -- just to make it short,  
14 before we get there, apparently, it enclosed a copy of  
15 the patent.

16 Do you see that?

17 A. Yes. I do see the highlighted part.

18 MR. CAWLEY: And let's go down further,  
19 and here we go.

20 Q. (By Mr. Cawley) We believe the '135 patent  
21 would be of interest to your company in connection with  
22 its Live Communications Server product with Server  
23 Pack 1 and in connection with its Microsoft Office  
24 Communicator 2005 product. In our view, a license to  
25 the '135 patent could offer unique opportunities to

1 Microsoft.

2 Do you see that language?

3 A. Yes, sir, I see that.

4 Q. Now, did you see this letter?

5 A. I don't recall seeing this letter, sir.

6 Q. Now, remind us, what was your position in

7 2005?

8 A. In 2005, I was a corporate vice president  
9 focused on Office Communicator and Office Communications  
10 Server.

11 Q. And those products are mentioned in this  
12 letter, right?

13 A. Yes, they are, sir.

14 Q. And yet you're not sure whether you saw this  
15 letter or not.

16 A. Yes, sir. I'm not sure.

17 Q. Is that your testimony?

18 A. I'm not sure.

19 Q. Did Microsoft, after receiving this letter,  
20 take any steps to avoid infringing the '135 patent?

21 A. I do not know of taking any steps. I know  
22 there was follow-up to the letter, but I do not know of  
23 any steps we would take on infringing the letter.

24 Q. Now you said it.

25 A. I said it. On infringing the patents.



1 Q. Thank you. Okay. We're even, I guess.  
2 Isn't it true, Mr. Pall, that the way you operate your  
3 team is that you don't focus on what intellectual  
4 property or patents that other people may own or things  
5 like that that are going on in the industry?

6 A. I disagree, sir.

7 Q. Well, isn't that what you said in your  
8 deposition?

9 Let's take a look at your deposition.  
10 Page 77.

11 Do you have Page 77?

12 A. Yes, sir.

13 MR. CAWLEY: Let's highlight this  
14 language that begins with the witness, all the way down  
15 to the next -- there you go. Stop.

16 Q. (By Mr. Cawley) You said: I cannot comment  
17 for Microsoft and how broadly Microsoft operates in this  
18 area. I can tell you how I guide my team. And the way  
19 we operate is, my team is focused on innovation, and we  
20 believe that we have the forefront of technology.

21 We can innovate for any problem that comes in  
22 our way, and we do not focus on what intellectual  
23 property or patents or other things which are going on  
24 in the industry. We just focus on what -- innovation  
25 ourselves.

1           Is that what you testified in your deposition,  
2 sir?

3           A.    That's what I said, sir.

4           Q.    Yes, sir.

5           Do you know Henry Sanders?

6           A.    I know Henry Sanders, sir.

7           Q.    Did you see him testify this morning?

8           A.    Yes, I saw him testify.

9           Q.    And you saw and heard him testify that as far  
10 as he knows, he's a -- he's a -- in 2008, and ran the  
11 development group that was responsible for Windows  
12 networking technology, didn't he?

13          A.    Yes, sir.

14          Q.    And he testified this morning by deposition  
15 that there is no step where Microsoft checks whether  
16 someone's patent will be infringed.

17          Do you remember that testimony?

18          A.    Yes, sir.

19          Q.    Do you know Mr. Ryan Kim?

20          A.    I don't know him, sir.

21          Q.    You don't know Mr. Kim. Well, he's probably a  
22 little far down the chain. He's a Microsoft developer,  
23 isn't he? Do you remember testifying to that testimony  
24 this morning?

25          A.    I saw his testimony being -- part of his

1 testimony being read out, but I don't know him, sir.

2 Q. What's a developer?

3 A. A developer is a programmer.

4 Q. A programmer. He's a guy who sits in front of  
5 some computer and types away programming, right?

6 A. Yes, sir.

7 Q. And you heard him testify this morning, didn't  
8 you, that Microsoft developers are told by Microsoft not  
9 to look at patents.

10 Did you hear that?

11 A. Yeah, I heard him say that, sir.

12 Q. Yes, sir. Thank you, Mr. Pall.

13 MR. CAWLEY: I'll pass the witness.

14 THE WITNESS: Thank you, sir.

15 THE COURT: Redirect?

16 MR. SAYLES: May it please the Court.

17 REDIRECT EXAMINATION

18 BY MR. SAYLES:

19 Q. Mr. Pall, just a couple of things.

20 Mr. Cawley asked you about your deposition on  
21 Page 77 where you explained that your group focused on  
22 innovation.

23 A. Yes, sir.

24 Q. Are you in any way trying to say anything  
25 differently today?

1           A.     The only -- it's the same -- the same  
2 operating model that we have at Microsoft is pretty well  
3 reflected there.

4           If -- as I said earlier, if somebody comes --  
5 approaches us with some intellectual property and shows  
6 that we are actually using that intellectual property,  
7 then we take the appropriate steps.

8           Q.     All right. And I -- I think that you may have  
9 already answered this, but I just want to make sure.  
10 Mr. Cawley asked you about one of the letters that was  
11 sent on behalf of VirnetX.

12           Do you recall that just a minute ago?

13           A.     Yes, I saw that, sir.

14           Q.     And were you in Court when the replies were  
15 shown asking for information -- Microsoft asking VirnetX  
16 for information?

17           A.     Yes, sir. I was in Court when I saw the  
18 letter from Microsoft back to SAIC/VirnetX. Yeah, I saw  
19 that letter, sir.

20           Q.     With regard to the exhibits that you were  
21 shown earlier, 227, 228, several that you authored where  
22 you were writing to your group about RTC, do you  
23 remember those documents?

24           A.     Yes, sir.

25           Q.     Tell the ladies of the jury what you're

1 addressing when you address RTC as a whole?

2 A. I'm talking about products like Office  
3 Communications Server, Office Communicator, the  
4 application that allows you to make phone calls over the  
5 internet, do video, do instant messaging.

6 I'm talking about all those capabilities as  
7 delivered by those products.

8 Q. He also brought out with you that that group  
9 has a number of employees and has a fairly large budget  
10 by most of our standards.

11 Do you remember that?

12 A. Yes, sir.

13 Q. Now, are those people and that budget all  
14 directed to the accused feature in this case involving  
15 RTC?

16 A. No, sir, not at all.

17 Q. A few minutes ago, with regard to the  
18 demonstration that you performed, VirnetX's attorney  
19 asked you to type in [www.ebay.com](http://www.ebay.com).

20 Do you remember that?

21 A. Yes, sir.

22 Q. And VirnetX's attorney suggested that this  
23 demo was somehow invalid, I think would be fair, because  
24 typing in [www.ebay.com](http://www.ebay.com) caused a VPN connection to be  
25 established.

1 Do you remember that?

2 A. I remember that, sir.

3 Q. Were you surprised when the VPN was created?

4 A. I was not surprised when the VPN was created.

5 Q. Why not?

6 A. The main reason I wasn't surprised is, the way  
7 the software is written and configured, it's designed to  
8 make the VPN connection for a name that is typed in.

9 Q. Now, AutoDial -- and why is that important?  
10 Would you explain that?

11 A. It's very important.

12 When you're -- you know, when you're sitting  
13 at home, let's say, and you are -- most of the time, you  
14 know, you're on eBay or Amazon or looking at Facebook or  
15 applications like that, it's not every time that you  
16 want to make a connection securely to your workplace.  
17 You only want to make a secure connection when you are,  
18 you know, connecting to your workplace to access a  
19 computer on the net.

20 So depending on the configuration, the  
21 software can allow you to do many things.

22 Q. Do you recall when Mr. Cawley focused your  
23 attention on the fact that the BIOS had a 2000 version  
24 in it? Do you recall that?

25 A. Yes, sir, I saw that.

1 Q. Would this demonstration have worked any  
2 differently if you had a 1996 version?

3 A. No, sir.

4 Q. Can you explain that, please.

5 A. Yes, sir. You can buy a computer in 2000,  
6 2001. What you saw when you use that computer is not  
7 the hardware; it is only the programs that are running  
8 on that computer.

9 So it was -- it was really strange when he  
10 pointed to the hardware and said, you know, that this is  
11 a 2001 computer. What you saw was exactly what you  
12 would see in 1996.

13 Q. So why use a 2005 BIOS?

14 A. So as these computers were being put together  
15 to do the demonstration, we had to go find some very old  
16 computers, because this software, which was written in  
17 1996, doesn't run on computers that you can buy today.  
18 So we -- I think we found went and found the oldest  
19 computers that we do get our hands on and put the  
20 software on those computers.

21 Q. Just a couple more things.

22 Do you remember getting down on your knees  
23 with Mr. Cawley and looking under the table, and there  
24 was a sticker on the side of the box down there?

25 A. Yes, sir.

1 Q. Is that of any significance at all with  
2 respect to the demonstration that you did?

3 A. No, sir, not at all.

4 Q. Would you explain that, please.

5 A. Yes, sir. That sticker shows when the  
6 hardware was made. It does not show when the software  
7 was made. When you're using -- when you were seeing the  
8 screen and you were making the connection, you were  
9 using the software.

10 I could have put that software on a computer  
11 made in 1995, '96, '97, '98, '99, 2000, 2001, 2002,  
12 probably after that -- I don't know if the hardware  
13 would support software from 1996.

14 So it is really of not any significance for  
15 this particular demonstration, sir.

16 Q. And one final thing, Mr. Pall, have you ever  
17 appeared in Court and testified as a witness before?

18 A. No, sir. This is my first time.

19 MR. SAYLES: I'll pass the witness.

20 MR. CAWLEY: No further questions, Your  
21 Honor.

22 At this time, I would like to move into  
23 evidence as a demonstrative exhibit Plaintiff's  
24 Demonstrative 17, the timeline that I drew.

25 THE COURT: Any objection?



1 MR. SAYLES: As a demonstrative, there's  
2 no objection.

3 THE COURT: All right. Be admitted.  
4 All right. You may step down, Mr. Pall.  
5 Thank you.

6 All right. Ladies of the Jury, we're  
7 going to take our afternoon break at this time, and we  
8 will be in recess until 3:25.

9 COURT SECURITY OFFICER: All rise.  
10 (Jury out.)  
11 (Recess.)

12 COURT SECURITY OFFICER: All rise.  
13 (Jury in.)

14 THE COURT: Please be seated.  
15 All right. Who will Microsoft's next  
16 witness be?

17 MS. WEISWASSER: Your Honor, Microsoft  
18 calls Tyler Barton.

19 THE COURT: Tyler Barton.  
20 All right. You have been sworn, haven't  
21 you, Mr. Barton?

22 THE WITNESS: Yes, I have.

23 TYLER BARTON, DEFENDANT'S WITNESS, PREVIOUSLY SWORN

24 DIRECT EXAMINATION

25 BY MS. WEISWASSER:

1 Q. Good afternoon.

2 A. Good afternoon.

3 Q. Please introduce yourself to the jury.

4 A. My name is Tyler Barton.

5 Q. Mr. Barton, who is your employer?

6 A. I work for Microsoft.

7 Q. Have you had involvement in the area of  
8 peer-to-peer technologies at Microsoft?

9 A. Yes, I have. I've had extensive involvement  
10 in that area. I was a program manager in the  
11 peer-to-peer group for three years, from the summer of  
12 2006 until the summer of 2009.

13 Q. Have you also been involved in Windows Meeting  
14 Space?

15 A. Yes, I have. I've worked on the PeerNet APIs  
16 and on Windows Meeting Space.

17 Q. We're going to talk about your work in the  
18 peer-to-peer area later, but first let's talk a bit  
19 about your background.

20 Did you go to college?

21 A. Yes, I did. I received my bachelor of  
22 software engineering degree from the University of  
23 Waterloo in 2006.

24 Q. Where is the University of Waterloo?

25 A. It's a short drive from Toronto, Canada.

1 Q. Did you come to work directly for Microsoft  
2 after college?

3 A. I did. But I actually started working for  
4 Microsoft while I was still in college. The University  
5 of Waterloo has a co-op program where you have the  
6 opportunity to switch between school and work in  
7 industry every four months.

8 I did a total of six co-op placements, the  
9 last two of which were for Microsoft.

10 Q. Please tell us a little bit about the work you  
11 did for Microsoft on your internships while in college?

12 A. My first time at Microsoft, I worked on a  
13 technology called Windows Presentation Foundation. Its  
14 a graphics technology. And then I came back to work on  
15 the peer-to-peer team where I worked on Windows Meeting  
16 Space and the PeerNet APIs, and I later joined the  
17 peer-to-peer team full-time.

18 Q. You said that you joined Microsoft after  
19 graduating from college in 2006.

20 A. That's right.

21 Q. What were your responsibilities when you  
22 joined Microsoft at that time?

23 A. I joined as a program manager in the  
24 peer-to-peer group. My responsibilities included the  
25 design and development of peer-to-peer features with

1 help of software development and test engineering teams.  
2 I worked on Windows Meeting Space, and I worked on the  
3 PeerNet APIs.

4 Q. Mr. Barton, I know you haven't had a chance to  
5 be in the courtroom over the past few days, but the jury  
6 has heard quite a bit about some of these technologies.  
7 But let's go through some background.

8 What are peer-to-peer technologies?

9 A. Peer-to-peer is a broad term. A peer-to-peer  
10 system is one where client computers work directly  
11 together without using any kind of a third-party server.  
12 The opposite of peer-to-peer is what we call client  
13 server. In client server, your computers do make use of  
14 a server or an intermediary when they communicate.

15 E-mail is great example of a client server  
16 technology that you might actually think is  
17 peer-to-peer. When you send an e-mail to your friend,  
18 your computer doesn't send that e-mail directly to hers.  
19 It actually sends that e-mail to an e-mail server.  
20 And that server is responsible for holding onto the  
21 message and making sure that it gets where it's supposed  
22 to go.

23 So with client server, you do use a server or  
24 intermediary. And with peer-to-peer, your computers  
25 work together directly.

1 Q. Now, you mentioned the PeerNet APIs. Let me  
2 ask you first, what is an API?

3 A. An API stands for application programming  
4 interface, and it's kind of like a tool that we put in  
5 Windows that's there for applications to make use of.  
6 It makes it easier for developers to build applications  
7 that work on Windows.

8 Now, an API isn't something that you would use  
9 directly yourself. It lies dormant until an application  
10 comes along that makes use of it.

11 Q. Let's just be clear on our terminology. When  
12 you say an application, what are you referring to?

13 A. An application is something that you use to do  
14 something on your computer. If your word processing,  
15 you might use Microsoft Word as an example of an  
16 application. You use an application when you send  
17 e-mail, when you look at photographs. You might use an  
18 application like Quicken or QuickBooks for management of  
19 business or managing money.

20 So an application is something that you use to  
21 do something on your computer.

22 Q. So let's return back to the PeerNet APIs.  
23 What are the PeerNet APIs?

24 A. PeerNet APIs are tools that we put in Windows  
25 that are there for -- to help developers build

1 peer-to-peer applications.

2 Q. Do the PeerNet APIs have use to someone  
3 sitting at their computer, if there is no peer-to-peer  
4 application?

5 A. No. As I said, APIs aren't something that you  
6 use directly. They're used by applications. So if  
7 there's no application that uses the API, it kind of  
8 lies dormant.

9 Q. How many PeerNet APIs are there?

10 A. There are three technologies in the PeerNet  
11 APIs. They are called PNRP, grouping, and graphing.

12 Q. Do Windows XP and Windows Vista have APIs  
13 other than the PeerNet APIs?

14 A. Yes. Windows has thousands of APIs. Windows  
15 Vista and XP have thousands of APIs. And the PeerNet  
16 APIs are a few of these thousands.

17 Q. Now, if I were to buy Windows XP in a box, say  
18 at Best Buy, would that box actually contain that  
19 PeerNet APIs?

20 A. Yes. The APIs would be in the box, yes.

21 Q. And would that box contain any peer-to-peer  
22 applications based on the PeerNet APIs?

23 A. No. No, there are no applications that use  
24 PeerNet APIs in XP.

25 Q. Let me ask you the same question about Windows

1 Vista.

2           So if I buy a box containing Windows Vista,  
3 does that box contains the PeerNet APIs?

4           A.    Yes, it does.

5           Q.    Would it contain any peer-to-peer applications  
6 based on the PeerNet APIs?

7           A.    There's one.  It's called Windows Meeting  
8 Space, and it's available in Windows Vista.

9           Q.    So there's one application in Windows Vista  
10 that is called Windows Meeting Space?

11          A.    That's right.  Yes.

12          Q.    Have you worked on Windows Meeting Space?

13          A.    I have, yes.

14          Q.    I'd like to ask you a few questions about it  
15 and how it works.

16                Are you aware that VirnetX says that Windows  
17 Meeting Space is somehow using its patents?

18          A.    Yes.

19          Q.    And you've worked on that application?

20          A.    I've worked on Windows Meeting Space, yes.

21          Q.    So let's just start by talking about, what is  
22 Windows Meeting Space, what does it do?

23          A.    Windows Meeting Space is an application that  
24 you can use when you're having a meeting and everybody  
25 in that meeting has got a laptop.  You can use it to

1 share files between the computers in the meeting. You  
2 can use it to share your screen so that everybody in the  
3 meeting can look at the same picture on their own  
4 computer.

5 Q. Now, you mentioned in a meeting. Is Windows  
6 Meeting Space typically used in face-to-face meetings,  
7 or is it used over the internet?

8 A. Windows Meeting Space is designed for what we  
9 call face-to-face meetings. So it's designed for the  
10 situation when everybody is in the same room. It's not  
11 designed for use over the internet.

12 Q. I'd like to talk about a few subjects relating  
13 to how Windows Meeting Space works. Now, I know you've  
14 not been in Court for the testimony of this week,  
15 because of Judge Davis' order excluding fact witnesses.  
16 But I would like to bring up an example that has been  
17 used, which is a library.

18 But since you said that Windows Meeting Space  
19 is not designed for remote use over the internet, why  
20 don't we take a library example where a group of  
21 students are, say, having say a study session in a  
22 particular room.

23 Let's go through how Windows Meeting Space is  
24 used that they might share files on their computers in  
25 that room, and then let's talk about how others might



1 get invited into that Windows Meeting Space session.

2 A. Okay. This is where it would help if I could  
3 use the easel.

4 MS. WEISWASSER: Your Honor, may the  
5 witness approach the easel?

6 THE COURT: Yes, he may.

7 MS. WEISWASSER: Your Honor, may I  
8 approach the witness?

9 THE COURT: Yes, you may.

10 MS. WEISWASSER: Can y'all see okay?

11 THE COURT: Yes. Do we have the  
12 microphone?

13 THE WITNESS: Thank you.

14 Q. (By Ms. Weiswasser) So let's start with our  
15 library sample and students are in a study session in a  
16 room at the library and they'd like to use the Windows  
17 Meeting Space application to share some files with each  
18 other.

19 How would that work?

20 A. Okay. Let's say we have three people. Let's  
21 say Bill, Ted, and Anne. I'll try to draw this so  
22 that's it large. Let's say the three of them get  
23 together in the library, and each one of them pulls out  
24 their Windows Vista laptop, and they connect these  
25 laptops to the wireless network there.

1           Now, one of the first things these computers  
2 have to do is get what's called an IP address.

3           Q.     What is an IP address?

4           A.     An IP address is a number that a computer uses  
5 to identify itself when communicating with other  
6 computers on a network.

7           So you see I'm drawing these IP addresses here  
8 underneath the computers. They look similar, but the  
9 numbers are, in fact, different.

10           Okay. So the three of them have started up  
11 their computers. They've connected to the network, and  
12 they're now able to connect using Windows Meeting Space.  
13 And they're able to say share their screens or share  
14 their files, two things that might be useful when  
15 studying together.

16           Q.     Okay. So now let's say that someone named  
17 Kay -- that Kay has some files that might be helpful to  
18 the session, and she's also in the library. They'd like  
19 to invite Kay to join their Windows Meeting Space  
20 session.

21           How would Kay get invited to that meeting?  
22 And if there are a number of ways, why don't we just go  
23 through them.

24           A.     Okay. I'll use a different marker now so that  
25 we can see the new stuff.

1           Let's say that Kay arrives late, and the three  
2 of them are already participating in a meeting. So  
3 she's got to join the meeting, connect up her computer  
4 to theirs. So Kay will come and she'll open up her  
5 Windows Vista laptop, and she'll get an IP address,  
6 which, again, is one of those numbers that she can use  
7 to communicate. Here's Kay.

8           And now the computers here have to learn each  
9 other's IP addresses so that they're able to talk to  
10 each other or communicate with each other, and that  
11 is -- that's really what's necessary when a new computer  
12 is getting invited into a Meeting Space session.

13           Q. So just to make sure we're clear, are you  
14 saying that the Windows Meeting Space session, the  
15 people in that, need to find out Kay's IP address in  
16 order to include her in the session?

17           A. That's right. Yes.

18           Q. Okay. So how would they go about doing that  
19 in getting her involved?

20           A. There are three ways that this can happen with  
21 Windows Meeting Space. The first is using a technology  
22 called People Near Me. So with People Near Me -- I  
23 realize this is probably a little tough to see.

24           But with People Near Me, Ted's computer will  
25 kind of shout out on the network and ask, hey, are there

1 any other people here that I might invite into a Windows  
2 Meeting Space session? So his computer will shout out;  
3 it will find Kay's computer; and he can invite her to  
4 come in and join the meeting.

5 Q. With this People Near Me method for inviting  
6 Kay, is the PNRP technology used?

7 A. No. This is a different technology. People  
8 Near me is not -- is unrelated.

9 Q. Okay.

10 A. Okay. There's a second technique that Windows  
11 Meeting Space can use, and it's using something called  
12 Meetings Near Me. So with Meetings Near Me, it's Kay's  
13 computer that shouts out Meetings Near Me.

14 So Kay's computer shouts out and asks, are  
15 there any meetings going on near me here? And she will  
16 find Ted, Bill, and Anne's computers, and she'll learn  
17 their IP addresses, and she'll be able to connect up to  
18 the Meeting Space session that way.

19 Q. Okay. So if Kay has shouted out with Meetings  
20 Near Me, has the PNRP technology been used?

21 A. No. This is also different. Meetings Near Me  
22 is a different technology.

23 Okay. There's a third way that Kay can get  
24 involved in the meeting, and that's using an e-mail  
25 invitation. So this is a little clunkier. In this

1 case, Bill or Ted, one of these people, has to decide  
2 that they want to invite Kay using e-mail. They use  
3 Windows Meeting Space, and it creates what's called an  
4 invitation file. This is a file that they can send by  
5 e-mail to Kay's computer.

6 And it will contain the IP addresses of the  
7 machines involved in the meeting so that she can use  
8 them and connect them.

9 Q. So let me ask you a question about that.

10 Are you saying that the e-mail invitation will  
11 actually contain an IP address in it?

12 A. That's right. Yes.

13 Q. So is the PNRP technology used in that  
14 situation?

15 A. No. It's not used in this situation.

16 Q. Mr. Barton, then, is there any way in which  
17 PNRP could be used to invite Kay to join the meeting?

18 A. Yes. There's a very specific sequence of  
19 events that has to happen, and they have to happen in  
20 order, if PNRP is going to be involved when inviting  
21 somebody to join a meeting.

22 Q. Why don't you walk the jury through the  
23 various events that would have to happen for PNRP to be  
24 used.

25 A. Okay. I'm going to use another piece of

1 paper.

2           Okay. So it's a difficult sequence, and it's  
3 a very specific sequence, as I said.

4           It starts with Ted arriving early. So Ted has  
5 got to get there before the other participants or the  
6 other people in his study group arrive. But Ted is  
7 there and he's early.

8           Okay. Next, Ted's got to decide to use an  
9 e-mail invitation to invite the other people, even  
10 though they haven't arrived yet. So Ted's got to use an  
11 e-mail invitation.

12           Q. Now, this is -- let's just make sure we're  
13 clear here. This is -- this is the third way of  
14 inviting someone that e-mail invitation would actually  
15 contain the IP address?

16           A. Yes. The e-mail invitation includes Ted's IP  
17 address or that number that his computer uses to  
18 communicate.

19           Here I'll draw Ted's laptop.

20           Okay. So Ted has gotten there early. He's  
21 created an e-mail invitation, and he sent the e-mail to  
22 the other people that are going to join him in the study  
23 group.

24           Okay. Now let's say that Kay -- Kay arrives  
25 and she fires up her laptop, and Tom arrives and he

1 fires up his laptop. This is a little -- slightly  
2 different study group, different people. But two of  
3 them arrive and they decide that they want to join this  
4 meeting, and Ted is here.

5 So they connect up, and Meeting Space is  
6 connected, and these three people are able to use it to  
7 share their screen and files and all that stuff. So the  
8 three of them are there.

9 Now, PNRP hasn't been used yet. There's still  
10 a few more steps to this. So --

11 Q. I'm sorry to interrupt you. I just want to  
12 make sure we're clear here.

13 In other words, if Ted was still available and  
14 online at the time that Kay and Tom accepted his e-mail  
15 invitation, there would be no need to use PNRP?

16 A. Yes, that's right.

17 Q. Okay.

18 A. Okay. So the next step -- and this is  
19 important -- is Ted has got to decide to leave the  
20 meeting for some reason. He's got to take off. Maybe  
21 he's sick; maybe he forgot some other appointment, but  
22 Ted -- he's got to go. If his computer sticks around,  
23 PNRP won't be used. But it's important that he leaves  
24 at this time.

25 Ted takes off, and now let's say that fourth

1 person arrives late. Tom is late. And he's going to  
2 arrive after Ted has already left, and Tom has to decide  
3 to use that e-mail invitation to join the meeting. He  
4 can't use those other technologies I talked about. He  
5 can't use People Near Me or Meetings Near Me. He has to  
6 decide to use the e-mail invitation. And he must arrive  
7 after Ted has already left.

8           So this is the situation with the set of steps  
9 that have got to happen if PNRP is going to be involved  
10 in joining the meeting. You can see it's a fairly  
11 complex sequence that's got to happen before PNRP is  
12 involved.

13           Q. I just want to make sure we're clear.

14           Are you saying that Tom could have come in  
15 after Ted had already left and closed his laptop, and he  
16 still could have used People Near Me or Meetings Near  
17 Me?

18           A. Yes, that's right. Those would have been  
19 options.

20           Q. In those cases, PNRP would not be used?

21           A. That's right. His computer would have instead  
22 just kind of shouted out and found these computers  
23 instead of using PNRP.

24           Q. Okay. So does that explain, then, the only  
25 situation in which PNRP would be used to have a new



1 person join a Windows Meeting Space session?

2 A. Yes. This is the situation in which PRNP is  
3 used to join.

4 Q. Okay. Mr. Barton, if I could just ask you to  
5 sit down now. I think we can continue from there.

6 A. (Complies.)

7 MS. WEISWASSER: Your Honor, I would like  
8 to mark Mr. Barton's two drawings as Defendant's  
9 Demonstrative Exhibits 8 and 9.

10 THE COURT: All right. So marked.  
11 Any objection?

12 MR. McLEROY: No objection, Your Honor.

13 THE COURT: Be admitted.

14 MS. WEISWASSER: Thank you.

15 Q. (By Ms. Weiswasser) Now, have we covered every  
16 way that PRNP could have been involved in joining  
17 Windows Meeting Space session?

18 A. Yes. Certainly in joining a Windows Meeting  
19 Space session, yes, we have.

20 Q. Okay. So I'd like to switch topics, still  
21 relating to PNRP, and ask you about something called  
22 graph maintenance.

23 A. Okay.

24 Q. And, again, I know you weren't here to hear  
25 this. But yesterday, VirnetX's expert talked about

1 something called graph maintenance and the involvement  
2 of PNRP.

3 A. Okay.

4 Q. So I'd like to ask you about that topic.

5 First of all, what is graph maintenance in  
6 Windows Meeting Space?

7 A. Okay. Well, you see how I drew the computers  
8 connected to each other. This is in what we call a  
9 graph, a connection between a bunch of computers.  
10 Every so often, Windows Meeting Space does a little  
11 maintenance, kind of like an oil change or fixing up the  
12 house. It's pretty typical for software applications to  
13 run maintenance to make sure everything is healthy. And  
14 Meeting Space is no exception.

15 So every couple of minutes, the graphing  
16 technology will kind of do a check to make sure  
17 everything is healthy. And this is what we call graph  
18 maintenance.

19 Q. Are you saying that this is a standard sort of  
20 housekeeping process that computer applications  
21 generally do?

22 A. It -- it -- this is not uncommon in software  
23 to have a maintenance -- maintenance like this.

24 Q. So is -- is PNRP the only way that this  
25 routine graph maintenance process can be done?

1           A.     In -- a lot of things happen in graph  
2 maintenance, and it's like there are a bunch of  
3 different chores that are taken care of. PNRP is used  
4 in a very specific chore in Meeting Space or in the  
5 graph.

6                     It's used in something that we call long-term  
7 partition repair. There's also short-term partition  
8 repair, and that -- that doesn't involve PNRP.

9                     So partition repair is -- is a case where some  
10 of the computers get separated off in their own little  
11 collection and can't connect back to the larger group.  
12 That's what we call a partition. And it can happen if  
13 your network breaks down, if one of the wires goes out,  
14 or your wireless goes out or something like that. And  
15 PNRP is used in one of the ways that you can heal or  
16 bring the computers back together.

17           Q.     Are you saying that there are a number of  
18 other chores, though, involved in this graphing  
19 maintenance that do not involve PNRP?

20           A.     Yes, there are other chores that don't involve  
21 PNRP.

22           Q.     I have one more topic that I'd like to ask you  
23 about with Windows Meeting Space, and that's the  
24 following: If we could just go back and think about our  
25 study session that involves Ted, Kay, and Tom having a

1 Windows Meeting Space session. And they are connected  
2 securely to each other, and their communications with  
3 each other are secure; is that correct?

4 A. Yes. Their documents are screened that they  
5 share. That's secure; nobody else can see that.

6 Q. Right.

7 Now, let's think about someone totally on the  
8 outside. Say that Kay has a good friend and who lives  
9 somewhere else and finds a really great website.

10 A. Okay.

11 Q. And she wants to send it to Kay by e-mail.  
12 She wants to send her a link, and she wants to do that  
13 over the internet.

14 Is there anything about Kay's IP address,  
15 while she's connected to a Windows Meeting Space  
16 session, that somehow prevents her from getting this  
17 e-mail from Anne over the internet that somehow requires  
18 some special authorization for access?

19 A. No. Meeting Space won't stop you from doing  
20 anything else on your computer. You can still get  
21 e-mail, still browse the internet when you're using  
22 Windows Meeting Space.

23 Q. So just to make sure we're clear on this,  
24 you're saying that Kay does not -- there's no special  
25 authorization for access that would be required to her

1 computer simply because she's part of the Windows  
2 Meeting Space session?

3 A. No.

4 Q. Mr. Barton, I appreciate your time. Thank  
5 you.

6 MS. WEISWASSER: I pass the witness.

7 THE COURT: All right. Cross-exam.

8 MR. McLEROY: Yes, Your Honor.

9 May I approach, Your Honor?

10 THE COURT: Yes, you may.

11 MR. McLEROY: May it please the Court.

12 THE COURT: Okay.

13 CROSS-EXAMINATION

14 BY MR. MCLEROY:

15 Q. Good morning -- or good afternoon, Mr. Barton.

16 A. Good afternoon.

17 Q. My name is Luke McLeroy, and I'm one of the  
18 attorneys here for VirnetX, of course.

19 Now, in your direct examination, you focused  
20 mainly on how often PNRP was used, correct?

21 A. Yes. We talked a great deal about that.

22 Q. Now, you agree that it is used by Meeting  
23 Space application, right?

24 A. Yeah. There's a situation where PNRP is used.

25 Q. But you didn't talk about very much how PNRP

1 actually works, did you?

2 A. No, we didn't.

3 Q. You didn't talk about the features that it  
4 provides; is that right?

5 A. No. We didn't talk about that.

6 Q. Now, you understand that Microsoft contends  
7 that the PNRP APIs do not infringe any of VirnetX's  
8 patents; is that right?

9 A. Yes. I believe so, yes.

10 Q. And you were here for opening statements?

11 A. I was, yes.

12 Q. So you understand that Microsoft contends that  
13 its PeerNet APIs do not infringe, because they do not  
14 have anonymity; is that right?

15 MS. WEISWASSER: I'm going to object,  
16 Your Honor. That's a legal term, and this is a fact  
17 witness. He's --

18 THE COURT: Restate your question,  
19 please.

20 MR. McLEROY: Yes, Your Honor.

21 Q. (By Mr. McLeroy) You understand that in this  
22 lawsuit, Microsoft's products contend that its PeerNet  
23 APIs do not have anonymity; is that right?

24 MS. WEISWASSER: Again, I'm going to  
25 object on the same ground that anonymity is a legal

1 issue, and this is a fact witness. It's also beyond the  
2 scope of my direct.

3 THE COURT: Restate your question.

4 Q. (By Mr. McLeroy) Do PeerNet APIs provide  
5 anonymity?

6 MS. WEISWASSER: Again, Your Honor, it's  
7 beyond the scope of my direct.

8 THE COURT: Well, if the witness  
9 understands what you mean by anonymity.

10 A. I think it would be helpful if you would  
11 clarify anonymity.

12 Q. (By Mr. McLeroy) Can -- in the PeerNet APIs,  
13 could a hacker see the identity of the individuals using  
14 the PeerNet APIs to set up a meeting like you drew on  
15 the board here?

16 A. They'll be able to see the IP addresses of the  
17 computers involved.

18 Q. And would you say that it's not anonymous?

19 MS. WEISWASSER: Your Honor, I have the  
20 same objection.

21 THE COURT: Overruled.

22 A. Seeing the IP addresses reveals information  
23 about who is participating in the meeting, so no.

24 Q. (By Mr. McLeroy) So, no, it's not anonymous?

25 A. The IP addresses are revealed.

1 Q. Do you know Mr. Sandeep Singhal?

2 A. Yes, I do.

3 Q. You'd agree with me that he is one of the most  
4 knowledgeable people at Microsoft regarding the PeerNet  
5 APIs; is that right?

6 A. He's a very knowledgeable person about them,  
7 yes.

8 Q. And although you weren't here earlier today,  
9 we saw a video of his deposition earlier.

10 MR. McLEROY: Now, can we look at  
11 Plaintiff's Exhibit 245?

12 I think this is big enough for us to see.

13 Q. (By Mr. McLeroy) This appears to be a  
14 presentation that Mr. Singhal authored, right?

15 A. Yes.

16 Q. And if you look at the bottom right corner,  
17 there is a date there. It says 2006, Microsoft  
18 Corporation.

19 Do you see that?

20 A. I do, yes.

21 Q. At that time, I guess Dr. Singhal, was he the  
22 Product Unit Manager for Windows P2P and Collaboration  
23 Technologies?

24 A. That was his title.

25 Q. And based on the title of this document, is it



1 safe to assume that this presentation relates to the  
2 PeerNet APIs or peer-to-peer platform in Windows; is  
3 that right?

4 A. Yes, I think that's fair.

5 Q. Now, can we turn to the page -- there aren't  
6 page numbers other than the long string of number in the  
7 bottom right-hand corner -- the page that ends in 612.

8 Do you see the two dark blocks on this page?

9 A. Yes, I do.

10 Q. In the top block, there are three words.  
11 Could you read them?

12 A. I see the words. It's a little harder now,  
13 but I know what they are. Distributed, anonymous, and  
14 mobile.

15 That is a lot harder now.

16 Q. Would you agree that the adjective distributed  
17 describes the PeerNet APIs?

18 A. I don't know if it describes the APIs, but it  
19 would be a fair thing to say about some of our  
20 technologies, yes.

21 Q. How about the peer-to-peer platform, would you  
22 say the peer-to-peer platform is distributed?

23 A. I have the same comment. I mean, there's a  
24 reason why I don't think it would be fair to say that  
25 the platform is distributed, but the technologies work

1 in a distributed way.

2 Q. Well, I guess in your direct examination you  
3 did discuss the difference between a client server  
4 approach to computing versus a peer-to-peer approach  
5 computing.

6 A. Yes, we talked about that.

7 Q. And you would agree with me that the  
8 peer-to-peer approach is a more distributed approach,  
9 right?

10 A. I think that's fair, yeah.

11 Q. And then also, the third word here is mobile.  
12 Do you see that?

13 A. I do.

14 Q. And I guess we've talked a little bit here  
15 about how users can move around with their laptops; is  
16 that right?

17 A. I suppose so, yeah.

18 Q. And used the Meeting Space application?

19 A. I'm sorry. Could you repeat?

20 Q. And used the Meeting Space application and  
21 move around with their laptops, right?

22 A. Yes.

23 Q. All right. So you'd agree that mobile  
24 describes the PeerNet APIs; it's a feature they provide?

25 A. Yes. I suppose so, yes.

1 Q. Do you believe, after reading this document,  
2 that Dr. Singhal thought that the PeerNet APIs were  
3 anonymous, also?

4 A. I think that Mr. Singhal had specific  
5 definition of anonymous in mind.

6 Q. And he used the word anonymous here, right?

7 A. Yes, he did.

8 Q. In this a presentation he prepared?

9 A. Yes.

10 Q. One other topic I would like to talk with you  
11 about, Mr. Barton, and I want to focus on PNRP; is that  
12 okay?

13 A. Yes, of course.

14 Q. Bless you.

15 A. Thank you.

16 Q. PRNP, like you said, is one part of the  
17 PeerNet APIs; is that right?

18 A. Oh, yes. That's right.

19 Q. And the PeerNet APIs just in general, they're  
20 usable by a computer? A computer running the Windows  
21 operating system?

22 A. Yes. Well, they're usable by -- by an  
23 application.

24 Q. Right. And the application runs on a  
25 computer?

1 A. Yes.

2 Q. Now, are you aware that Microsoft seems to  
3 have two different positions regarding whether or not  
4 PNRP is a DNS technology?

5 A. I don't believe that that's correct.

6 Q. You don't think they have two different  
7 positions?

8 A. I don't think so, no.

9 Q. All right.

10 MR. McLEROY: Well, can we bring up  
11 Plaintiff's Exhibit 148?

12 Q. (By Mr. McLeroy) This is a printout from  
13 Microsoft's website, isn't it?

14 A. Yep. It looks like it's from MSDN, which is  
15 part of the Microsoft website, yes.

16 Q. Okay. And then if we look at the highlighted  
17 portion a little bit further down, just the one line  
18 that's the date, it's dated October 1st, 2007; is that  
19 right?

20 A. I see that, yes.

21 MR. McLEROY: Now, if we could go back up  
22 to the top.

23 Q. (By Mr. McLeroy) We'll see this document is  
24 called about PNRP; is that right?

25 A. Yes, that's right.

1 Q. And the first line under about PNRP reads:  
2 The peer name resolution protocol (PNRP) name space  
3 provider (NSP) is a serverless DNS technology.

4 Do you see that?

5 A. I do.

6 Q. Okay. I'd like to compare that to another  
7 exhibit.

8 MR. McLEROY: Can you bring up  
9 Plaintiff's Exhibit 507?

10 Q. (By Mr. McLeroy) And before we look at this  
11 one, have you been told one way or another whether or  
12 not VirnetX contends that the PNRP is a secure DNS in  
13 this lawsuit?

14 A. I -- I don't -- I don't recall a secure --  
15 whether or not --

16 Q. You don't remember that from the opening  
17 statements, that PNRP is a secure DNS?

18 A. I think that I might have heard that, yes.

19 Q. Okay. Now, let's look at this page now.

20 MR. McLEROY: Can we pull up the date on  
21 this one? It's down toward the bottom.

22 Q. (By Mr. McLeroy) This page is dated April 9th,  
23 2009.

24 A. Uh-huh.

25 Q. And that's after this lawsuit had been pending

1 for a while; is that right?

2 A. I suppose so, yes.

3 Q. I think by this point, you had already given a  
4 deposition in this lawsuit?

5 A. Yes. That's right.

6 Q. Now, if we go back up to the top, this is the  
7 same about PNRP page, isn't it, on the website?

8 A. Yes. I see that, yes.

9 Q. All right. And here it says: The peer name  
10 resolution protocol, name space provider (NSP). So so  
11 far, it's the same as the last page we looked at, right?

12 A. Yeah. That's right, yes.

13 Q. All right. It says: Is a serverless name  
14 resolution technology.

15 Did I read that right?

16 A. Yeah, that's right.

17 Q. So you would agree there is a change in this  
18 page on Microsoft's website from 2007 until 2009?

19 A. Yes. There has been a change, yes.

20 Q. Did you have any responsibility for making  
21 this change?

22 A. No, I did not make this change.

23 Q. Mr. Cawley asked Mr. Pall earlier, he said it  
24 wasn't his group responsible for making the change.

25 Was anyone in your group responsible for

1 making this change?

2 A. My group is an engineering group, and there is  
3 a collection of writers that are responsible for this  
4 documentation. So they are not my group, no.

5 Q. So you probably don't know who made this  
6 change, do you?

7 A. In this case, I don't, no.

8 MR. McLEROY: Pass the witness.

9 THE COURT: Cross?

10 MS. WEISWASSER: I have no further  
11 questions, Your Honor.

12 THE COURT: Thank you. You may step  
13 down.

14 THE WITNESS: Thank you.

15 THE COURT: All right. Who will be your  
16 next witness?

17 MR. POWERS: Your Honor, we have a third  
18 party, Mr. Saydjari, who's here from out of town. We  
19 think our direct of him is probably about half an hour.

20 If we can get him on and off today, he  
21 would vastly appreciate it.

22 THE COURT: Certainly.

23 MR. POWERS: I assume their cross can be  
24 done or maybe we could stay just a few minutes late, if  
25 we needed to, but it would be really good if we could

1 get him.

2 THE COURT: We will do the best we can.  
3 We'll try.

4 MR. POWERS: Very well. Thank you, Your  
5 Honor.

6 MS. WEISWASSER: Thank you, Your Honor.  
7 Then in that case, Microsoft calls Mr. Sami Saydjari.

8 THE COURT: All right.

9 MS. WEISWASSER: I'm going to get him  
10 outside, and Mr. Saydjari has not been sworn yet.

11 THE COURT: All right. If you would come  
12 forward, raise your right hand and be sworn.

13 (Witness sworn.)

14 MS. WEISWASSER: Your Honor, may I  
15 approach?

16 THE COURT: Yes, you may.

17 SAMI SAYDJARI, DEFENDANT'S WITNESS, SWORN

18 DIRECT EXAMINATION

19 BY MS. WEISWASSER:

20 Q. Good afternoon.

21 A. Good afternoon.

22 Q. Please introduce yourself to the jury.

23 A. My name is Sami Saydjari, and I am the CEO of  
24 the Cyber Defense Agency.

25 Q. What is the Cyber Defense Agency?



1           A.    We provide strategic consulting to the United  
2 States government, the military, on how to secure  
3 computers against the most sophisticated attacks from  
4 foreign countries.

5           Q.    Who founded the Cyber Defense Agency?

6           A.    I did in the year 2002.

7           Q.    Where is your company located, Mr. Saydjari?

8           A.    We're located in Wisconsin, Rapids, Wisconsin.

9           Q.    Do you also live in Wisconsin, Rapids?

10          A.    Yes, I do.

11          Q.    Have you had to take time away from running  
12 your business in order to travel here to Tyler, Texas,  
13 to testify in this case?

14          A.    Yes, ma'am.

15          Q.    Is Microsoft compensating you for your time  
16 lost in your business as a result of coming to this  
17 trial?

18          A.    Yes, ma'am.

19          Q.    How much are you being compensated?

20          A.    My commercial rate.

21          Q.    What is that, Mr. Saydjari?

22          A.    That's \$475 per hour.

23          Q.    Let's get started with your background.

24                    Did you go to college?

25          A.    Yes, ma'am. I went to college at Rice

1 University in Houston, Texas, where I earned my  
2 bachelor's of computer science and electrical  
3 engineering, and my master's at Purdue University in  
4 Indiana.

5 Q. Was your master's degree also in computer  
6 science?

7 A. Yes, ma'am.

8 Q. What did you do after college?

9 A. I joined directly the Department of Defense.

10 Q. Is that the United States Department of  
11 Defense?

12 A. Yes, ma'am.

13 Q. And at the United States Department of  
14 Defense, were you working in the Washington, D.C., area?

15 A. Yes, ma'am, I was.

16 Q. And did you join the Department of Defense in  
17 1983?

18 A. Yes, ma'am.

19 Q. How many years did you spend at the United  
20 States Department of Defense?

21 A. From 1983 to the year 2000.

22 Q. So what did you do for the Department of  
23 Defense over the 17 years that you were working with  
24 them?

25 A. I did research into securing computers against

1 foreign attackers for the entire 17 years.

2 Q. So were you focused on issues involving  
3 computer security?

4 A. Yes, ma'am. Computer security, network  
5 security, the entire range.

6 Q. Did that also involve internet security?

7 A. Yes, ma'am, internet security was definitely  
8 included.

9 Q. Now, is computer and internet security  
10 important to the Department of Defense?

11 A. Yes, ma'am. It's absolutely vital to the  
12 security of the Defense Department to protect the  
13 secrets that are contained on the computers that are  
14 basically -- DOD uses to fight war.

15 Q. Was there a particular group within the  
16 Department of Defense that you worked for from 1997 to  
17 2000?

18 A. Yes, ma'am. That would be the Defense Advance  
19 Research Projects Agency also known as DARPA.

20 Q. What does DARPA do?

21 A. DARPA has a very simple mission. It's to  
22 avoid technological surprise. And so the job of DARPA  
23 is to keep the military on the very leading edge of  
24 technology, to develop the best of the best technology  
25 to give our troops the advantage in securing the -- for

1 national security.

2 Q. We're going to talk more about DARPA and your  
3 work with DARPA in a bit, but let me just complete your  
4 background.

5 What did you do after you completed your work  
6 at DARPA in the Department of Defense in 2000?

7 A. After that, I briefly joined a non-profit  
8 organization called Stanford Research Institute, and  
9 then I went on to found my own company.

10 Q. Have you given congressional testimony in the  
11 area of internet security?

12 A. Yes, ma'am, I have.

13 Q. What year was that?

14 A. That was April of 2007.

15 Q. Who did you provide that testimony to?

16 A. That would be to the United States Congress,  
17 the House Committee on Homeland Security, the  
18 Subcommittee on Emerging Threat.

19 Q. So other than the invitation to testify before  
20 Congress, have you received any other honors for your  
21 work on internet security?

22 A. Yes, ma'am, a number of them, including  
23 Meritorious Service Award from the Secretary of Defense  
24 for my service at DARPA; a fellowship from a major DOD  
25 agency; and many, many other awards such as those.

1 Q. Let's turn back to your work for DARPA.

2 You said that you were at DARPA from 1997 to  
3 2000.

4 A. Yes, ma'am.

5 Q. What was your role at DARPA?

6 A. I was the program manager for a program called  
7 Information Assurance.

8 Q. You said Information Assurance.

9 What does the Information Program -- Assurance  
10 Program at DARPA do?

11 A. It's basically a programming in computer and  
12 network security to figure out how to defend the  
13 military systems against the next generation of threats.

14 Q. Does that focus on internet security?

15 A. Yes, ma'am, computer and internet security.

16 Q. Is this a prestigious position?

17 A. Yes, ma'am. I would estimate less than 1 in  
18 10,000 professionals in the field would get chosen to go  
19 to DARPA. It's highly prestigious.

20 Q. Okay. So I understand from that answer that  
21 it's a selective position.

22 A. Yes, ma'am.

23 Q. How were you selected to become the program  
24 manager for the Information Assurance Program at DARPA?

25 A. I was recommended by two different program

1 managers of DARPA, and then hand-approved by the  
2 Director of DARPA himself.

3 Q. So what were your responsibilities as the head  
4 of Information Assurance from 1997 to 2000?

5 A. My job was to formulate a vision about how to  
6 dramatically improve security of the military's computer  
7 systems and to make that vision known and understood by  
8 the director of the agency. And once we agreed on that,  
9 to make that vision come true by the investment of a  
10 significant budget in technologies that would realize  
11 that vision.

12 Q. Now, was this budget provided by the  
13 Department of Defense?

14 A. Yes, ma'am.

15 Q. And what was the amount of your budget?

16 A. It was \$30 million every three years.

17 Q. So that was a budget, then, that you were able  
18 to use to invest in technologies?

19 A. Yes, ma'am.

20 Q. And would those be technologies that would  
21 further your vision?

22 A. Yes, ma'am.

23 Q. So what was the vision that you selected as  
24 head of Information Assurance at DARPA?

25 A. My -- my interest was in putting together the

1 technologies that were out there and new technologies to  
2 provide a systematic defense, to weave the technologies  
3 together in a way that would make it very, very  
4 difficult for our potential adversaries to break into  
5 our computer systems.

6 Q. I'd like to ask you, Mr. Saydjari, about one  
7 of the first technologies that you funded --

8 A. Yes, ma'am.

9 Q. -- in your role as head of Information  
10 Assurance.

11 Are you familiar with the system called  
12 Dynamic Virtual Private Network?

13 A. Yes, ma'am.

14 Q. Does that also, by the way, go by the name of  
15 Dynamic VPN or DVPN?

16 A. Yes, ma'am.

17 Q. Is that one of the first programs you funded  
18 while you were at DARPA?

19 A. Yes, ma'am, it was.

20 Q. So why did you choose to fund the Dynamic VPN  
21 system or program?

22 A. The DVPN program was one of the most worked on  
23 and urgent, important problems to the Defense Department  
24 known as the coalition problem.

25 Q. What is the coalition problem?

1           A.    A coalition problem is, the United States was  
2 increasingly fighting wars with partners in  
3 battlefields, and so the United States doesn't go in  
4 alone.  It goes with other countries.

5                   And so when we do that, there is -- there  
6 needs to be communication between each of the coalition  
7 members, and that communication has to be secure,  
8 because we're passing around our war plans.

9                   And, obviously, our war plans have to be kept  
10 secret from the adversary, because if they know where  
11 we're going to be and when we're going to be there, they  
12 can kill people.

13                   And so protecting those communication paths  
14 was a matter of life and death and highly urgent to do  
15 it quickly and easily.

16           Q.    Now, let's just make sure we have our timeline  
17 set here.

18                   What year did you fund the Dynamic VPN  
19 project?

20           A.    That would have been in late 1997.

21           Q.    So let's turn back to the coalition problem.

22                   Are you saying that it was important that the  
23 systems that would be set up be fast?

24           A.    Yes.  It would have to be fast to set it up,  
25 and it would have to be fast to change it, because



1 coalition partners come and go due to politics of the  
2 situation.

3           So one country may come in and become a member  
4 of the coalition at one point, and then they may leave  
5 the coalition at another point. So it has to be fast to  
6 set it up and fast to reconfigure it.

7           Q.    Would it be important that the setup be  
8 automatic?

9           A.    Yes, ma'am, quickly. It had to be automatic.

10          Q.    And how about ease of use? Would that have  
11 been important?

12          A.    Absolutely. It would have been critical. In  
13 order to set it up fast and quickly, it would have to be  
14 easy to use. That was one of the military criteria for  
15 the technology that we were working on.

16          Q.    Uh-huh. So who did you hire as the technology  
17 developer for the Dynamic VPN project?

18          A.    That would be Trusted Information Systems,  
19 also known as TIS.

20          Q.    What is TIS or Trusted Information Systems?

21          A.    They were one of the premier research and  
22 development firms in computer security at the time.

23          Q.    Do you recall who at Trusted Information  
24 Systems you worked with on the Dynamic VPN project?

25          A.    Yes, ma'am. That would be Dan Sterne.

1 Q. Had you worked with Mr. Sterne before?

2 A. Yes, I had.

3 Q. And what did you think of his work on internet  
4 security?

5 A. I found he was an outstanding researcher.

6 Q. So was Trusted Information Systems able to  
7 build a prototypes of the Dynamic VPN system?

8 A. Yes, they were.

9 Q. And did the Dynamic VPN system solve this  
10 coalition problem that you talked about earlier?

11 A. Yes, ma'am. It did create secure pipes  
12 quickly and easily between the coalition partners.

13 Q. Now, I'd like to talk about the subject of  
14 whether the Dynamic VPN project generally was a  
15 classified or secret project in any way.

16 Was it?

17 A. No, ma'am. Quite the opposite. It was  
18 intended to be an open project, openly available, widely  
19 distributed.

20 Q. And why was it intended to be an open and  
21 widely distributed project?

22 A. The United States military preferred to  
23 consume its technology as commercial product. And so it  
24 was very, very important to let people know about the  
25 existence of the technology so that we could have one or

1 more vendors produce it.

2           And the reason why it's important to be a  
3 commercial product is because it's cheaper, faster,  
4 easier for the military to consume commercial products  
5 than it is government-specialized developed products.  
6 In addition, it's really very important to the  
7 government to make the technology available to secure  
8 the rest of society, because DARPA, even though it's  
9 focused on military security, is very interested in the  
10 security over the rest of the nation and our critical  
11 portion of our companies.

12           Q.     So was the Dynamic VPN system ever  
13 demonstrated?

14           A.     Yes, ma'am, it was. In March of 1998, as a  
15 part of a technology demonstration series that we did  
16 called integrated feasibility demonstrations.

17           Q.     So let's just make sure we're clear on a  
18 couple of things, and then we'll turn to some documents.  
19 You said that the Dynamic VPN system was demonstrated in  
20 March of 1998?

21           A.     Yes, ma'am.

22           Q.     And you said that it was demonstrated at  
23 something called the integrated feasibility  
24 demonstration?

25           A.     Yes, ma'am.

1 Q. Now, that's a mouthful, so let's just explain  
2 to the jury, what is an integrated feasibility  
3 demonstration?

4 A. Yes. If we -- if we take the words  
5 individually, feasibility means that we are  
6 demonstrating the capabilities of the technology. So we  
7 show it's possible by building one to show that, in  
8 fact, it's technically possible to do it.

9 And demonstration means that we're showing it  
10 in a context, in this case, of a military environment  
11 problem.

12 So we would show that the technology works.  
13 We would show it works with other security technology,  
14 and we would show that it works in the context of a  
15 military problem so that when we showed it to military  
16 people, they could understand how it worked with respect  
17 to their problem.

18 Q. Are integrated feasibility demonstrations  
19 generally -- and let's actually focus specifically on  
20 the integrated feasibility demonstration in March of  
21 1998.

22 Was that classified or secret in any way?

23 A. No, ma'am. That would be against the goals of  
24 having it openly distributed and trying to produce  
25 commercial off-the-shelf products.

1 Q. All right. We'll talk a little bit more about  
2 that in some detail.

3 What I'd like to do is -- actually, let me  
4 just ask you before we turn to a document, was DVPN --  
5 was the Dynamic VPN system successfully demonstrated at  
6 the integrated feasibility demonstration in March of  
7 1998?

8 A. Yes, ma'am. It was an unqualified success.

9 Q. Okay. Well, I'd like to turn to Defendant's  
10 Exhibit 3009. It would be in the binder in front of  
11 you.

12 MS. WEISWASSER: And, Chris, if we can  
13 just look at that first beginning part there.

14 Q. (By Ms. Weiswasser) So, Mr. Saydjari, are you  
15 familiar with this document?

16 A. Yes, ma'am, I am.

17 Q. What is this document?

18 A. This is our plan for our first integrated  
19 feasibility demonstration in March of '98.

20 Q. And does this indicate that this document is  
21 from March 10th of 1998?

22 A. Yes, ma'am, it does.

23 Q. Now let's just go down a little bit on this  
24 page, and this says it was prepared for DARPA  
25 Information Systems Office.

1 Now, is that your program?

2 A. It was the office in which my program resided,  
3 yes, ma'am.

4 Q. Okay. And it says that it was prepared by GTE  
5 Internet Working and BBN Technologies.

6 A. Yes, ma'am.

7 Q. What was their role in this integrated  
8 feasibility demonstration project?

9 A. BBN was the technology integrator, so their  
10 job was to put the technologies together, to weave them  
11 together in sort of a fence-like structure in the  
12 context of a military problem and also to orchestrate  
13 the demonstration.

14 Q. So let's turn to some of these descriptions of  
15 Dynamic VPN in this document. Why don't we start on  
16 Page 2, which is 3009.006.

17 MS. WEISWASSER: And, Chris, if you can  
18 highlight from the three major objectives down through  
19 Dynamic Virtual Private Networks.

20 No. Actually, a little bit up.

21 Okay. That's fine. And then maybe we  
22 can highlight Dynamic Virtual Private Networks under  
23 Prevent. And let's also highlight above that, three  
24 major objectives have been established for IFD 1.1.

25 Q. (By Ms. Weiswasser) The primary objective is

1 to successfully stand up and demonstrate the  
2 capabilities and/or technologies listed below.

3 So, Mr. Saydjari, what does this mean?

4 A. It means what I had indicated before. The  
5 purpose of -- of the feasibility demonstration was to  
6 show that the capabilities of the -- show the  
7 capabilities of each of the technologies individually,  
8 that they work, but also to show them in a context of  
9 the other technologies that they work together hand in  
10 hand and then to show that they work together hand in  
11 hand against a military-style problem that would be used  
12 for the military to understand.

13 Q. Okay. Why don't we turn to Page 8 of this  
14 document, which is the 3009.012.

15 MS. WEISWASSER: And, again, Chris, if  
16 you can focus on 2.2.1.1 Dynamic Virtual Private  
17 Networks.

18 And actually, you can pull it down and  
19 highlight the full three paragraphs with that topic.  
20 And why don't we highlight Dynamic Virtual Private  
21 Networks.

22 And then why don't we highlight Virtual  
23 Private Network Technology in the -- right there.

24 That's good.

25 And then why don't we highlight Dynamic

1 Security Perimeter Technology and DNS SEC.

2 Q. (By Ms. Weiswasser) So, Mr. Saydjari, Dynamic  
3 Security Perimeter, is that the same thing as Dynamic  
4 VPN?

5 A. Yes, ma'am, it is.

6 Q. Okay. So in this paragraph, is this  
7 describing the dynamic virtual private network system  
8 that was demonstrated in March of 1998?

9 A. Yes. It's given a bit more detail on how it  
10 worked.

11 Q. And is this an accurate reflection of how it  
12 worked?

13 A. Yes, ma'am, it is.

14 Q. Now, what does DNS SEC mean?

15 A. DNS SEC is a secure version of the domain name  
16 system, which associates a network address with the name  
17 that we like to use like www.microsoft.com. We, as  
18 human beings, would use those, but networks use an IP  
19 address, and the security of that is what DNS SEC is  
20 about.

21 Q. And the dynamic virtual private network  
22 system, did that use DNS SEC technology?

23 A. Yes, ma'am, it did.

24 Q. Okay. Why don't we turn to 3009.021, which is  
25 also a discussion of the dynamic virtual private network



1 system.

2 MS. WEISWASSER: If you could just  
3 highlight, Chris, 3.2.1.1. You can highlight that whole  
4 section.

5 And let's -- let's make sure we  
6 understand. We're talking about the dynamic virtual  
7 private networks here, and I'd like you to highlight,  
8 actually, the first and the third bullet points.

9 And I also -- why don't you highlight  
10 Initial Evaluation Criteria for Dynamic VPN Includes.

11 Q. (By Ms. Weiswasser) So, Mr. Saydjari, what is  
12 this telling us about the dynamic virtual private  
13 network system that was demonstrated in March of 1998?

14 A. Well, when we do a demonstration, we wanted to  
15 set up what the success criteria was, what it would mean  
16 for the program to be successful. And so these are set  
17 up as the evaluation criteria, the success criteria, by  
18 which we judge the demonstration.

19 Q. And I see in the first bullet, it says  
20 transparency within the VPN.

21 What does that mean?

22 A. That means it needs to be -- it's basically  
23 invisible to the user. So the military users who are  
24 used to using certain computer programs to communicate  
25 across the web, across the internet need to be able to

1 use the same applications without having to do anything  
2 different, without having to click anything else  
3 different.

4           They basically just use it and automatically a  
5 secure pipe is set up, if they're talking to a coalition  
6 partner, because the firewall is basically this big, if  
7 they're talking to a coalition partner, and they would  
8 secure that channel, a secure pipe, with the other --  
9 with the other firewall.

10           Q.    So the third bullet references ease of setup  
11 and use.

12                    What does that mean?

13           A.    Well, before DVPN, what has to happen,  
14 whenever you set something up is, every different  
15 computer has to have the same key, and somebody would  
16 have to go around and manually put that key in  
17 potentially hundreds of computers. And that would take  
18 a very long time and was prone to error.

19                    And so what this means is it has to be doable  
20 in one place. So we had centralized this function to  
21 one server called the centralized manager. And all he  
22 has to do is basically click on adding one country or  
23 another country and their address for that -- for their  
24 local area network.

25                    And then once he did that, either added

1 somebody or deleted somebody, it was automatic that all  
2 of the coalition partners were then added who were on  
3 the list, and those who were not on the list were  
4 subtracted and could no longer read the communication  
5 between the members.

6 Q. Were transparency and ease of setup and use  
7 important to the success of the Dynamic VPN system that  
8 was demonstrated in March of 1998?

9 A. Absolutely. You'll notice in the first three  
10 of the list, so they were absolutely critical to us.

11 Q. And did the dynamic virtual private network  
12 system satisfy those criteria?

13 A. Yes, ma'am. That was a great success that  
14 way.

15 Q. Okay. Well, let's -- let's talk a bit about  
16 who attended the integrated feasibility demonstration in  
17 March of 1998, when the Dynamic virtual private network  
18 system was demonstrated.

19 Who -- who attended?

20 A. All of the integrators who were involved would  
21 have attended. DARPA and its staff would have attended  
22 as well as those who DARPA believed would be interested  
23 in the technology either as a consumer.

24 So, for example, military leaders would attend  
25 the demonstration to see how it worked as well as

1 potential producers, military contractors and companies  
2 who might be interested in creating that technology to  
3 that the DOD can then consume it.

4 Q. So about how many people attended this March  
5 of 1998 demonstration of Dynamic VPN?

6 A. About 30.

7 Q. Now, you mentioned earlier that this March of  
8 1998 demonstration of Dynamic VPN was not classified or  
9 secret in any way, and I felt we could just turn to a  
10 couple of pages in this document and ask you about that.

11 Why don't we first look at 3009.09.

12 MS. WEISWASSER: Chris, if you can look  
13 at the end of -- the beginning of the second paragraph.

14 It says: IFD 1.1 is being conducted at  
15 the DARPA DIS, a joint project office, unclassified  
16 integration environment.

17 And if we could put in green, perhaps,  
18 unclassified integration environment.

19 Q. (By Ms. Weiswasser) What does that mean?

20 A. Unclassified means that it was an open  
21 environment where people did not require a special  
22 clearance in order to get into that facility.

23 Q. Now, I have another exhibit, 3008.

24 MS. WEISWASSER: Don't put that up on the  
25 screen.

1                   Your Honor, this is one of the subjects  
2 of the pending motion.

3                   THE COURT: Okay.

4                   MS. WEISWASSER: So I will just have the  
5 witness testify about it but not put it up on the screen  
6 and not reveal any sustains.

7                   Is that how I should proceed?

8                   THE COURT: All right. Okay.

9                   MS. WEISWASSER: Okay.

10                  THE COURT: What exhibit number is it?

11                  MS. WEISWASSER: It's DX3008.

12                  Q.     (By Ms. Weiswasser) Mr. Saydjari, if you could  
13 turn to 3008 in your binder. I -- I guess what I should  
14 ask you is just whether this is a document that you're  
15 familiar with and whether this is a copy of what was  
16 presented at the Dynamic VPN demonstration in March of  
17 1998.

18                  A.     Yes, ma'am.

19                         In addition to the demonstration, we also  
20 would have a presentation about how it works, and this  
21 would be the kind of presentation that we would have at  
22 that -- at that meeting.

23                         MS. WEISWASSER: So, Your Honor, I'd like  
24 to offer Defendant's Exhibit 3008 as an exhibit.

25                         THE COURT: All right. Any objection?

1 MR. CAWLEY: The objection is hearsay,  
2 Your Honor.

3 THE COURT: Response?

4 MS. WEISWASSER: We have a pending motion  
5 on this issue. We don't believe it's hearsay because  
6 we're not offering it for the truth of what's asserted  
7 in the document, but just to show actually what was  
8 presented at the demonstration that Mr. Saydjari has  
9 been testifying about. We just want to be able to  
10 actually say this is a copy of what was presented.

11 THE COURT: All right. Be admitted.

12 MS. WEISWASSER: Okay. So in that case,  
13 why don't we put 3008 up on the screen.

14 Q. (By Ms. Weiswasser) Do you have that in front  
15 of you, Mr. Saydjari?

16 A. Yes, ma'am, I do.

17 Q. Okay. So, Mr. Saydjari, what is this  
18 document?

19 A. This would be the document that was presented  
20 at the integrated feasibility demonstration about how  
21 DVPN works.

22 Q. Okay.

23 MS. WEISWASSER: Why don't we look at  
24 Page 2 of this demonstration. And what I'd like to  
25 highlight is from rapid automated VPN reconfiguration

1 through the end DARPA IA program.

2                   And why don't you actually highlight  
3 rapid automated VPN reconfiguration.

4           Q.     (By Ms. Weiswasser) What does this mean?

5           A.     Rapid reconfiguration means, basically, to be  
6 able to set the network up and change it in minutes as  
7 opposed to days when it was done by hand where everybody  
8 went around to every computer with a new code.

9                   This is -- this means it has to be done in one  
10 place in minutes.

11           Q.     So is that an accurate description of the  
12 Dynamic VPN system that was demonstrated in March of  
13 1998?

14           A.     Yes, ma'am, it is.

15                   MS. WEISWASSER: Why don't we just  
16 highlight also in the next part DNS SEC.

17           Q.     (By Ms. Weiswasser) What does that mean here?  
18 I know you testified earlier what it means, but does  
19 this indicate that DNS SEC was also a part of this  
20 system?

21           A.     Yes, ma'am, without a doubt.

22           Q.     Okay.

23                   MS. WEISWASSER: Why don't we turn to  
24 Slide 8 -- actually, before we do that, I have one  
25 question about Slide 4. And I'd like to highlight the

1 first bullet point: Membership verified by DNS SEC  
2 query to coalition domain; e.g., what is IP address of  
3 enclave?

4 Q. (By Ms. Weiswasser) What does that mean?

5 A. That means that in order to figure out who is  
6 in the enclave, the DNS SEC server, the computer that  
7 handles the DNS SEC request would have a list of  
8 everybody who was in and not in the coalition, and that  
9 list would include both names and addresses of the  
10 computers that are associated with memberships of --  
11 members of the coalition.

12 Q. And is that an accurate description of how the  
13 March 1998 dynamic virtual private network system works?

14 A. Yes, ma'am.

15 Q. Okay. Why don't we look at Slide 8. And my  
16 first question for you on this slide is, dynamic  
17 security perimeter. Does that mean dynamic -- the  
18 dynamic virtual private network system we've been  
19 talking about?

20 A. Yes, ma'am. The names were interchangeable.

21 Q. Okay. And what does this slide show?

22 A. It shows how a VPN would be established  
23 between two members of a coalition; in this case, Red  
24 Cross and FEMA, kind of representing a disaster relief  
25 operation that the military often is involved in.



1 Q. Okay. So is this an accurate depiction of the  
2 dynamic virtual private network system demonstrated in  
3 March of 1998?

4 A. Yes, ma'am. It shows how it goes to the DNS  
5 SEC to find the addresses, and then it shows how it sets  
6 up the pipeline between the two members.

7 Q. Okay. I have one final question for you about  
8 this document.

9 MS. WEISWASSER: Chris, if you can just  
10 go back to the first page of it. And in the bottom, it  
11 references two dates, December 18th, 1997, and March  
12 9th, 1998.

13 Q. (By Ms. Weiswasser) Now, my first question for  
14 you is, why are there two dates on here?

15 A. It would not be unusual for our contractors to  
16 reuse slides from one presentation to another.

17 So it's highly likely that this was given to  
18 me as a status report in December of 1997 by the  
19 contractors to what was going on in the contract, and  
20 then that they reused those slides and perhaps slightly  
21 update it when they presented it at the integrated  
22 feasibility demonstration in March, three months later.

23 Q. And do you actually have a recollection of  
24 seeing these slides prior to the integrated feasibility  
25 demonstration?

1 A. Yes, ma'am. I would have seen them.

2 Q. And who would have shown you these slides?

3 A. That would have been Dan Sterne.

4 Q. And who do you think, by the way, would have  
5 presented these slides at the integrated feasibility  
6 demonstration in March of 1998?

7 A. The principal investigator would have been  
8 required to present those slides, so I'm almost certain  
9 it was Dan Sterne.

10 Q. Okay. All right. Finally, let's look at 3046  
11 in your binder.

12 THE COURT: Counsel, let me -- before you  
13 go on, just point out that you have used 30 minutes, and  
14 I know it's your desire to leave time to cross so that  
15 the witness can leave by this evening. So I'm not  
16 trying to rush you, but I'm just pointing out where we  
17 are.

18 MS. WEISWASSER: Thank you, Your Honor.  
19 I think I can finish in two to three minutes --

20 THE COURT: Okay.

21 MS. WEISWASSER: -- okay?

22 Chris, if we can just pull up the title  
23 of this document and then the first section under  
24 progress with the bullet points.

25 Why don't we highlight 16, March, 1998 at

1 the top to 30, April, 1998 at the top, and why don't we  
2 highlight the word progress, and why don't we highlight  
3 the second bullet, provided dynamic security VPN demo at  
4 IFD 1.1.

5 Q. (By Ms. Weiswasser) Mr. Saydjari, what is this  
6 document?

7 A. This is a status report from the contractor to  
8 me on what's going on in the contract.

9 Q. And what does that tell you about the  
10 demonstration of the dynamic VPN system?

11 A. It clearly confirms that it did happen.

12 Q. Does it confirm that it happened sometime  
13 between March 16th and April 30th of 1998?

14 A. Yes, ma'am.

15 Q. Okay. One final subject for you. Are you  
16 familiar with a company called SAIC?

17 A. Yes, ma'am.

18 Q. And how about a gentleman named Mr. Gif  
19 Munger?

20 A. Yes, ma'am.

21 Q. And how are you familiar with SAIC and  
22 Mr. Munger?

23 A. Mr. Munger came in to pitch an idea to be  
24 funded under my program.

25 Q. And do you recall what time period he would

1 have sought the funding?

2 A. Yes, ma'am. After reviewing e-mails, it  
3 looked like it was between August of 1998 and March of  
4 1999.

5 Q. And do you recall the technology that  
6 Mr. Munger and SAIC were presenting to you?

7 A. Yes, ma'am. It was a VPN-based technology.

8 Q. And was this in your role as head of  
9 Information Assurance --

10 A. Yes, ma'am.

11 Q. -- Program at DARPA?

12 A. Yes, ma'am.

13 Q. And did DARPA fund the SAIC and Mr. Munger's  
14 VPN invention?

15 A. No, DARPA did not.

16 Q. Why did DARPA choose not to fund the  
17 invention?

18 A. In the evaluation of the proposal, it was  
19 DARPA's opinion and my opinion as well that the  
20 technology did not represent enough of a distinction  
21 from the -- the dynamic virtual private network, the  
22 DVPN technology, that we had already funded. It was a  
23 duplicate of what we had already created.

24 Q. Okay. Now, did SAIC actually formally apply  
25 for funding after that?

1 A. Yes, ma'am, through one of our solicitations.

2 Q. And were they awarded that funding?

3 A. No, ma'am, for the very same reasons.

4 Q. Okay. Thank you.

5 MS. WEISWASSER: I pass the witness.

6 THE COURT: Cross?

7 CROSS-EXAMINATION

8 BY MR. CAWLEY:

9 Q. Mr. Saydjari, I have to start asking you  
10 questions about the elephant in the room. It went by  
11 very quickly at the beginning of your examination, but  
12 did you say you're being paid by Microsoft?

13 A. I said I was being compensated for lost time,  
14 yes.

15 Q. For lost time.

16 Now, just -- let's get that straight. We've  
17 seen some expert witnesses in this case. I guess you  
18 haven't, but we have. Dr. Jones and Mr. Reed and I  
19 guess tomorrow we're going to see some expert witnesses  
20 for Microsoft.

21 But you're not an expert witness here, are  
22 you?

23 A. That's correct. I'm a factual --

24 Q. You weren't paid to study anything in this  
25 case and express an opinion, right?

1 A. That's correct. I'm a fact witness.

2 Q. You're a fact witness.

3 A. Yes, sir.

4 Q. Now, you say that Microsoft has agreed to  
5 compensate you for your lost time.

6 A. That's correct.

7 Q. Okay. Let's talk about that.

8 What is the rate that you charge for technical  
9 consulting?

10 A. For commercial clients, it's \$475 per hour.

11 Q. I see.

12 And how long has that been the case?

13 A. Oh, I'm not exactly sure. Probably at least a  
14 couple of years, maybe a year and a half.

15 Q. Do you remember when your deposition was taken  
16 in this case?

17 A. Approximately. Within the last six to nine  
18 months.

19 Q. Let me give you a copy of your deposition.

20 MR. CAWLEY: Are we able to pull this up  
21 on the screen?

22 Q. (By Ms. Cawley) Let's go to Page 85.

23 MS. WEISWASSER: Mr. Cawley, should I  
24 pull out my own copy?

25 MR. CAWLEY: Do we have another copy?

1 I have it. I have it.

2 MS. WEISWASSER: Okay. I mean, I may  
3 have brought my copy with me, so let me get that out.  
4 Okay. I've got it.

5 MR. CAWLEY: Okay.

6 Q. (By Mr. Cawley) Actually, let's start at Page  
7 83 of your deposition, because this is important, and I  
8 want to make sure we understand it.

9 When was your deposition taken?

10 A. You asked me to look at the document.

11 Q. Do you remember when it was taken?

12 A. No, I don't have a specific remembrance of  
13 what date it was.

14 Q. Well, let me see if I can find the date.  
15 Does July 23rd of 2009 sound about right?

16 A. Yeah, it sounds about right.

17 MR. CAWLEY: Do you need a copy of the  
18 deposition, ma'am?

19 MS. WEISWASSER: No. I have -- I brought  
20 my own.

21 MR. CAWLEY: All right.

22 Q. (By Mr. Cawley) So let's take a look at  
23 Page 83 starting at Line 23. And let me get on the same  
24 page.

25 Are you with me?

1 A. Yes.

2 Q. Page 83, Line 23, you were asked a question:

3 Are you being paid for your time here today?

4 You answered: I am.

5 Question: How much are you being paid?

6 Answer: Actually, I don't recall

7 specifically.

8 Question: Is it an hourly rate?

9 Answer: Yes.

10 Question: Is it your standard hourly rate?

11 Answer: It is -- well, that's hard to answer,  
12 because I have different rates for different things that  
13 I do. So it's standard for this type of work, but it's  
14 not standard for the technical consulting that I do.

15 Have I read that correctly so far?

16 A. Yes, you have.

17 Q. Next question: When you say this type of  
18 work, are you talking about litigation consulting?

19 A. No, sir. I'm talking about --

20 Q. I'm sorry. I'm reading from your deposition  
21 still.

22 A. Oh.

23 Q. Yes.

24 A. I apologize.

25 Q. The question was -- I'm sorry for not making



1 it clear.

2 Question: When you say this type of work, are  
3 you talking about litigation consulting?

4 And you answered: Yes, correct?

5 Did I read that correctly?

6 A. You read that correctly, yes.

7 Q. All right. But then you were asked the  
8 question: Have you consulted on other litigations in  
9 the past?

10 And you said: I have not.

11 Question: This is your first time?

12 Answer: Yes.

13 Is that still true?

14 A. Yes, sir.

15 Q. So you testified that you have a standard rate  
16 for litigation consulting, but the fact of the matter  
17 is, you've got one client for litigation consulting, and  
18 that's Microsoft, correct?

19 A. I don't have a litigation client at all,  
20 because this is not a litigation consultation.

21 Q. Oh, I see.

22 A. It's a commercial consultation.

23 Q. Well, didn't you just testify in your  
24 deposition here that you were -- that this was standard  
25 for litigation consulting?

1           A.    No.  I think it said that it was a standard  
2 rate for this type of work, and I was referring to  
3 commercial work, not litigation work.

4           Q.    Well, let's read on then.

5                    You were asked the question, Page 84, Line 19:  
6                    What is your technical consulting rate?

7                    And you answered:  Honestly, I don't remember.  
8 I'm being totally frank, because my accountant takes  
9 care of all that.  So I don't remember the number  
10 specifically.

11                   Question:  Can you give me a range that you  
12 think -- that you feel confident it would be within?

13                   Your answer:  I can't, because we just  
14 recently changed that rate.  I would say it's somewhere  
15 between 300 and \$420 an hour.  I don't know where  
16 exactly it is in that range right now.

17                   Do you remember giving that testimony?

18           A.    I do.

19           Q.    Okay.  And then going down to Page 85,  
20 Line 10, Question:  And you said you just recently  
21 raised the rate.

22                   And you answer:  I actually recently dropped  
23 the rate.

24                   Do you see that?

25           A.    I do.

1 Q. And then you were asked: What were the rates  
2 before you dropped them; do you remember?

3 And your answer was: It was in the sort of  
4 middle 400 range, but I don't know specifically what the  
5 number was.

6 Did you answer that question?

7 A. Yes.

8 Q. And then you were asked the question on  
9 Line 23: What's the best ballpark that you can give me  
10 on the rate that you are charging Microsoft for your  
11 time here today?

12 And you answer: I don't want to speculate,  
13 but, again, my accountant would know that, too. My  
14 guess is, it's upper 400s, something like that, but,  
15 again, I don't remember.

16 Do you remember giving that testimony?

17 A. Yes, sir.

18 Q. So didn't you testify, sir, in your  
19 deposition, not that your standard commercial rate for  
20 technical consulting was 475 but that you had dropped  
21 it, and it was in the middle 400s before you dropped it?

22 A. Well, I don't think I -- no, I don't think  
23 that's what that says.

24 Q. Isn't that exactly what you said, sir?

25 A. I don't think so. I think you're inferring

1 something.

2 Q. Didn't you say, Page 85, Line 4, that it's  
3 somewhere between 300 and 420 an hour?

4 A. Yes. So I was in error.

5 Q. And, in fact -- well, that was -- you gave  
6 that testimony under oath, just like you're under oath  
7 now, didn't you?

8 A. Right. And I also said that I didn't know  
9 exactly and that I thought it was about that range. And  
10 so under oath -- I was, in fact, under that oath.

11 Q. You didn't know what you were making.

12 A. I'm sorry. Did you ask me a question?

13 Q. You testified that you didn't know what you  
14 were making, but you thought it was somewhere between  
15 300 and \$420 an hour, correct?

16 A. That is correct. That's what I testified.

17 Q. And now you're telling us that Microsoft is  
18 paying you 475 an hour, right?

19 A. That is correct.

20 Q. And isn't it true, sir, that that's higher  
21 than the rate you charge other clients?

22 A. No, it's not.

23 Q. You charge all your other clients 425?

24 A. No.

25 Q. 475?

1 A. Not all of my clients. I have different rates  
2 for different kinds of work.

3 Q. What rates do you have for what you're doing  
4 for Microsoft?

5 A. It's my standard commercial rate, which is  
6 \$475 an hour.

7 Q. And how many commercial clients do you have?

8 A. About three or four.

9 Q. Three or four? Who are they?

10 A. I can't name them.

11 Q. Oh, you can't name them or don't want to name  
12 them?

13 A. I have contracts -- obligations not to name  
14 these -- these people in a public forum.

15 Q. Okay.

16 MS. WEISWASSER: Your Honor, Mr. Saydjari  
17 does a lot of confidential work. He should not be  
18 required to reveal the names of his other clients in  
19 this public courtroom.

20 THE COURT: Proceed.

21 Q. (By Mr. Cawley) So you testified to the jury  
22 on your direct examination, when this quick line of  
23 questioning went by, that Microsoft was compensating  
24 you, making it up to you for your lost wages.

25 The fact of the matter is, this is just a

1 paying job for you, isn't it?

2 A. Negative. No, it's not a paying job. It's  
3 making up for lost time.

4 Q. You have commercial clients, right?

5 A. Yes.

6 Q. And you're charging Microsoft just like a  
7 commercial client.

8 A. I am losing wages that I would have been paid  
9 during this time that I am testifying for Microsoft, and  
10 they are compensating me at my commercial rate for my  
11 lost time.

12 Q. Do you bill this money yourself personally, or  
13 do you have a company that gets it?

14 A. I'm not sure what you're asking me.

15 Q. Well, you say your lost wages. Do you -- do  
16 you -- have you -- are you losing wages?

17 A. Yes. By being here, I'm not earning wages,  
18 that's correct.

19 Q. Okay. How -- do you -- do you have a salary?

20 A. I have a partial salary, and I'm also  
21 partially reimbursed on an hourly rate, depending on  
22 what we're doing.

23 Q. Okay. So is your salary docked because you're  
24 here?

25 A. My hourly rate certainly would be docked, yes.

1 Q. No, not your hourly rate, your salary.

2 A. My salary is not, but it's way less than that.

3 Q. Your salary is not docked. Your hourly rate  
4 is made up of hourly work you charge clients, right?

5 A. Right, which I can't do while I'm here.

6 Q. Well, you're doing it, aren't you?

7 A. No. I'm here to testify about the facts, and  
8 I'm losing the wages that I would have been making  
9 during this time.

10 Q. Is it your testimony under oath that if you  
11 were not here testifying in front of this jury about the  
12 facts in this case, you would be doing work for some  
13 other client at the rate of \$475 an hour?

14 A. I can't say that for a fact, but that was the  
15 potential, yes.

16 Q. Thanks. All right.

17 Well, let's talk about some of those facts  
18 that you've been paid to come here and testify about.

19 MS. WEISWASSER: Your Honor -- Your  
20 Honor, I object to that statement.

21 THE COURT: Overruled.

22 MS. WEISWASSER: That implies that --  
23 okay.

24 MR. CAWLEY: May I proceed, Your Honor?

25 THE COURT: Yes, you may.

1 Q. (By Mr. Cawley) As a program manager, you are  
2 responsible for identifying a vision of what technology  
3 DARPA could develop, correct?

4 A. That is correct.

5 Q. And one of the requirements of your  
6 Information Assistance (sic) Program was that the  
7 security technology be easy to use --

8 A. That is correct.

9 Q. -- true?

10 And wouldn't you agree that this was  
11 because -- that the technology needed to be used by the  
12 military personnel, soldiers, and they may or may not  
13 have much computer experience?

14 A. That's correct.

15 Q. And you believed, therefore, that it was  
16 appropriate to make that kind of security easier to use.

17 A. Yes.

18 Q. You agree with me?

19 A. Yes.

20 Q. And, in fact, you knew of some specific  
21 examples back in the time we're talking about where the  
22 complexity of using computer security became a problem  
23 for the military.

24 A. Yes, sir, that's correct.

25 Q. And specifically, you thought back in this



1 time period, that easy-to-use automatic virtual private  
2 networks were needed.

3 A. Yes, sir.

4 Q. Now, you've testified about a project called  
5 DVPN, right? We heard about that.

6 A. Yes.

7 Q. And that was a project that you funded in your  
8 Information Assurance Program, correct?

9 A. That is correct.

10 Q. And you selected Dynamic DVPN -- excuse me --  
11 Dynamic VPN as an early target, because it was, in your  
12 words, a very hot problem.

13 A. That is correct.

14 Q. I believe it was an urgent problem, in fact,  
15 right?

16 A. That is correct.

17 Q. And now, we're talking about a project that  
18 happened more than 10 years ago, right?

19 A. Yes.

20 Q. And you have never looked at the source code,  
21 the computer code, for DVPN, true?

22 A. I don't specifically recall looking at the  
23 source code.

24 Q. Well, have you looked at it or not?

25 A. I don't recall looking at it. It would not

1 have been normally part of my job to look at the source  
2 code.

3 Q. Let's look at your deposition. Do you still  
4 have it in front of you?

5 A. Yes.

6 Q. Turn to Page 192, Line 25.

7 Question: Do you recall even seeing the  
8 source code?

9 Answer: I recall specifically not seeing the  
10 source code.

11 Does that refresh your recollection?

12 A. Yeah. It sounds right.

13 Q. Okay. Now, the DVPN project was managed by  
14 the Trusted Information Systems; is that right?

15 A. That is correct.

16 Q. But it's also true that you don't remember any  
17 of your interactions with them on this project, right?

18 A. No, that wouldn't be correct. I don't have  
19 a --

20 Q. Okay.

21 A. -- specific day-by-day --

22 Q. Look at your deposition, Page 163 at Line 9.

23 Question: What's the first interaction with  
24 TIS you recall in the context of the DVPN program?

25 Answer: Actually, I don't recall any of the

1 interactions, just because there was so much going on.

2 Do you recall that now, sir?

3 A. I do.

4 Q. Okay. And you don't recall how many times the  
5 DVPN prototype was demonstrated, do you?

6 A. I do recall it was at least once.

7 Q. But you don't recall how many times. You  
8 recall once; you don't know if there were more.

9 A. Right. Directly recalling out of my memory,  
10 that's correct.

11 Q. And you testified about some of the kinds of  
12 people who attended the demonstration, but you don't  
13 remember any of the specifics of who those people were,  
14 do you?

15 A. Well, I remember some specifics, and others I  
16 don't remember. I couldn't give you a list of 30 names,  
17 if that's what you're asking me.

18 Q. Okay. How many names could you give me a list  
19 of?

20 A. I don't know. I haven't been asked to do  
21 that, so I imagine I can give you a list of about four  
22 or five people.

23 Q. Okay. But beyond that, you don't remember?

24 A. Not off the top of my head, no.

25 Q. And you don't recall asking anyone to attend

1 the demonstration, correct?

2 A. I don't specifically recall inviting a  
3 particular person, but I would recall, yes, asking  
4 people to attend.

5 Q. Okay. So you recall that, generally, you  
6 asked people to attend, but you don't remember which  
7 people, accurate?

8 A. Not by name and not all of them, but some of  
9 them.

10 Q. Okay. And, in fact, isn't it true,  
11 Mr. Saydjari, you don't remember the details of the DVPN  
12 demonstration?

13 A. Do you mean the technical details of how it  
14 worked?

15 Q. Well, I mean, what you were asked in your  
16 deposition when you were asked, do you remember the  
17 details of the demonstration demonstrating -- do you  
18 remember what you saw there? And you said you didn't  
19 remember; isn't that right?

20 A. I don't know. I'm not looking at that at the  
21 moment. But it would be correct to say that I don't  
22 remember the technical details of the project and how it  
23 worked. I would remember that it was -- that it worked  
24 and that it was demonstrated.

25 Q. Okay. Fair enough. Now, remember Defendant's

1 Exhibit 3008?

2 MR. CAWLEY: Should we see that again?

3 Q. (By Mr. Cawley) I think it's in your binder.

4 Yeah, the document with two dates on it.

5 A. Yes.

6 Q. What's your best recollection, sir, of when  
7 this demonstration actually occurred?

8 A. It was in March of 1998, and that's as  
9 refreshed by the documentation that I've seen.

10 Q. Early or late March?

11 A. I would not recall independently of when the  
12 documentation was given. The documentation indicates  
13 around the middle of March. I think it was the 16th, if  
14 I recall the documentation correctly.

15 Q. Now, Mr. Saydjari, in your experience, isn't  
16 it typical to simplify the operation of a system for a  
17 demonstration?

18 A. Can be.

19 Q. For example, it might be desirable to do that,  
20 to focus on a particular aspect of that system in the  
21 demonstration.

22 A. It's theoretically possible, yes.

23 Q. And you've seen that happen, haven't you?

24 A. I have.

25 Q. But you don't recall whether the DVPN was

1 simplified, do you?

2 A. I don't recall specifically, no.

3 Q. Okay. And you don't recall the specific  
4 equipment that was used in the DVPN demonstration,  
5 correct?

6 A. If you mean the exact configuration of the  
7 computer down to the bits, I absolutely do not remember  
8 that.

9 Q. And in fact, let's get to this point  
10 specifically: You don't have a specific recollection of  
11 how the DVPN technology triggered the VPN, correct?

12 A. That is correct.

13 Q. Okay. And furthermore, even though you don't  
14 remember it exactly, you would doubt that it used a DNS  
15 call as a trigger, correct?

16 A. I don't know whether I -- I don't really know  
17 for sure. In fact, in point of fact, I wouldn't  
18 remember the technical details independent of the  
19 documentation that was there. That really wasn't my job  
20 to understand that level of detail.

21 Q. Take a look at Page 75 of your sworn  
22 deposition. I'm going to start reading the question at  
23 Line 22: Do you have any recollection of whether the  
24 DVPN system used the DNS request to trigger a VPN?

25 Your answer: I don't have specific

1 recollection, but given my recollection of the coalition  
2 manager, the CM, being centrally involved, I would doubt  
3 that they would use the DNS call to trigger, because my  
4 recollection is that the VPN was set up through the  
5 coalition manager prior to the VPN starting up.

6 Does that refresh what you -- your  
7 recollection of what you said in your deposition?

8 A. Yes.

9 Q. Have you met with Microsoft's lawyers before  
10 this testimony?

11 A. Yes.

12 Q. How many times?

13 A. I would estimate, oh, maybe three or four.

14 Q. When's the last time?

15 A. Let's see. Probably today.

16 Q. Today? Probably today?

17 A. Yes.

18 Q. Any doubt about that, sir?

19 A. Well, no. I'm sorry. It was today.

20 Q. Aah, it was today.

21 A. It's a bit of a blur over the last few days.

22 I apologize.

23 Q. You're not aware of any products that were  
24 developed out of the DVPN technology, are you, sir?

25 A. That is correct.

1 Q. You're not aware of any government agencies  
2 who use the DPN -- DVPN technology?

3 A. I don't know whether they did or didn't.

4 Q. And you're not aware of any return on that  
5 investment, other than the prototype that was  
6 demonstrated in one of your meetings?

7 A. That's correct.

8 Q. Okay. You also testified about some  
9 interactions that you had with Mr. Munger and others at  
10 SAIC. Let me ask you a few questions about that.

11 A. Sure.

12 Q. Before Microsoft's lawyers contacted you, you  
13 didn't remember anything about the SAIC proposal, did  
14 you?

15 A. I don't know that it's fair to say anything,  
16 but I certainly had very little recollection of it.

17 Q. Okay. And when you -- you do recall, though,  
18 that when you met with Mr. Munger and his team, what you  
19 discussed with them was his idea -- or their idea for  
20 using IP hopping to defeat a denial of service attack,  
21 correct?

22 A. Yes. That was an aspect.

23 Q. And IP hopping is a type of VPN, correct?

24 A. It can be implemented with VPN, that's  
25 correct.



1 Q. IP hopping involves, in simplified terms, the  
2 constant switching of IP addresses to make it harder to  
3 track them.

4 A. That's correct.

5 Q. And you don't recall any discussion with  
6 Mr. Munger or SAIC regarding how VPNs should be set up,  
7 true?

8 A. That's true.

9 Q. All you remember evaluating was -- with  
10 Mr. Munger and SAIC was their IP-hopping ideas.

11 A. Directly remembering off the top of my head 12  
12 years later, that is correct.

13 Q. And you don't recall discussing or evaluating  
14 SAIC's ideas regarding DNS-triggered VPNs?

15 A. That is not correct. I did, in fact, review  
16 the evaluation after the fact. My documentation  
17 refreshed my memory that I reviewed the entire proposal,  
18 not just the IP-hopping idea.

19 Q. That's not what you said in your deposition,  
20 is it?

21 A. I don't know. You would have to show me, and  
22 I'll have to read it.

23 Q. I'd be glad to. Page 144, Line 8. You with  
24 me?

25 Question: You don't recall them explaining to

1 you that they were proposing to set up VPNs using DNS  
2 triggers?

3           Your answer: I don't specifically recall  
4 that, no.

5           A. That is --

6           Q. Is that the testimony that you gave, sir?

7           A. Yes, but I think that's different than the  
8 question you just asked me.

9           Q. Well, is that the testimony that you gave?

10          A. That is the testimony that I gave, yes.

11          Q. One of the reasons that you decided not to  
12 fund SAIC's project was your feeling that it was too  
13 close to the DVPN project, correct?

14          A. One of them, yes.

15          Q. And at the time you met with Mr. Munger, you  
16 had already started funding DVPN.

17          A. That is correct.

18          Q. In fact, you had been working on DVPN for at  
19 least the previous year, right?

20          A. Since December of 1997, so approximately a  
21 year.

22          Q. Okay.

23          A. Not quite.

24          Q. And in fact, you believed that you may have  
25 even finished the DVPN project at the time you were

1 meeting with SAIC; isn't that right?

2 A. Yeah, that's correct.

3 Q. And you didn't believe it was prudent to make  
4 two investments in that small aspect of your program,  
5 correct?

6 A. That is correct.

7 Q. All right. Now, finally, sir, it's not  
8 unusual, is it, that due to the state of the economy,  
9 political issues, political events, terroristic events,  
10 that the priority of government funding may change.

11 You agree with that?

12 A. I agree with that.

13 Q. And, in fact, you've experienced that at  
14 DARPA, haven't you, when you've experienced at times  
15 decreases in your funding and at times increases?

16 A. My funding at DARPA was consistently high,  
17 actually, during the entire time I was there. It  
18 actually reached a peak while I was there.

19 Q. Well, I'm not saying that it was ever high or  
20 low. All I'm saying is that the availability of money  
21 varies, doesn't it?

22 A. Certainly, it's finite, yes.

23 Q. And, in fact, in 2008, 2009, DARPA and other  
24 government agencies' funding for computer security  
25 research decreased, didn't it?

1 A. Yes.

2 Q. And you noticed a similar change in funding --  
3 not decrease, but in some ways increase, for example,  
4 after 9/11?

5 A. In computer security, I don't know that I  
6 would -- I would say that that's a true statement.

7 Q. And it's not a true statement because, in  
8 fact, priorities shifted to antiterrorism activities,  
9 correct?

10 A. I really can't speak for the government's  
11 priorities and how the funds shifted. I'm not an expert  
12 on the budget.

13 Q. You were in that business, sir, though, and  
14 you would agree with me, wouldn't you, that after 9/11,  
15 when everyone was focused, and properly so, on defeating  
16 terrorism, it left less money to go to things like  
17 computer security.

18 A. It's -- it's possible. I just don't recall  
19 specifically during that year.

20 Q. Thank you, sir.

21 MR. CAWLEY: Pass the witness.

22 THE COURT: Redirect?

23 MS. WEISWASSER: Your Honor, just a few  
24 questions, please.

25 THE COURT: All right.

1 REDIRECT EXAMINATION

2 BY MS. WEISWASSER:

3 Q. Mr. Saydjari, VirnetX's lawyer spent most of  
4 his time asking about your hourly rate.

5 Do you recall that?

6 A. I do.

7 Q. After an almost 20-year career in the United  
8 States Department of Defense, responsible for the  
9 nation's computer security, is your testimony today,  
10 which has been under oath, affected in any way by the  
11 payment that Microsoft has made to you?

12 A. No, ma'am, in no way. That's not who I am.

13 Q. Wouldn't your credibility, Mr. Saydjari, be  
14 worth more to you than that?

15 A. Absolutely.

16 Q. So what was your reaction to VirnetX's  
17 lawyer's suggestion that somehow your testimony today  
18 has been affected by you being compensated for your lost  
19 time?

20 A. Honestly, I found it somewhat offensive.

21 MS. WEISWASSER: No further questions,  
22 Your Honor.

23 THE COURT: Thank you. Any further  
24 recross?

25 MR. CAWLEY: No, Your Honor.

1 THE COURT: All right. You may step  
2 down.

3 May this witness be finally excused? Any  
4 objection?

5 MR. CAWLEY: No objection.

6 MS. WEISWASSER: No objection, Your  
7 Honor.

8 THE COURT: All right. Thank you. You  
9 are excused.

10 All right, Ladies of the Jury. That  
11 concludes our testimony for today. Let me give you kind  
12 of an update as to where we are.

13 The attorneys are on a time schedule, and  
14 as best I can determine, if they take all of their time,  
15 which I'm sure we're all hopeful, including them, that  
16 they don't, but if they do take all of their time, we've  
17 got about eight more hours of testimony to go.

18 And we're getting in five to six hours,  
19 so my best guess at this point is we'll -- we could get  
20 through with the testimony tomorrow. In all  
21 probability, we'll come back Monday morning and finish  
22 the testimony and then hear closing arguments and get  
23 the case to you Monday afternoon.

24 But that's just to give you an idea of  
25 planning. It could go over into Tuesday, but for your

1 planning purposes, I just wanted to let you know where  
2 we are in the process.

3 Thank you again for your attention. It's  
4 been a long day. You've worked very hard, all of the  
5 lawyers have, and it's very much appreciated. Drive  
6 careful going home.

7 Remember my instructions. Please still  
8 don't discuss this case with anyone else or among  
9 yourselves or do any kind of investigation or anything  
10 of that nature. Follow my instructions, and we'll see  
11 you back here in the morning at 9:00 o'clock.

12 The jury is excused.

13 COURT SECURITY OFFICER: All rise for the  
14 jury.

15 (Jury out.)

16 THE COURT: Please be seated.

17 All right. What can we expect tomorrow,  
18 Mr. Powers, as far as witnesses?

19 MR. POWERS: Well, at the beginning, we  
20 have three depositions.

21 THE COURT: Okay.

22 MR. POWERS: The first two will be  
23 further DVPN depositions following up on -- they'll be  
24 Mr. Sterne, who was referenced by Mr. Saydjari, and then  
25 Mr. Kindred, who is also DVPN as well.

1                   Then Mr. Hopen by deposition. He's  
2 Aventail. And I believe the next witness would be  
3 Dr. Johnson, a technical expert on non-infringement.

4                   THE COURT: Okay. And will that conclude  
5 Microsoft's case?

6                   MR. POWERS: There may be another  
7 deposition or two after that. It sort of depends on  
8 when Mr. Johnson is going for Friday. Obviously,  
9 Mr. Wicker will be testifying, as well as an expert on  
10 validity, which is another long examination.

11                   There's a couple more depositions that  
12 depending on when -- where we are, that's where we -- I  
13 expect it to go into Monday morning.

14                   THE COURT: Into Monday.

15                   MR. POWERS: Yes.

16                   THE COURT: All right.

17                   MR. CAWLEY: So just so I can sleep well  
18 tonight, Judge, or as well as possible, can we have the  
19 agreement or the understanding that we're not going to  
20 do closing argument tomorrow?

21                   THE COURT: We don't -- I think that's  
22 safe.

23                   MR. CAWLEY: Okay. It would really be  
24 nice if we could finish the evidence tomorrow, and then  
25 everybody could focus on their closing arguments.



1                   We could bring in the jury when they're  
2 fresh and charge and do arguments and get it to them by  
3 noon on Monday, but if not, we'll get it to them Monday  
4 afternoon.

5                   MR. POWERS: If it can be done, we will,  
6 Your Honor. I don't think it's possible.

7                   THE COURT: Okay. All right. Very well.  
8 Just for the parties' information, the Plaintiff has  
9 used 10 hours and 50 minutes, and the Defendant has used  
10 8 hours and 48 minutes.

11                   MR. POWERS: Your Honor, there is one  
12 matter that it would help to resolve before tonight, and  
13 that is there are three object -- exhibits that are  
14 directly discussed by the next two deposition witnesses,  
15 Sterne and Kindred, the DVPN exhibits that are the  
16 subject of our brief.

17                   The rulings by Your Honor on those  
18 exhibits affect the cuts in the video depositions that  
19 we're doing. So if we can have a ruling on those, it  
20 would help the parties with getting the video  
21 depositions properly done tonight.

22                   THE COURT: All right. Well, let's take  
23 those up right now then.

24                   All right. What's your first one, and  
25 what's the testimony with regard to it? And you need to

1 summarize or put it on. What's your preference?

2 MR. POWERS: 3061, Your Honor.

3 THE COURT: Excuse me. 3061?

4 MR. POWERS: 3061 is the source code.

5 The only objection is authentication. Mr. Kindred  
6 testifies about that authentication and authenticates  
7 the source code.

8 He was -- he was the person -- he wasn't  
9 the person who wrote the source code, but he was the  
10 person who got the handoff of the source code and  
11 testified -- and was working with it on a regular basis,  
12 and he'll testify, yes, that's the source code that I  
13 had.

14 THE COURT: And who is Mr. Kindred?

15 MR. POWERS: He was an employee of --

16 THE COURT: TIS.

17 MR. POWERS: -- of TIS and its successor  
18 entity as well. So they changed names at some point in  
19 there, but it's the same entity.

20 THE COURT: And what -- do you have his  
21 deposition testimony, what he says about the source  
22 code?

23 MR. POWERS: We do, yes. It's at Pages  
24 12 and 16 of Exhibit F.

25 THE COURT: Okay. If you will, hand it

1 up to me. If I can...

2 And this is where he authenticates it?

3 MR. POWERS: Yes, Your Honor.

4 THE COURT: Okay. What's the Plaintiff's  
5 objection, authentication?

6 MR. McLEROY: That, Your Honor,  
7 Mr. Kindred joined the company in September of 1999,  
8 about 18 months after this presentation was given.  
9 He doesn't have the personal knowledge necessary to  
10 authenticate this source code as the source code that  
11 was used in this March 1998 presentation. All he  
12 testifies to -- and I believe you'll see this when you  
13 read it -- is that this source code was waiting for me  
14 or given to me when I arrived, and I modified it to  
15 those future versions of DVPN.

16 MR. POWERS: And, Your Honor, the second  
17 relevant point, of course, is that the source code, like  
18 all source code, is dated as to when it was created and  
19 last modified. And he testifies about that convention,  
20 and the source code itself is really  
21 self-authenticating.

22 As Your Honor knows, when you read the  
23 source code, you look at the comments, it tells you what  
24 was done when. And so he's saying, yes, this is the  
25 source code I received when I started; yes, this is

1 appropriate; yes, this is authentic; this is what he  
2 looked like; and this is how it worked then.

3 THE COURT: Let me see the testimony.  
4 Did you prove it up by business records with him as  
5 well?

6 MR. POWERS: It's clearly a business  
7 record. It's source code, Your Honor. That's not the  
8 issue. The issue is only authentication. It's not a  
9 hearsay issue.

10 (Pause in proceedings.)

11 THE COURT: Okay. Any further response?

12 MR. McLEROY: Yes. One additional point,  
13 Your Honor. There's a software engineer who used to  
14 work at this Trusted Information Systems. His name is  
15 Mr. Domenic Turchi. He was actually the engineer who  
16 wrote the code and demonstrated the code at this March  
17 1998 meeting. That's what the testimony will show.  
18 And he lives in Maryland. We're not aware of any reason  
19 why he could not have been deposed in this case, but  
20 Microsoft made the strategic decision not to subpoena  
21 him, not to have his testimony here.

22 THE COURT: All right. 3061 will be  
23 admitted.

24 What else?

25 MR. POWERS: The next exhibit, Your

1 Honor, is Exhibit 3040.

2 THE COURT: That's the e-mail from Turchi  
3 to Sterne?

4 MR. POWERS: Exactly, Your Honor. And  
5 the objection is hearsay. And obviously, it's like  
6 every other document that's been admitted of exactly  
7 this type, despite the hearsay objection, by agreement.  
8 This is a standard business record, and the same would  
9 really apply to 3041 and 3045.

10 THE COURT: And where did you get this  
11 e-mail?

12 MR. POWERS: This was -- well, let me  
13 figure out the answer to that.

14 (Counsel confer.)

15 MR. POWERS: My understanding, Your  
16 Honor, it was produced by Mr. Sterne.

17 THE COURT: Okay. And what did  
18 Mr. Sterne testify about this e-mail?

19 MR. POWERS: He testifies that it is what  
20 it appears to be and that it's --

21 THE COURT: And that he received this  
22 e-mail from Turchi? Does he testify to that?

23 MR. POWERS: Yes, Your Honor.

24 THE COURT: All right. Response?

25 MR. McLEROY: Yes, Your Honor. We don't

1 believe this has been proved up as a business record,  
2 and if you review the testimony, what we would like you  
3 to focus on is whether or not it has been shown that it  
4 was prepared at or near the time of the events in  
5 question, that being this March 1998 presentation.

6           What the evidence shows is that DVPN  
7 rapidly changed from its inception, as Mr. Saydjari  
8 testified, in mid to late 1997 through March of 2000  
9 where, in fact, there was a second demonstration of  
10 DVPN, which Microsoft does not contend invalidates any  
11 of the VirnetX patents.

12           So there are a lot of changes made to the  
13 source code. That's why we believe at or near the time  
14 of the event is very critical here, and that has not  
15 been proved up with respect to any of the remaining  
16 documents.

17           THE COURT: It's dated, though, isn't it?

18           MR. McLEROY: It is dated, Your Honor.

19           THE COURT: All right. 3040 will be  
20 admitted.

21           MR. POWERS: The next one, Your Honor, is  
22 3041, which is an overview document that's created to  
23 describe the DVPN.

24           Again, it's established clearly as a  
25 business record. It's also to establish what the

1 document was used for. And this, as I understand it,  
2 was actually used as part of --

3 THE COURT: Now, that doesn't have any  
4 authors, I notice.

5 MR. POWERS: It's not listed as  
6 authored.

7 THE COURT: All right. And who is your  
8 sponsoring witness that says where they got this and  
9 what it is?

10 MR. POWERS: Mr. Sterne, Your Honor.

11 THE COURT: What does he say?

12 MR. POWERS: I'll grab the testimony for  
13 you.

14 THE COURT: Response?

15 MR. McLEROY: Your Honor, this document,  
16 unlike the e-mail, is undated, and we don't believe  
17 there's any evidence in the record that shows that it  
18 was prepared at or near the time of this demonstration,  
19 which is exactly what they're offering it to prove.

20 THE COURT: What does Mr. Sterne say  
21 about it?

22 MR. POWERS: Your Honor, the testimony is  
23 at Page 28, Line 22 through 25; also 17 -- it's  
24 summarized at Page 7 of our brief. I could hand that up  
25 for you as a road map.

1 THE COURT: I'd like to see the  
2 testimony, if you have it there.

3 MR. POWERS: I do, Your Honor.

4 THE COURT: What page is it?

5 MR. POWERS: Well, the first page, Your  
6 Honor, for 3041 is Page 28.

7 THE COURT: Line?

8 MR. POWERS: 22 to 25 is the first  
9 excerpt that discusses the team, which is, of course,  
10 relevant to that.

11 Page 29, Lines 3 through 12 is discussing  
12 the issue directly in terms of its creation in the  
13 ordinary course of the business.

14 Really, if you started at Page 28,  
15 Line 9, and go through 29, Line 12, that's the bulk of  
16 it.

17 THE COURT: That's where I am.

18 (Pause in proceedings.)

19 THE COURT: Okay. What's your objection?

20 MR. McLEROY: It's hearsay, Your Honor,  
21 and that it hasn't been proved to have been prepared at  
22 or near the time of the IFD 1.1.

23 THE COURT: All right. I'm going to  
24 sustain the objection as to 3041.

25 Which one is next?



1 MR. POWERS: The last one, Your Honor, is  
2 3045. And the relevant pages from Mr. Sterne's  
3 deposition are 61 to 62.

4 THE COURT: And this is a diagram of the  
5 VPN demonstration; is that correct?

6 MR. POWERS: Exactly, Your Honor.

7 THE COURT: But it's not dated and does  
8 not have an author, right?

9 MR. POWERS: It's undated on its face and  
10 doesn't have an author on its face, but Mr. Sterne  
11 supplies that.

12 THE COURT: Okay. That's Sterne on --

13 MR. POWERS: Actually, there is a date,  
14 Your Honor. It's March -- the date is March 21 of 1998.

15 THE COURT: All right. And where is  
16 Sterne's testimony, what page? 61?

17 MR. POWERS: 61 and 62, Your Honor.

18 THE COURT: Beginning on Line -- that's  
19 Exhibit 7?

20 MR. POWERS: Yes, Your Honor. Beginning  
21 at Line 21, I think, on 61, but perhaps a little bit  
22 before that, through about the middle of Page 62.

23 THE COURT: Who's BBN?

24 MR. POWERS: I'm sorry? Do what, Your  
25 Honor?

1 THE COURT: Oh, that's the -- he said it  
2 was probably produced by BBN.

3 MR. POWERS: BBN is that contractor that  
4 Mr. Saydjari just testified about, who was the  
5 integrator, who's the one that was participating in the  
6 March conference.

7 (Pause in proceedings.)

8 THE COURT: Okay. Objection?

9 MR. McLEROY: Yes, Your Honor.

10 This is hearsay. Unlike the other  
11 documents, this one did not come from Trusted  
12 Information Systems. It came from a separate company,  
13 BBN.

14 And no BBN representative was deposed,  
15 and I don't believe, in Mr. Sterne's deposition, that  
16 any effort was made to prove this document up as a  
17 business record.

18 MR. POWERS: May I respond, Your Honor?

19 THE COURT: Yes, you may.

20 MR. POWERS: Trusted Information Systems  
21 was working with BBN. Mr. Saydjari just testified to  
22 that. The document is dated, and they were working  
23 together as part of that exact demonstration.

24 The title is Virtual Private Network  
25 Demonstration, and Mr. Sterne's testimony, I think,

1 gives all the information we need.

2 THE COURT: Let me see the document, if  
3 you would.

4 (Pause in proceedings.)

5 THE COURT: Now, where is the date on the  
6 document?

7 MR. POWERS: Very first page, bottom  
8 right.

9 THE COURT: All right. Be admitted.  
10 All right. What else?

11 MR. POWERS: That's it from Microsoft,  
12 Your Honor.

13 THE COURT: All right. Anything else  
14 from the Plaintiff?

15 MR. CAWLEY: Your Honor, may we have  
16 permission to use the camera in the courtroom to  
17 photograph the demonstrative in the computers?

18 THE COURT: Yes, that's fine.

19 MR. CAWLEY: Thank you, Your Honor.

20 THE COURT: Both sides may do so.

21 All right. Very well. We will see you  
22 in the morning.

23 COURT SECURITY OFFICER: All rise.

24 (Court adjourned.)

25 \* \* \* \* \*

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CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/ \_\_\_\_\_  
SUSAN SIMMONS, CSR  
Official Court Reporter  
State of Texas No.: 267  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date

/s/ \_\_\_\_\_  
JUDITH WERLINGER, CSR  
Deputy Official Court Reporter  
State of Texas No.: 731  
Expiration Date: 12/31/10

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EXHIBIT F9

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IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION

VIRNETX \* Civil Docket No.  
\* 6:07-CV-80  
VS. \* Tyler, Texas  
\*  
\* March 12, 2010  
MICROSOFT CORPORATION \* 9:00 A.M.

TRANSCRIPT OF JURY TRIAL  
BEFORE THE HONORABLE JUDGE LEONARD DAVIS  
UNITED STATES DISTRICT JUDGE

APPEARANCES:

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(Proceedings recorded by mechanical stenography,  
transcript produced on CAT system.)

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APPEARANCES CONTINUED:

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\* \* \* \* \*

P R O C E E D I N G S

(Jury out.)

COURT SECURITY OFFICER: All rise.

THE COURT: Please be seated.

All right. Is there a matter before we

1 bring the jury in?

2 MR. CASSADY: Your Honor, just one small  
3 housekeeping matter. Exhibit 732 was inadvertently left  
4 off of our list yesterday. It's an MCP -- MCPP license.  
5 It might be other licenses that were let into evidence,  
6 and I wanted to give Mr. Sayles a chance to object  
7 outside the presence of the jury.

8 THE COURT: Are you offering it?

9 MR. CASSADY: I'm offering that and 277  
10 and 228 from yesterday.

11 THE COURT: All right. Any objection?

12 MR. SAYLES: I object to the first  
13 numbered exhibit --

14 MR. CASSADY: 732.

15 MR. SAYLES: -- 732 on the grounds that  
16 it's an irrelevant, non-comparable license agreement and  
17 should not be permitted to go to the jury.

18 THE COURT: Okay. Admitted.

19 Thank you.

20 All right. Anything else before we bring  
21 the jury in?

22 MR. CASSADY: No, Your Honor.

23 THE COURT: All right. Bring the jury  
24 in.

25 COURT SECURITY OFFICER: All rise.



1 (Jury in.)

2 THE COURT: Please be seated.

3 All right. Good morning. It's Friday.

4 All right. We're about to begin our  
5 fifth day of trial, and we will have a full day of  
6 evidence today, probably a little bit of evidence on  
7 Monday morning.

8 So with that, if you would like to call  
9 your next witness.

10 MR. BOBROW: Thank you very much, Your  
11 Honor.

12 At this time, Microsoft calls David  
13 Johnson.

14 THE COURT: Okay. David Johnson.  
15 I believe Mr. Johnson has been sworn,  
16 hasn't he?

17 MR. BOBROW: Yes, he has, Your Honor.

18 DAVID JOHNSON, DEFENDANT'S WITNESS, PREVIOUSLY SWORN

19 DIRECT EXAMINATION

20 BY MR. BOBROW:

21 Q. Good morning, sir.

22 A. Good morning, sir.

23 Q. Can you please introduce yourself to the jury?

24 A. Yes. My name is David Johnson.

25 Q. Where do you live Mr. Johnson?

1 A. In Houston, Texas.

2 Q. How long have you lived there?

3 A. I've been in Houston now a total of 19 years.

4 Q. And --

5 A. I'm sorry. 29 years. Excuse me.

6 Q. What do you do for a living in Houston?

7 A. I'm a tenured full professor of computer  
8 science and in electrical and computer engineering at  
9 Rice University.

10 Q. How long have you been a professor there?

11 A. Ten years.

12 Q. Were you a professor before that?

13 A. Yes. I was at the Carnegie Mellon University  
14 in Pittsburgh for eight years.

15 Q. So when did you start as a professor at  
16 Carnegie Mellon?

17 A. In 1992.

18 Q. When did you start as a professor at Rice?

19 A. 2000.

20 Q. And what has been the focus of your research  
21 and your work at Carnegie Mellon University and at Rice?

22 A. Focus on my research has been in the area of  
23 network protocols and internet and operating systems and  
24 allowing those computers to communicate with each other,  
25 including issues such as efficiency, reliability, and

1 security.

2 Q. Now, would you please tell us why you're here  
3 today?

4 A. I've been asked to give my opinion as to  
5 whether Microsoft infringes the asserted VirnetX's  
6 patents.

7 Q. Have you formed opinions on that subject?

8 A. Yes, sir, I have.

9 Q. What opinions have you formed?

10 A. Microsoft does not infringe the patents.

11 Q. All right. Now, before we get into the  
12 details of that and the work that you did in your  
13 forming those opinions, what I would like to do, first  
14 of all, is get a little bit more of your background out  
15 and talk about some of the work that you've done both at  
16 Carnegie Mellon and at Rice.

17 So if we could begin, please, even before  
18 that, if you could give us a sketch of your educational  
19 background since high school.

20 A. Yes, sir.

21 I attended high school at Spring High School  
22 in Spring, Texas, near Houston, and graduated there in  
23 1978. I went from Spring High School to Rice University  
24 and received my bachelor's there in computer science and  
25 in mathematical sciences in 1982.

1           In 1985, I received my master's in computer  
2 science also from Rice University, and in 2000 -- excuse  
3 me -- in 1990, I received my Ph.D. in computer science  
4 at Rice University.

5           Q.    All right. Now, Professor Johnson, as a  
6 professor at Carnegie Mellon and at Rice, have you  
7 taught courses in the field of networks and the  
8 internet?

9           A.    Yes, sir, I have. I've taught courses at both  
10 the graduate and undergraduate level in networks and  
11 operating systems. Primarily my teaching is graduate  
12 courses in mobile and wireless network protocols and  
13 undergraduate courses in operating systems. And I teach  
14 those courses every year.

15          Q.    Do you also teach courses outside of the  
16 university setting?

17          A.    Yes, sir, I have. I've taught more than a  
18 dozen short courses, one-day courses typically, at  
19 computer science conferences.

20          Q.    Okay. And does any of the teaching you do  
21 involve network security?

22          A.    Yes, sir, it does. In both of the classes  
23 that I mentioned, the graduate mobile and wireless  
24 networking course and undergraduate operating systems  
25 course, I teach network security or cover that in both

1 of those classes, including issues such as encryption,  
2 authentication, denial of service attack prevention.  
3 Virtual private networks, prevention of viruses, issues  
4 such as that.

5 Q. All right. Now, I think a couple of times you  
6 mentioned to us that some of your work involves mobile  
7 networks, mobile IP and wireless.

8 Can you give us a very brief description of  
9 what that's about?

10 A. Sure. A mobile network is one in which the  
11 computers can move around and connect to the network at  
12 different places, and, in fact, can move around while  
13 they're even in use.

14 And wireless networking is the most common  
15 example of a mobile network.

16 Q. And does the mobility of those devices that  
17 you've described create any particular problems?

18 A. Yes, sir, it does.

19 In a typical -- in a traditional stationary  
20 network, the network address of a computer essentially  
21 defines the location of that computer and allows the  
22 routers in a network, such as the internet, to be able  
23 to route packets to that location.

24 When the mobile -- the computers become  
25 mobile, that association between the address of the

1 computer and the location on the computer breaks, so  
2 routing becomes much -- much more difficult.

3 Q. Now in that last answer, you talked about  
4 hackers and the word hack.

5 Can you please tell us what you mean by that?

6 A. The way computers communicate with each other  
7 is through packets, such as in the internet, the  
8 protocols call IP, or the internet protocol, so  
9 you've -- you know, many of the witnesses have mentioned  
10 IP packets.

11 That's just the basic unit of communication  
12 that computers use over networks to communicate with  
13 each other.

14 Q. Okay. Thank you.

15 Now, let me ask you -- you mentioned that  
16 you've done work in networks and the internet. Have you  
17 authored any standards relating to networks and the  
18 internet?

19 A. Yes, sir, I have.

20 I've -- I was active for more than 10 years in  
21 the IETF, or Internet Engineering Task Force, and there  
22 have authored five different RFCs. One of those RFCs is  
23 related to parts of how the internet itself work and the  
24 rest deal with aspects of mobile networking.

25 Q. Now, you mentioned in your last answer RFC.

1           Can you remind us, please, what that stands  
2 for?

3           A.    Yes.  Thank you.

4           RFC is the name of the documents that -- that  
5 specify all the different standards that make now the  
6 internet works.

7           Q.    Thank you.

8           Now, you mentioned some of the standards work  
9 you've done in the mobile area.  Are there any the  
10 particular security issues that come up in that context?

11          A.    Yes, sir, there are.

12          When computers move from place to place, the  
13 computer has to send a sort of what you might think of  
14 as a location update packet to let others know the new  
15 location of -- of the mobile computer.

16          And the danger then comes in or the security  
17 problem then comes in is, it would then be possible for  
18 hackers to essentially fake those location update  
19 packets, or possibly modify those location update  
20 packets, and trick others into thinking the mobile  
21 computer is someplace that it's not or perhaps someplace  
22 that it was, say, last week.

23          So it would then be possible for the attacker  
24 to essentially highjack arbitrary communication between  
25 any different computers on the internet.

1 Q. Thank you.

2 Now, you mentioned this mobile IP standard.  
3 How widely is that standard used, sir?

4 A. It's very widely used. It turns out the most  
5 widely used aspect of it is in the cellular telephone  
6 industry, and from the latest statistics from the cell  
7 phone industry, there are over a billion users of the  
8 mobile IP standard worldwide.

9 Q. Okay. Now, shifting from some of your  
10 standards work, have you done any work on the issues of  
11 networking or the internet for the United States  
12 government?

13 A. Yes, sir, I have.

14 I have received seven grants from the National  
15 Science Foundation, two grants from DARPA, the Defense  
16 Advanced Research Products Agency, and one grant from  
17 NASA all in the areas of -- of networking.

18 Q. Did any of that work that you just described  
19 for the United States government involve issues of  
20 network security?

21 A. Yes, sir.

22 In particular, one of those National Science  
23 Foundation grants was specifically directed to  
24 developing new techniques for network security, the  
25 grant from the Trusted Computing program of the National



1 Science Foundation.

2 Q. Now, sir, as a professor at Carnegie Mellon  
3 and at Rice University, have you authored any papers or  
4 books or articles on the subject of networks or the  
5 internet?

6 A. Yes, sir, I have.

7 I have published over 100 papers in conference  
8 proceedings and in journals, in book chapters, technical  
9 reports, internet standards documents, most of which  
10 deal with net -- computer networking and many of which  
11 deal directly with different aspects of -- of computer  
12 network security, particularly mobile network security.

13 Q. Okay. Now, before your work on this case,  
14 have you ever worked as an expert in any other cases?

15 A. Yes, sir, I have. This is the --

16 Q. Have you -- I apologize, sir. Go ahead.

17 A. I was just going to say, yes, this is the  
18 twelfth case that I've been retained as an expert  
19 witness for.

20 Q. Have you ever been hired by the party that  
21 owns the patent, sometimes the Plaintiff?

22 A. Yes, sir, I have.

23 Q. And you've been hired, I take it then, for  
24 work on behalf of defendants, the parties that have been  
25 sued for infringement; is that right?

1 A. Yes, sir, that's correct.

2 Q. Okay. Now, earlier you told us your opinions  
3 that Microsoft does not infringe the two patents of  
4 VirnetX that are at issue in this lawsuit. And I wanted  
5 to first find out about the work that you did leading up  
6 to your opinions.

7 Now, I understand, sir, that you have prepared  
8 some slides or overheads to assist in your presentation;  
9 is that right?

10 A. Yes, sir, that's correct.

11 Q. All right. So the first thing I'd like you to  
12 do is to please describe for us the work that you did  
13 before forming your opinion that Microsoft does not  
14 infringe the '135 patent or the '180 patents?

15 A. All right. I studied the patents at issue in  
16 this case. I studied their prosecution histories before  
17 the Patent Office. I studied, of course, Judge Davis'  
18 claim construction in this case. I studied a large  
19 number of Microsoft technical documents as well as the  
20 source code of the products at issue in this case, the  
21 deposition transcripts in this case.

22 I've used both the -- the different pieces of  
23 software accused in this case. Studied Dr. Jones'  
24 reports, including the Wireshark data that he collected  
25 and presented earlier this week in this case. And I

1 prepared reports in this case to describe my findings in  
2 this case.

3 Q. All right. Now, what I'd like to begin with,  
4 since we have two patents and we have two sets of  
5 products, let's start, if we may, with the '135 patent  
6 and the products of Microsoft that are involved there,  
7 okay?

8 A. Yes, sir.

9 Q. So what I'd like to first do is make sure  
10 we're all on the same page and we know what software it  
11 is that you looked at and formed your opinions on.

12 So if you would, please, let us know what that  
13 is.

14 A. All right, sir. I've prepared on this next  
15 slide a list just to summarize the different pieces of  
16 software. So one of those was Windows XP, and another  
17 one was Windows Vista.

18 Q. All right. And what else have you looked at?

19 A. All right. So in the case of Windows XP, it  
20 was only versions of XP that included the RTC or  
21 real-time communications APIs Version 1.2 or later.  
22 In the case of Windows Vista, it was only those that  
23 included the UCC APIs which meant that only after a user  
24 had either downloaded those APIs from the web or  
25 installed them into that version of Windows Vista, when

1 installed some product that was using those APIs.

2           And the other piece of software were Windows  
3 Messenger Version 5, Office Communicator, Live Meeting  
4 Console, Live Communications Server, and Office  
5 Communications Server.

6           Q.    All right. Now, that's quite -- quite a  
7 mouthful there. What I'd like to do, if I may, is  
8 simply refer to all of that software that's at issue  
9 here as the RTC, real-time communication, software.

10           Is that all right with you?

11           A.    That's great. Thank you.

12           Q.    Okay. Now, let's go back and let me ask you,  
13 have you formed an opinion on whether this RTC software  
14 that you've just described infringes any of the claims  
15 of the '135 patent?

16           A.    Yes, sir, I have.

17           Q.    Tell us what your opinion is.

18           A.    That Microsoft does not infringe any of the  
19 asserted claims with the RTC software.

20           Q.    Tell us, please, how you arrived at that  
21 opinion.

22           A.    I have summarized on -- I'm sorry. I forgot  
23 which slide I was on.

24                    What I did was compared the asserted claims  
25 given Judge Davis' claim constructions, to the accused

1 software and determined that at least three elements of  
2 those claims are missing in the accused products.

3 Q. Okay. Three elements?

4 A. Yes.

5 Q. All right. Now, before I ask you to go  
6 through those --

7 MR. BOBROW: May I ask the Court to  
8 please dim the lights so that the slide is a bit more  
9 viewable for ladies of the jury?

10 THE COURT: Just a minute. We're having  
11 a little technical difficult.

12 There we go.

13 MR. BOBROW: Thank you very much.

14 Q. (By Mr. Bobrow) All right. So you had  
15 mentioned that you had found that three elements of the  
16 claims of the '135 patent were missing.

17 Can you please explain that for us?

18 A. Yes, sir.

19 So in this next slide I've listed, shown Claim  
20 1, just to illustrate the three elements that are  
21 missing. In this claim, there are two of those elements  
22 that are missing: The VPN element and the website  
23 element.

24 So here I've highlighted where those elements  
25 appear in Claim 1, and I found that both the VPN element

1 and the website element are missing. So what I've done  
2 here is crossed out the different portions of the claim  
3 in which those two elements appear, leaving in this  
4 case, only the first step of the method not crossed out.  
5 So the only -- these other elements of the method are  
6 not met by the RTC software.

7 Q. All right. And did you perform the same  
8 evaluation for Claims 10 and 12 of the '135 patent?

9 A. Yes, sir, I did.

10 Q. Can you show us what you did?

11 A. Sure.

12 In my next slide, I've shown the text of  
13 Claims 10 and 12. And in this case, I found not only  
14 the VPN element and the website element missing, but  
15 also the gatekeeper computer element is missing. So  
16 I've highlighted again here those three elements appear  
17 in these two claims. And, again, I've crossed out the  
18 elements, the portions of these two claims in which  
19 those elements appear.

20 And in this case, the entire body of both  
21 Claims 10 and 12 are crossed out, because those elements  
22 appear in -- across the entire claims.

23 Q. All right. So why don't we break this up into  
24 pieces, and what I'd like to do first is ask you some  
25 questions about your opinion that the RTC software

1 doesn't use or include a virtual private network or a  
2 VPN, okay?

3 A. Yes, sir.

4 Q. All right. So, first of all, can you please  
5 remind us what a VPN is?

6 A. Certainly.

7 The Court here has given us a construction for  
8 a VPN, and that is a network of computers which  
9 privately communicate with each other by encrypting  
10 traffic on insecure communication paths between the  
11 computers.

12 Q. Okay. Now, is it your understanding that  
13 Judge Davis' construction requires both data security  
14 and anonymity?

15 A. Yes, sir, that's correct.

16 Q. All right. Can you begin, then, by telling us  
17 what data security is?

18 A. Data security in the context of the patents  
19 means encryption. And I have highlighted here just two  
20 paragraphs of the -- of the patent in which, in fact,  
21 both the data security and the anonymity requirements  
22 are discussed.

23 Q. All right. And can you tell us, then, what  
24 the patent says there about data security?

25 A. Yes. Data security involves keeping the

1 information secret. And so the patent here describes,  
2 for example, data security is usually tackled using some  
3 form of data encryption.

4 Q. Now, you had mentioned anonymity.

5 Can you tell us what anonymity is?

6 A. Yes, sir.

7 Anonymity involves keeping the identities of  
8 the computers that are communicating secret so that an  
9 attacker who may eavesdrop on the communication is  
10 unable to determine which computers are communicating.  
11 I've highlighted here a sentence from the patents that  
12 describes that where they say: Also, it may be desired  
13 to prevent an eavesdropper from discovering that  
14 Terminal 100 is in communication with Terminal 110.  
15 And the language of the patents, Terminal 100 and  
16 Terminal 110, simply identify two computers that they  
17 are talking about in these two paragraphs that are  
18 communicating with each other.

19 Q. And if I've got this right, the portion of the  
20 patent that you were referring to when you were talking  
21 about data security and anonymity is at Column 1, Lines  
22 14 through 45; is that correct?

23 A. That's correct, sir.

24 Q. All right. Now, I'd like to shift from the  
25 patent and, please, I'd like you to explain for us how



1 it is that a typical VPN, virtual private network,  
2 provides anonymity.

3           Would you do that for us, please?

4           A. All right, sir.

5           So I have prepared an animation to help  
6 explain how a typical VPN works and provides anonymity.  
7 So I've shown here on the left side a source computer  
8 and on the right side a destination computer.

9           And for simplicity, I'll simply refer to the  
10 IP addresses that I've shown here as basically the one  
11 whose address begins with the 204 sending it -- a packet  
12 to the one whose destination -- whose IP address begins  
13 with 122.

14           I've shown also in this picture the internet  
15 in the middle of the -- of the picture, and then a  
16 computer at the edge of the internet on each side, which  
17 would serve as a VPN gateway.

18           So the source computer may want to send some  
19 information to a colleague on the destination computer,  
20 for example, information about new tax laws. And the  
21 source computer takes that information, puts it into an  
22 IP packet that is addressed from the source computer's  
23 IP address -- this 204 IP address -- to the destination  
24 computer's IP address -- this 122 IP address.

25           That computer then sends the packet on its way

1 towards the destination. On its way out into the  
2 internet from this original source network, it goes  
3 through that VPN gateway, which then takes that packet  
4 and encrypts the entire packet, including not only the  
5 contents of the packet but also the header of the packet  
6 in which those original IP addresses were located.

7           So those IP addresses of the source computer,  
8 this 204 address, and the destination, the 122 address,  
9 are private IP addresses, are not going to be visible  
10 across the internet.

11           The VPN gateway then puts that now encrypted,  
12 entire, original packet into a new packet addressed from  
13 the VPN gateway itself to the VPN gateway on the other  
14 side. So it's from the 105 IP address to this 115 IP  
15 address.

16           If there's some hacker somewhere in the  
17 network that's able to eavesdrop on the communication  
18 across the public network of the internet, all that's  
19 visible in the packet is these two public IP addresses,  
20 the 105 address and the 115 address.

21           So if this hacker is able to grab a copy of  
22 the packet and try to inspect it, if the hacker looks  
23 inside to try to find out actually which computer sent  
24 that packet originally and which computer is the  
25 destination of the packet, all the hacker is going to be

1 able to see is that encrypted contents that includes the  
2 encrypted original IP addresses.

3           So the hacker is going to be unable to  
4 determine which two computers, the 204 computer and the  
5 112 computer, are actually in communication with each  
6 other.

7           Q. All right. Thank you, Professor Johnson.

8           What I'd like to do now is shift from that to  
9 talking about Office Communicator and Office  
10 Communications Server, which are two of Microsoft  
11 products that were discussed just a bit earlier.

12           And first of all, I wanted to make sure that  
13 as we talk about Office Communicator and Office  
14 Communicator Server -- Communications Server, now is it  
15 your understanding that those, Office Communicator and  
16 Office Communications Server, are representative of the  
17 other products that you listed on that slide earlier?

18           A. Yes, sir, they are.

19           Q. All right. Now, let me, first of all, ask you  
20 about how an Office Communicator computer communicates  
21 with the Office Communications Server, okay?

22           A. All right.

23           Q. So the first question that I have for you is  
24 that when those two computers communicate with each  
25 other, in what form do they send information?

1           A.     They send that information in IP packets.  
2 That's the only way to communicate between computers in  
3 the internet.

4           Q.     Now, what is in an Office Communicator to  
5 Office Communications Server IP packet? What are the  
6 contents of it?

7           A.     I've prepared another graphic here to help  
8 explain that.

9                     There's basically three major components to  
10 the contents of an IP packet going from Office  
11 Communicator to Office Communications Server.

12                    The first portion of the IP packet is what is  
13 known as the IP header, and that's where the source IP  
14 address of the sending computer and the destination IP  
15 address of the receiving computer are located.

16                    The next portion of the packet is the -- what  
17 is known as the TCP header, or transmission control  
18 protocol. That's just another of the protocols that  
19 these two computers are using to communicate with each  
20 other and to carry in the IP packet, which is, of  
21 course, how they actually communicate between each  
22 other.

23                    And the PCP header is a number of things, but  
24 most significantly is the -- what's known as the  
25 destination port number that identifies the particular

1 application on that destination computer.

2           So the IP packet sends it to that destination  
3 computer, and the destination port number identifies the  
4 actual program on that destination computer that's  
5 supposed to receive the packet.

6           And finally, the other large portion of the  
7 packet is the message itself that's going to be sent  
8 from that source computer to that destination computer.

9           Q. All right. So let me break this up just a  
10 bit, and I'm going to flash with a laser over here to  
11 make sure -- I know you can't see that above your  
12 head -- but I'm circling with this pointer this blue  
13 header that says source IP address and destination IP  
14 address.

15           Now, in an OC/OCS IP packet, are those IP  
16 addresses encrypted?

17           A. No, sir, they're not.

18           Q. All right. In the next layer that you've  
19 shown here, this TCP layer, is the source or destination  
20 or port information encrypted?

21           A. No, sir. None of it is encrypted.

22           Q. All right. And what about in the -- in the  
23 data, is that encrypted?

24           A. It may be or it may not be.

25           In this example, it is -- it would be

1 encrypted. I haven't shown that here, so the text is  
2 still readable, but this is a -- the port number  
3 identifies that this is going to -- over an encrypted  
4 connection, but it would be only the data portion, the  
5 bottom portion that would be encrypted.

6 Q. Okay. Now, in this OC/OCS IP packet that  
7 you've illustrated here, is there any private IP address  
8 and private IP address in that packet?

9 A. No, sir, there's not.

10 There are the IP addresses that are in the  
11 header of the packet, and they are plainly visible.  
12 There are no other IP addresses that would be private IP  
13 addresses.

14 Q. All right. Now, when an OC or Office  
15 Communicator computer communicates with an Office  
16 Communications Server, are the Office Communicator  
17 computer and the Office Communications Server computer  
18 anonymous?

19 A. No, they're not.

20 Q. Why not?

21 A. Because, again, the IP addresses are plainly  
22 visible in the header of the packet. This source IP  
23 address clearly identifies the sending computer. The  
24 destination IP address clearly identifies the  
25 destination computer.

1           And so an attacker who would eavesdrop on this  
2 packet would easily be able to tell which two computers  
3 are in communication with each other.

4           Q.    Now, I understand that you've prepared an  
5 animation to illustrate that.

6                    Would you share that with us, please?

7           A.    Yes.  I have.

8                    So this is similar to the VPN animation that I  
9 showed in one sense, but it's actually quite different.  
10 I've shown on the left the Office Communicator computer  
11 and on the right the computer running the Office  
12 Communications Server.

13                   And, again, showing the IP addresses of the  
14 two, which I will, for simplicity, refer to the 204  
15 address and the 112 IP address.

16                   So the Office Communicator running on this  
17 computer with the 204 IP address wants to send again  
18 this information about new tax laws to -- to some  
19 colleague, and -- for example, in an instant messenger  
20 going over Office Communicator.

21                   To do that, the message is encrypted, but now  
22 it's just the data of the message that's encrypted.  
23 There is no IP header yet.  Only the data is encrypted,  
24 and then that encrypted message -- my clicker didn't  
25 work.  There it goes.

1           The encrypted message is then put into an IP  
2 packet that is addressed from the computer running  
3 Office Communicator directly to the computer that is  
4 running Office Communications Server. And that message  
5 is sent across the internet.

6           And, again, if we have our hacker who might be  
7 trying to eavesdrop on communications across the  
8 internet and if that hacker is able to, you know, grab a  
9 copy of that packet and try to learn something  
10 interesting from it, it's clearly able to see the IP  
11 address of that source computer and the IP address of  
12 the destination computer, allowing the hacker to easily  
13 know which two computers are in communication with each  
14 other.

15           Q. All right. Now, were you in Court the other  
16 day when Dr. Jones explained why he believed that  
17 communication between Office Communicator and the Office  
18 Communications Server?

19           A. Yes, I was here.

20           Q. And what did he say about anonymity?

21           A. He said it was his opinion that the  
22 communication is still anonymous, because what's known  
23 as the SIP address is -- of the source-sending person  
24 and the SIP address of the destination person are  
25 encrypted; they would be inside that encrypted part of



1 the message.

2 Q. All right. Now, let's pause there, because  
3 we've got so many initials and letters going on.

4 So you said a SIP address. Is that SIP?

5 A. Yes. SIP is the session initiation protocol,  
6 sir.

7 Q. Okay. So the IP in SIP, that means something  
8 different than the IP in IP packet?

9 A. That's correct.

10 The I in IP is the internet protocol, which,  
11 again, is this basic unit of communication that all  
12 computers on the internet use as the only way to  
13 communicate with each other.

14 And the I in SIP is the session initiation  
15 protocol, which is essentially how you -- how, using  
16 this Office Communicator/Office Communications system,  
17 that a connection to be able to send this instant  
18 message from me to my colleague is initiated.

19 Q. Now, tell us if you would, please, what a SIP  
20 address is and what it does.

21 A. A SIP address is essentially like a person's  
22 name. Say my name is David and a SIP address is -- is  
23 basically like that. It is not useful for figuring out  
24 where the destination is. It simply identifies the  
25 destination person.

1 Q. All right. And do you agree with Dr. Jones'  
2 opinion that by encrypting SIP addresses that that  
3 provides anonymity?

4 A. No, it does not provide anonymity.

5 The anonymity that's required is preventing  
6 this hacker from being able to determine which two  
7 computers are in communication with each other.

8 The SIP address does not in any way identify a  
9 computer. A SIP address is the name of a person, again,  
10 such as like David. But the computers are identified by  
11 the IP address.

12 A person might log into one computer at, you  
13 know, one day using their SIP name and log into a  
14 different computer the another day or later the same  
15 day. Or, in fact, a person may log into multiple  
16 computers at the same time using the same SIP address --  
17 SIP name.

18 And so the name does not in any way identify a  
19 particular computer.

20 Q. Now, is a SIP address a network address?

21 A. No, it is not.

22 A network address is like -- the address of  
23 this courthouse, if I remember correctly, is 211 West  
24 Ferguson Street. That's an address. That allows you to  
25 locate the building. And if you were trying to route a

1 packet or yourself in a car to the courthouse, you could  
2 use 211 West Ferguson Street to actually find this  
3 location.

4           Whereas a SIP address is sometimes called a  
5 SIP address. It's technically a SIP uniform resource  
6 identifier, which is another mouthful. So it's commonly  
7 called a SIP address, but it's not really an address.  
8 A SIP address is like a name like David. It doesn't  
9 tell you where anything is. 211 West Ferguson Street or  
10 an IP address tells you where something is.

11           Q. All right. What I'd like you to do, please,  
12 is put up on the overhead Figure 1 from the '135 patent.

13           Can you do that, sir?

14           A. Yes, sir, here it is.

15           Q. Now, as I understand it from what you said,  
16 what's depicted here is a picture of the internet; is  
17 that right?

18           A. Yes, sir. This is a picture that comes from  
19 the '135 patent and shows a diagram of the internet in  
20 which -- as I mentioned earlier, this so-called Terminal  
21 100 computer is in communication with this Terminal 110  
22 computer, like I've shown at the top and the bottom of  
23 the figure, respectively.

24           Q. All right. Now, to get information or  
25 communication from that originating terminal, 100, down

1 to this destination terminal, 110, what kind of address  
2 do I need?

3 A. The only way to get the packet from this 100  
4 computer to the 110 computer is by sending IP packets,  
5 which are addressed using IP addresses. That's the only  
6 thing that IP routers can use to know how to forward a  
7 packet through these -- these different hops that I've  
8 shown here in yellow from the diagram in the patent.  
9 The packet has to be forwarded from a router to another  
10 IP router to another IP router. An IP router is used,  
11 IP addresses, to know how to forward the packet towards  
12 the destination.

13 Q. Just to be clear, if I use a SIP address, an  
14 S-I-P address, can I get a communication or a packet  
15 from this originating Terminal 100 over the internet to  
16 this destination Terminal 110?

17 A. No, sir, you can't. The IP routers, first of  
18 all, only know what IP addresses mean, not what SIP  
19 names mean. But even if they did understand exactly  
20 what a SIP name means, those routers would not have any  
21 idea how to forward a packet, hop by hop, and reach a  
22 SIP name such as -- such as David.

23 They know how to reach a location that's  
24 identified by an IP address but not a person by just  
25 using that person's name or the equivalent of that

1 person's name, which is what a SIP address is.

2 Q. All right. So in your view, does -- the RTC  
3 software that we discussed earlier, does that use or  
4 include a VPN?

5 A. No, sir, it does not include a VPN or use a  
6 VPN.

7 Q. All right. Let's turn to the second element  
8 that you said was missing from the '135 patent and that  
9 was website, okay?

10 Now, I'd like to start by reminding everyone  
11 what a website is.

12 A. All right. The Court again, Judge Davis, has  
13 given us a construction of what a website is. And that  
14 is one or more related web pages at a location on the  
15 worldwide web.

16 Q. All right. So let's break that up and let me  
17 ask you, first of all, to tell us briefly what the  
18 worldwide web is.

19 A. The worldwide web is the interconnected  
20 collection of all the public websites in the world, and  
21 I've just shown here examples of some, you know, very  
22 common, popular websites.

23 The links from one web page to another allows  
24 users to, you know, click on a little piece of text or a  
25 little picture, and when you click on that with your

1 mouse in your browser, it takes you from one page to  
2 another page, and you can follow through this collection  
3 of related web pages that make up one website, or, in  
4 fact, follow links from one website to another website  
5 across this sort of web of information, which is what  
6 the web really is.

7 Q. All right. Now, you were here in Court when  
8 Dr. Jones testified that the RTC software does not  
9 literally include a website.

10 Were you here for that?

11 A. Yes, sir, I was.

12 Q. Do you agree with that view?

13 A. I agree it does not include a website  
14 literally.

15 Q. All right. Now, have you evaluated whether an  
16 OCS, or Office Communications Server, is equivalent to a  
17 website?

18 A. Yes, I have done that evaluation, also.

19 Q. What did you conclude?

20 A. That it's certainly not equivalent to a  
21 website.

22 Q. How did you go about evaluating whether a  
23 website on the one hand is equivalent to an Office  
24 Communications Server on the other?

25 A. So what I've shown in this next slide here is

1 a chart where I looked at some of the core attributes of  
2 really what is a website, and tried to evaluate in what  
3 way does the website have those attributes and then in  
4 what way does OCS possibly have any of those attributes.

5           So the first attribute that I've listed here  
6 is that a website is hosted on a web server. So, for  
7 example, a web server is a computer which might look  
8 something like this. Could be any computer typically in  
9 a machine room. And on that computer are located these  
10 web pages.

11           The Court's construction is a collection of  
12 related web pages at a location on the worldwide web.  
13 Those web pages are housed, if you will, on this web  
14 server, and when someone in their browser requests a web  
15 page, that web page is sent from this web server  
16 computer to the user's browser so the user can view that  
17 web page.

18           So on my chart here, I've checked off, yes,  
19 that a website does have this attribute.

20           The second attribute I've listed here is the  
21 web pages are viewable through a web browser. So, for  
22 example, if I wanted to go shopping at Wal-Mart on the  
23 web, I could go to [www.wal-mart.com](http://www.wal-mart.com) in my browser, and I  
24 would see something like this (indicates).

25           The web is designed to collect this related

1 information together and to be able to present it to  
2 users. The web was created -- the first version was  
3 released by the inventor of the web, Tim Berners-Lee, in  
4 1991, and from his very first proposal in even 1989, the  
5 purpose of the web is to collect this information  
6 together, link it together, and make it viewable.  
7 He was working with physicists who had a lot of data  
8 that they wanted to be able to find again and view again  
9 the related data.

10           So on my chart of core attributes, I have  
11 checked off that, yes, web pages and a website are  
12 viewable through a web browser.

13           The final attribute I've listed here is that  
14 web pages in a website support what are known as  
15 hyperlinks. So if I'm shopping again at Wal-Mart.com  
16 and say I wanted to buy some piece of electronics, like  
17 a television set or a computer, with my mouse, if I move  
18 the mouse over and click on the word computers, my web  
19 browser will go to the web server and download a new web  
20 page.

21           A hyperlink is the relationship between that  
22 piece of the text, the word computers, and the idea that  
23 when you click on that piece of text, you're supposed to  
24 then be able to view this second web page, which here  
25 lists the kinds of electronics that Wal-Mart has for



1 sale.

2           So on my list of core attributes of a website,  
3 I've checked, yes, that websites do have this attribute  
4 of supporting hyperlinks. That is what makes the web a  
5 web. That's what links the pieces of the web together  
6 from one page to another related web page.

7           Q. All right. Now, did you perform this analysis  
8 on whether or not an Office Communications Server has  
9 any of those attributes?

10          A. Yes, sir, I did.

11          Q. And can you briefly tell us what you  
12 concluded?

13          A. Certainly.

14                 An Office Communications Server has none of  
15 those attributes. An Office Communications Server does  
16 not host any information that is, you know, stored on  
17 the Office Communications Server and downloaded when a  
18 user wants to view that information. You can't request  
19 a piece of information that's stored on Office  
20 Communications Server.

21                 So I've marked, no, that OCS does not host --  
22 does not host on a web server; does not have information  
23 hosted on a web server.

24                 The information that OCS may have is not  
25 viewable through a web browser. You can't plug anything

1 into your browser and see any information that's stored  
2 on this OCS server. In fact, the information on the OCS  
3 server is -- that instant message I showed earlier, for  
4 example, is not stored on the server. It goes from  
5 client to client.

6           The information that's stored on a server is  
7 purely controlled information, purely information that's  
8 internal to the operation of the server, not intended to  
9 be viewed by humans in any way through a browser or  
10 otherwise.

11           So I've marked off, no, that the Office  
12 Communications Server does not have information that is  
13 viewable through a web browser.

14           Finally, the information does not support  
15 hyperlinks. I can't follow from a piece of text that  
16 has this sort of hidden link information that when I  
17 click on that piece of text takes me to another page.  
18 There's no such kind of -- of link of anything like that  
19 in any information that's stored on a Office  
20 Communications Server.

21           So, again, I've marked off, no, that it does  
22 not have that attribute also.

23           Q. Now, in your view, Professor Johnson, are  
24 these differences that you've described between a  
25 website on the one hand and an Office Communications

1 Server on the other, are those differences substantial?

2 A. They are quite substantial. Basically, it has  
3 none of the attributes. You can't do any of the things  
4 with an OCS server that you can do with a website. They  
5 have really nothing in common.

6 Q. So let me ask you, then, to put it a little  
7 bit of a different way, do websites perform  
8 substantially the same function and work substantially  
9 the same way and achieve substantially the same results  
10 as an Office Communications Server?

11 A. No. The function is completely different.  
12 A website is a collection of related information that's  
13 intended to be viewable by, you know, people through  
14 their web browser. Again, the OCS -- the function of an  
15 OCS is to help a client be able to find another client,  
16 given these SIP names, which are like, you know, David.  
17 It's the OCS server that helps the first client find the  
18 second client.

19 The way in which it does this on a website is  
20 by returning web pages that are hosted on the website,  
21 returning those web pages when requested by a yours with  
22 their browser. The way in which OCS does this is by,  
23 you know, allowing the first client to register and  
24 forwarding the request from one to the other.

25 I mean, it's just completely different in the

1 way in which they work, and the results are completely  
2 different.

3           The result of a website is to host those pages  
4 and to allow those pages to be viewable by viewers,  
5 humans.

6           And the result of a website is that the -- I'm  
7 sorry -- of the OCS server is that the first client can,  
8 in fact, find the second client. When I start with just  
9 their SIP name, I'm able to, you know, send an instant  
10 message to that second -- that client.

11           Q.    Now, would a person in this field consider a  
12 website on the one hand to be interchangeable with an  
13 Office Communications Server on the other?

14           A.    They're not in any way interchangeable. As  
15 I've have described, they don't do anything common with  
16 what each other does.

17           Interchangeability would be, for example, if I  
18 was building this -- this table, desk, whatever I'm  
19 sitting at here -- if I was going to assemble the parts  
20 of it using nails, I could hold the different pieces of  
21 lumber together that way, or I could use all the pieces  
22 of it together with screws.

23           Screws and nails in this context are roughly  
24 interchangeable with each other. They would both hold  
25 the different boards together.

1 OCS versus a website, there's nothing like  
2 that. They simply are not interchangeable in any way.

3 Q. So in your view, does the RTC software use or  
4 include a website or the equivalent of a website?

5 A. No, it does not.

6 Q. All right. Now, let's turn to the third  
7 element that was discussed earlier. This one pertains  
8 to Claims 10 and 12 of the '135 patent. And that's this  
9 element called a gatekeeper computer, all right?

10 A. Yes, sir.

11 Q. So, first of all -- and I don't know. Do you  
12 have the text of the --

13 A. Yes, I've prepared that.

14 Q. Thank you.

15 So, first of all, we can see in Claim 10, it  
16 requires a gatekeeper computer, and also discusses a  
17 gatekeeper computer in Claim 12.

18 Can you tell us what such a computer is?

19 A. Yes, sir.

20 In the context of the '135 patent, a  
21 gatekeeper computer is a computer that helps set up the  
22 VPN connection.

23 Q. Okay. Now, does the RTC software include the  
24 gatekeeper computer?

25 A. No, it certainly does not.

1           A gatekeeper computer is a kind of computer.  
2 There's a lot of computers around the courtroom. A  
3 computer is a piece of hardware; it has a processor; it  
4 has memory; it typically has a disk drive in it; often  
5 has a display; has a lot of wires in it. A computer is  
6 a piece of hardware.

7           The RTC software is -- is software. It's just  
8 information. It's instructions that could be executed  
9 by a computer, but the RTC software itself is not a  
10 computer. It's just software and doesn't do anything  
11 until you load that on to some computer and try to  
12 execute it.

13           Q. All right. So in your view, does the RTC  
14 software use or include a gatekeeper computer?

15           A. No, sir, it does not.

16           So in the same way as I've done earlier, I've  
17 checked off, marked off, the two portions the -- I've  
18 only shown here the last portion of Claim 10 that  
19 includes the gatekeeper computer, and then all of  
20 Claim 12, I've also, again, marked off as not being met  
21 by the RTC software.

22           Q. All right. Now, let's shift gears, still  
23 talking about the '135 patent and the RTC software,  
24 though.

25           And I wanted to ask you whether you were here

1 in Court when Dr. Jones talked about what he referred to  
2 as the automatic connection feature of the RTC  
3 interface.

4           Were you here then?

5           A. Yes, sir, I was.

6           Q. All right. Now, do you recall his testimony  
7 on that subject generally, first of all?

8           A. Yes, I do.

9           Q. All right. Now, let me ask you, whether in  
10 the RTC software there are anyways of forming a  
11 connection that don't use the automatic connection  
12 feature; that is, to form a connection between an Office  
13 Communicator client on the one hand and an Office  
14 Communications Server on the other?

15          A. Yes, sir.

16                   In my next slide, I've actually prepared a  
17 list of -- there are, in fact, three ways of finding  
18 that Office Communications Server and thus being able to  
19 connect from the Office Communicator client to that  
20 server.

21                   The three ways are -- the first one I've  
22 listed here is the user could manually enter either the  
23 IP address or the host name of the Office Communications  
24 Server.

25                   So, for example, I've shown here on this next

1 slide a screen shot of how that would be done in the  
2 Office Communicator client. The user would simply be  
3 able to enter either the IP address for the host name  
4 into -- into the box here and click on okay. That would  
5 have to be done once when you set up that computer for  
6 the first time.

7           The other way -- the second way I've listed  
8 here is the user's IT administrator, say, of their  
9 company, could automatically provide that information by  
10 preconfiguring the user's client to essentially answer  
11 those same questions to plug into that client the IP  
12 address or host name of the server that this company is  
13 using.

14           And then the last way I've listed here is what  
15 I refer to as default server naming. It is a very  
16 commonly used, wide-spread custom. In Office  
17 Communicator/Office Communications Server, the protocol  
18 they use that's carried inside the IP packets that they  
19 use to talk to each other, the protocol that they use  
20 inside that is a SIP, or this session initiation  
21 protocol.

22           So if I was going to name the SIP server for  
23 Rice University, it would be very natural and very  
24 common to name that SIP.rice.edu, and the Office  
25 Communicator client program understands and knows about



1 that common custom of how SIP servers are named. And so  
2 the client program can simply assume that, hey, maybe  
3 the SIP server, the Office Communications Server program  
4 for Rice University would be at a machine named  
5 SIP.rice.edu.

6 Q. All right. Now, in that last answer, you said  
7 something like to edu.

8 A. I'm sorry.

9 Q. That would be dot, E-D-U, sort of like dot.  
10 Com or dot.bill. Is that what you meant?

11 A. Yes. We not only speak in too many acronyms  
12 in this field. We often pronounce our acronyms.  
13 So I meant E-D-U, which is just the three-letter  
14 abbreviation for an educational institutional  
15 organization, such as Rice University.

16 Q. Now, in your view, do any of these three  
17 alternative ways of forming a connection infringe the  
18 '135 patent?

19 A. No, sir. None of them infringe it.

20 Q. All right. And in your view, are these  
21 alternative ways of forming a connection to the  
22 automatic connection feature -- are these three ways  
23 substantial, in your view?

24 A. Quite substantial. They are easily used.  
25 They are available already in the product. They don't

1 really diminish the usability of the process in any way.  
2 The first two would only have to be done once when  
3 the -- you know, a user's new computer is being  
4 configured. The first one is fairly painless for the  
5 user.

6           The second one could be automatically done by  
7 the IT administrator, and, in fact, could be done  
8 essentially bulk, automatically across all the computers  
9 in the company. The IT administrator could just push  
10 out an update that would set the name or IP address of  
11 the server.

12           And the last one is simply a matter of naming  
13 your server in a very natural and easy-to-do way, and  
14 then from that point on, from the point of view of the  
15 client, the actual user, it's purely automatic.

16           Q. All right. Now, I think that finishes up on  
17 the '135 patent, RTC software. So now what I'd like to  
18 do is again shift gears, and this time focus on the  
19 second group of software at issue and the second patent  
20 at issue.

21           So now what I'd like to do is ask you some  
22 questions about the '180 patent and what has been  
23 referred to sometimes in this Court as the PeerNet --  
24 the PeerNet software, okay?

25           A. All right, sir.

1 Q. All right. So, first of all, I understand you  
2 have a slide that lists the software that you  
3 considered.

4 Now, let me just ask you, sir, as I understand  
5 it, the software you looked at included the Windows XP  
6 operating system, but only the versions with and after  
7 the Advanced Networking Pack; is that right?

8 A. Yes, sir, that's correct.

9 Q. And for Windows Vista, you looked at all  
10 the -- all of Windows Vista; is that right?

11 A. Yes, that's correct, also.

12 Q. All right. Now, would you please tell us --  
13 and if I understand the prior testimony here, are there,  
14 in your understanding, any applications for Windows XP  
15 that use the PeerNet software?

16 A. I'm not aware of any applications that use the  
17 PeerNet software in Windows XP.

18 Q. Now, for Windows Vista, are you aware of any  
19 applications that, in your understanding, use the  
20 PeerNet software?

21 A. I am aware there of only one application, and  
22 that is the Windows Meeting Space application.

23 Q. So what I'd like to do, then, as we did for  
24 the prior patent and set of software, I'm going to, if I  
25 may, simply shorthand this and talk about the software

1 as the PeerNet software, if that's all right with you.

2 A. That will be fine, yes.

3 Q. All right. Now, do you have an opinion on  
4 whether the PeerNet software infringes the '180 patent?

5 A. Yes, I do.

6 Q. What's your opinion?

7 A. That Microsoft software, the PeerNet software,  
8 does not infringe the '180 patent.

9 Q. Tell us, please, how you arrived at your  
10 opinion.

11 A. I studied the asserted claims of the '180  
12 patent in light of Judge Davis' claim constructions in  
13 this case and compared those claims to the  
14 functionality, the features of the PeerNet software, and  
15 determined that the PeerNet software does not infringe  
16 any of the asserted claims of the '180 patent either  
17 literally or under the Doctrine of Equivalents.

18 Q. And did you determine whether there were any  
19 elements of the claims of the '180 patent that were  
20 missing from the PeerNet software?

21 A. Yes, sir, I did. I've prepared another slide  
22 similar to what we did on the '135 patent where I've  
23 listed here Claims 1, 4, and 15.

24 And what I determined in my analysis is that  
25 there's at least two elements or features of the claims

1 that are missing from the PeerNet software, and those  
2 are the -- again, the VPN limitation of the claims, as  
3 well as here the secure computer network address feature  
4 of the claims.

5           So, again, what I've done is crossed out all  
6 the portions of the claims that include or depend from  
7 those limitations, and here the only thing that is left  
8 not crossed out is the first small portion of Claim 1 of  
9 receiving a secure domain name. All of the other  
10 portions of these claims require those developments.

11           Claim 15 requires them because it's a  
12 dependent claim.

13           Q. All right. Now, I noticed that you did not  
14 put up a slide on Claim 17 and 20 and 31 of this patent  
15 or Claims 33 and 35. And I simply wanted to ask you  
16 whether these elements that you've listed here, virtual  
17 private network and secure computer network address, are  
18 also missing from those claims.

19           A. Yes. The analysis on those in this sense is  
20 the same, and they are missing both of these elements as  
21 well.

22           Q. All right. Now, let's briefly talk about  
23 Windows Meeting Space, which is the one application  
24 you've identified that's used with Windows Vista.  
25 And the question I had for you is this: When computers

1 using Windows Meeting Space communicate with each other,  
2 what do they use to communicate?

3 A. They use IP packets to communicate. So,  
4 again, IP packets are the only way that computers on the  
5 internet can possibly speak to each other. You cannot  
6 send anything from one computer to another computer  
7 without sending that information in an IP packet from  
8 that first computer to the second computer.

9 Q. Okay. Let's now turn to the element that  
10 you've described as being missing here of virtual  
11 private network, and I wanted to ask you: Does the  
12 PeerNet software use or include a VPN?

13 A. No, it does not use or include a VPN.

14 Q. Okay. Can you tell us why not?

15 A. Certainly. I've prepared an animation here to  
16 illustrate why I believe it's not -- does not include a  
17 VPN, and the reason for that is that it does not provide  
18 anonymity.

19 What I've shown here is a group that would be  
20 using the PeerNet software, and imagine that my computer  
21 on the left here that has -- in this case, I'll just  
22 focus on the last digit of the IP addresses.

23 The computer IP address ends in 7 is sending a  
24 packet to another computer in the -- in the -- in the  
25 group. This IP packet has an IP source address that is

1 the first computer on the left's IP address, the one  
2 ending in 7, and the destination IP address is the one  
3 on the, I guess, upper right here, the IP address that  
4 ends in 44.

5           And, again, if we have our hacker in the  
6 network who's trying to eavesdrop on this IP packet  
7 that's going between this first and second computer and  
8 that IP -- and that hacker may be able to capture a copy  
9 of the packet and look at it, the hacker is clearly able  
10 to see the source address of the first computer, its IP  
11 address, the one ending in 7, and the destination  
12 address ending in 44 and is thus able to tell clearly  
13 which two computers are in communication with each other  
14 across the network using this packet.

15           The same feature was, in fact, shown both  
16 here -- and I didn't mention this in our analysis, the  
17 '135 patent discussion of that, but the same feature of  
18 these IP addresses being visible was shown in Dr. Jones'  
19 Wireshark files that he presented in his testimony here  
20 earlier this week.

21           The IP addresses are clearly visible, there  
22 are no private IP addresses, and the hacker can tell  
23 which two computers are in communication with each  
24 other.

25           Q.     Okay. Now, in a group, as you've shown here,

1 using Windows Meeting Space, using the PeerNet APIs,  
2 when one computer in that group sends a packet to  
3 another, is there any private IP address inside the  
4 packet?

5 A. No, there is not.

6 Q. Is there any encrypted IP address in a packet  
7 going from one computer using PeerNet software to  
8 another computer using the PeerNet software?

9 A. No, there is not. There's simply the public  
10 unencrypted IP addresses in the -- in the header of the  
11 packet that are plainly visible.

12 Q. Now, you heard Dr. Jones here in court express  
13 his view that there was anonymity in communications from  
14 one group member computer to another group member  
15 computer.

16 Do you recall that?

17 A. Yes, I do.

18 Q. Do you agree with his view?

19 A. No, I do not.

20 Q. Can you explain why you disagree with him.

21 A. What matters is -- I mean, in the -- in the --  
22 in the patent, anonymity is preventing the attacker from  
23 discovering which two computers are in communication  
24 with each other.

25 These IP addresses clearly identify, in this



1 case, the computer that has the IP address ending in 7  
2 and the computer that has the IP address ending in 44 as  
3 being those two computers that are in communication with  
4 each other.

5           Dr. Jones instead focused on the contents, the  
6 message, inside the packet and talked about a record  
7 going from one computer possibly to another computer.  
8 But the IP packet, irregardless of the contents of the  
9 packet, the message, the IP packet itself, the IP header  
10 itself, clearly identifies which two computers are in  
11 communication with each other, and so there is no  
12 anonymity.

13           Q.    Okay.  Let's turn to the second element then  
14 that you said was missing from the PeerNet software, and  
15 that was the secure computer network address, okay?  So  
16 this is now the second element missing from the PeerNet  
17 software.

18           And can you first tell us what a secure  
19 computer network address is?

20           A.    Yes, sir.

21           Again, Judge Davis has given us a construction  
22 of this -- of this term.  A secure computer network  
23 address is defined as a network address that requires  
24 authorization for access and is associated with a  
25 computer capable of virtual private network

1 communications.

2 Q. All right. Now, can you please illustrate for  
3 us how it is that a typical VPN provides such a secure  
4 computer network address?

5 A. Certainly.

6 So this is, basically, the same picture of a  
7 VPN that we looked at earlier, and I'm focusing here on  
8 the destination computer on the right, the one that I've  
9 highlighted, in this case, the one whose IP address  
10 begins with 122.

11 If someone on the internet, maybe the source  
12 computer or -- from anywhere wants to send a packet to  
13 that destination computer, it has to go through what I  
14 described earlier as the VPN gateway.

15 And if you don't have authorization for  
16 access, the VPN gateway stops the packet from going  
17 through its -- through the gateway to try to reach that  
18 destination computer.

19 So here I've shown a case in which the sender  
20 did not have authorization to access the IP address  
21 here, 122.12.64.24.

22 The other -- other users may have  
23 authorization for access, and sometimes the VPN  
24 gateway -- if you're authorized, the VPN gateway will  
25 allow the packet through to reach that computer.

1           So in the first case I showed, you did not  
2 have authorization for accessing the IP address, the 122  
3 here IP address. In the second case, you did have  
4 authorization for accessing that 122 IP address.

5           Q. All right. So in Windows Meeting Space for  
6 computers that are part of the group, do the group  
7 member computers have a secure computer network address?

8           A. No, they do not.

9           Q. Can you please tell us why that's so?

10          A. Certainly.

11                 What I've illustrated here on the next picture  
12 is just a big picture of a computer, and I want to just  
13 focus on the screen in the next couple of -- of graphics  
14 that I'll show to illustrate sort of what's running on  
15 that computer, but I also want to focus on the IP  
16 address of the computer.

17                 That IP address is what Dr. Jones has  
18 identified as being what, in his opinion, is the secure  
19 computer network address of a computer running a  
20 grouping application -- a PeerNet application.

21                 So here I've shown an IP address of this  
22 computer, and, supposedly, the user of this computer is  
23 reading their e-mail using Outlook Express.

24                 The packet -- IP packets that carry the e-mail  
25 messages to this computer reach the computer by being

1 addressed to this IP address as the destination address  
2 of those IP packets, and they're easily able to reach  
3 the computer as intended.

4           If I run a grouping application on the  
5 computer, at the same time as I'm running the Outlook  
6 Express application, still reading my e-mail while I'm  
7 participating in some, you know, PeerNet application,  
8 the packets there are associated with the e-mail  
9 application are still able to easily reach the computer  
10 using the computer's IP address here, 182.48.17.35.

11           But packets associated with the grouping  
12 application, the group is enforcing a requirement of  
13 authorization for access to the group to that one  
14 application program on the computer.

15           Whatever the group is enforcing, in terms of  
16 that authorization-for-access requirement only applies  
17 to the group program, that one application program  
18 running on the computer. It does not in any way affect  
19 access to the computer's IP address as a whole.

20           And so the e-mail application still works,  
21 whereas, if you don't have authorization for access, you  
22 can't actually join the group or access the records in  
23 the group. You can still read your e-mail.

24           And I've just used e-mail and Outlook Express  
25 as one application, one example. There are hundreds,

1 perhaps thousands or more applications that could be  
2 running on that computer.

3           And there are even things that run on the  
4 computer in the background that are part of how the  
5 computer operates internally that users don't typically  
6 see but still require IP packets to be able to reach the  
7 computer.

8           None of that is affected by having a grouping  
9 application running on a computer. It only affects the  
10 access to the one application on that computer, not the  
11 rest of the computer itself or the computer's IP address  
12 itself.

13           Q.    So do computers that are running this PeerNet  
14 software use or include a secure computer network  
15 address?

16           A.    They certainly do not, no.

17           Q.    All right. Thank you, Professor Johnson.

18                   MR. BOBROW: I pass the witness, Your  
19 Honor.

20                   MR. CALDWELL: Your Honor, may we  
21 approach?

22                   THE COURT: Yes, you may.

23                           (Bench conference.)

24                   MR. CALDWELL: We're back again on the  
25 same issues, because Mr. Bobrow asked twice if it's --

1 inside the IP has to be a visible or a hidden IP  
2 address. He's still arguing IP tunneling is part of  
3 this, and he's just using different words to do it.

4           So I object to the Markman. They were  
5 told not to do it at the pretrial conference, and they  
6 still did it.

7           MR. BOBROW: Your Honor, all we were  
8 doing was describing typical examples of VPN. He  
9 described how IP works, and he described how the VPNs  
10 work. He didn't reconstrue the claim in any way  
11 whatsoever.

12           He applied your construction, the  
13 instruction that you said -- yes. And he applied the  
14 construction that you ordered him to apply. He applied  
15 that from the claim construction. And he used some  
16 examples of VPN to illustrate his points. There was no  
17 reconstruction or different construction offered.

18           THE COURT: Okay. Well, let's try to  
19 steer as clear from that as possible, okay?

20           MR. CALDWELL: Your Honor, may I -- may I  
21 point out with the witness that they went for a  
22 construction of IP inside IP, and that was rejected?

23           THE COURT: Yes.

24           MR. CALDWELL: Okay.

25           MR. BOBROW: Well, Your Honor, I would

1 object to that. I don't think that there is any reason  
2 to bring in -- I think that there was an agreement that  
3 the parties would not go back and put in what the  
4 parties had argued leading to the claim construction.  
5 All that's happened here is that he's applied your  
6 construction, and he's given examples of how it works.  
7 And it would be highly prejudicial to allow counsel for  
8 VirnetX to try to come forward and say, gee, this is  
9 what -- this is what Microsoft argued, and it was  
10 rejected. I think that that's improper, and certainly,  
11 it would stand from that as well.

12 THE COURT: Okay. Lower your voice.

13 MR. BOBROW: I'm sorry, Your Honor.

14 THE COURT: This is supposed to be a  
15 bench conference.

16 MR. BOBROW: I understand. I misheard  
17 your clerk because I thought she said to keep my voice  
18 up, so I apologize.

19 THE COURT: Well, keep it up and down at  
20 the same time.

21 MR. BOBROW: Thank you, Your Honor.

22 THE COURT: All right. I don't want  
23 you -- I don't want you cross-examining him about what  
24 the claim construction -- what they argued in claim  
25 construction, but I think it is fair game, since he's

1 raised this, for you to get him to admit that that type  
2 of IP tunneling is not part of the claim -- my claim  
3 construction.

4 MR. BOBROW: If -- if he were asked  
5 whether tunneling is a requirement of the claim, that's  
6 fine. I don't -- you know, I think that's fine. I just  
7 understood that he was going to argue about what we  
8 argued.

9 THE COURT: You decide whether you want  
10 to go into it or just leave it alone.

11 MR. CALDWELL: Well, it just seems like  
12 it's the third conference we've had, and it just keeps  
13 coming up over and over again, and they keep doing it.

14 THE COURT: Please try to avoid that.

15 MR. BOBROW: Okay.

16 MR. CALDWELL: And, Your Honor, one last  
17 question, just so I don't have to repeat -- don't have  
18 to come back up here.

19 If Dr. Johnson directly contradicts his  
20 straight statement that Mr. Powers made directly to the  
21 Court in the Markman -- in the Markman argument and won  
22 a construction based on that argument, may I impeach him  
23 with that statement made to the Court?

24 THE COURT: Now, what is that now?

25 MR. CALDWELL: It's -- there's a



1 statement that Mr. Powers made to the Court arguing the  
2 construction of website where he said, what makes a  
3 website a website is that it uses http.

4 And I just want to ask the witness, is  
5 that what makes a website a website, and if he  
6 disagrees, I want to know if I can present that.

7 MR. BOBROW: Well, again, Your Honor,  
8 what we're doing is we're bringing in arguments that  
9 were made before claim construction. Your Honor  
10 construed the claims, and he shouldn't be allowed to  
11 impeach with attorney argument.

12 I think it would be fair for him to ask  
13 is http part of a website, or is html part of a website,  
14 but it would be unfair for him to use an argument that  
15 counsel made pre-claim construction to impeach the  
16 witness.

17 MR. CALDWELL: Well --

18 MR. BOBROW: He can certainly argue what  
19 is and is not a website but to use counsel's argument  
20 would be prejudicial and unfair.

21 MR. CALDWELL: I think what's unfair is  
22 to win a claim construction by telling Your Honor  
23 something very clearly and then come back and run from  
24 it at trial. That's --

25 THE COURT: I'll allow the

1 cross-examination.

2 MR. CALDWELL: You will?

3 THE COURT: I will.

4 (Bench conference concluded.)

5 THE COURT: How long do you anticipate  
6 your cross-exam will be, Counsel?

7 MR. CALDWELL: I expect it will be  
8 probably about 40 minutes.

9 THE COURT: All right. Well, it's  
10 10:30 -- almost 10:30. Why don't we go ahead and take  
11 our morning break at this time, Ladies and Gentlemen of  
12 the Jury and -- or Ladies of the Jury. Excuse me again.

13 We'll be in recess then until -- let's  
14 say 10:40.

15 MR. CALDWELL: Your Honor?

16 COURT SECURITY OFFICER: All rise.

17 MR. CALDWELL: Your Honor, may I ask a  
18 quick question?

19 THE COURT: Uh-huh.

20 Go ahead.

21 (Jury out.)

22 MR. CALDWELL: I'm very sorry about the  
23 extra delay.

24 THE COURT: Uh-huh.

25 MR. CALDWELL: Being that I just went

1 open kimono on my argument there, can I have an  
2 instruction that counsel for Microsoft not confer with  
3 Dr. Johnson during this break right here ahead of his  
4 cross to warn him about what I just told counsel?

5 THE COURT: I will so instruct him.

6 MR. CALDWELL: Thank you, Your Honor.

7 COURT SECURITY OFFICER: All rise.

8 (Recess.)

9 COURT SECURITY OFFICER: All rise.

10 (Jury in.)

11 THE COURT: Please be seated.

12 All right, Counsel. You may proceed.

13 MR. CALDWELL: Thank you, Your Honor.

14 CROSS-EXAMINATION

15 BY MR. CALDWELL:

16 Q. Good morning, Dr. Johnson.

17 A. Good morning.

18 Q. I'm Brad Caldwell, one of the attorneys for  
19 VirnetX. You and I have met, correct?

20 A. Yes, sir.

21 Q. Now, before we start going through some of the  
22 questions I have, can we rely on the deposition that I  
23 took of you a few months ago?

24 A. Yes.

25 Q. Can we also rely on the reliability or the

1 accuracy of the slides that you've presented?

2 A. Yes.

3 Q. And were you involved in helping prepare  
4 Mr. Pall's slides that he presented?

5 A. No, sir.

6 Q. Did you -- did you view those slides when they  
7 were presented in the courtroom?

8 A. Yes, I did, sir.

9 Q. And is it your opinion that we can rely on  
10 those as well?

11 A. Yes, I believe so, yes.

12 Q. Professor Johnson, did you understand, from  
13 the first minute that you were contacted about this  
14 matter, that you would be required to conclude that  
15 there was no infringement?

16 A. Not at all, no, sir.

17 Q. Well, did Microsoft hire you because virtual  
18 private networks are the focus of your research or  
19 teaching?

20 A. I have no way to know what was in Microsoft's  
21 mind. I imagine it was simply my expertise in  
22 networking more generally.

23 Q. Well, in the past, have you been a go-to  
24 expert for Microsoft when they need assistance for a  
25 non-infringement opinion?

1 A. No, sir.

2 Q. This is the third time you've worked for  
3 Microsoft in a patent case, correct?

4 A. That's correct, sir.

5 Q. You've never concluded that Microsoft  
6 infringed a patent, fair?

7 A. That's correct.

8 Q. Now, Professor Johnson, in your direct  
9 examination, I recall you saying that you had worked on  
10 about 12 other cases?

11 A. That's correct.

12 Q. Do you recall telling me in your deposition  
13 that you had been named as a testifying expert in 14  
14 patent infringement cases?

15 A. I do recall saying that, and I also recall  
16 saying that I was having a difficult time actually  
17 counting them the way they're formatted on my resume,  
18 and --

19 Q. Fair enough.

20 A. -- I slightly miscounted.

21 Q. Fair enough. Okay.

22 And you had your resume in front of you when I  
23 asked you that question.

24 A. Yes. And as I said, the way they're  
25 formatted, it was difficult to count them all.

1 Q. Okay. Is it fair --

2 A. I made sure before my testimony here that I  
3 did refresh myself and make an accurate count.

4 Q. And is it fair to say that you've prepared a  
5 good number of expert reports in connection with patent  
6 infringement?

7 A. That's correct, yes.

8 Q. And it's correct, isn't it, that in the 14 or  
9 12 cases, you have never -- excuse me.

10 It's correct, isn't it, that in the 14 or 12  
11 cases where you have been named as a testifying expert,  
12 you have never prepared a report concluding that anyone  
13 infringed a patent?

14 A. That's correct.

15 Q. And in all those cases where you prepared a  
16 report, have you ever testified that anyone infringed a  
17 patent?

18 A. No, sir.

19 Q. Are you just of the mind that no patent is  
20 ever infringed?

21 A. Certainly not, no, sir.

22 Q. Professor Johnson, do you know what the odds  
23 are of flipping a coin 12 times and having it always  
24 land on tails?

25 A. Yes.

1 Q. What are they?

2 A. I can't do math in my head this morning, but  
3 they're not very high.

4 Q. I noticed that in your direct presentation,  
5 you mentioned, at least in passing, the Court's  
6 construction of virtual private network.

7 Do you recall that?

8 A. Yes, I did.

9 Q. And then after that, you left the topic of the  
10 Court's construction of virtual private networks and  
11 referred to what you called a typical VPN.

12 Do you recall that?

13 A. I did describe what I called a typical VPN,  
14 that's correct, sir.

15 Q. And now, did you want the jury to believe that  
16 your definition of a so-called typical VPN is the  
17 definition that's at issue in this case after Judge  
18 Davis' claim construction?

19 A. No. My intention was simply to describe  
20 exactly what I said it was, a typical VPN. I clearly  
21 described the Court's construction, and that's exactly  
22 what I used in my analysis.

23 But to illustrate sort of the features or the  
24 concepts of a VPN, it's easier to talk about them in a  
25 particular example.

1 Q. And when you described a typical VPN, sir,  
2 didn't you describe having a set of IP addresses inside  
3 another set of IP addresses?

4 A. That's correct, sir.

5 Q. That has a name, doesn't it?

6 A. Yes, it does.

7 Q. What is that name?

8 A. It's generally referred to either as  
9 encapsulation, or the particular use of encapsulation  
10 here is what's called tunneling.

11 Q. Is tunneling a requirement of Judge Davis'  
12 construction of virtual private network?

13 A. No, it's not.

14 Q. Is encapsulation a requirement of Judge Davis'  
15 construction of virtual private network?

16 A. No, sir.

17 Q. Now, when we go through your cross-examination  
18 or your direct, do we need to take into account any  
19 Wireshark files that you created or any captures of that  
20 kind of IP traffic from tests that you ran?

21 A. No, you don't. I relied on Dr. Jones'  
22 Wireshark files, which clearly showed --

23 Q. Professor --

24 A. -- the VPN products.

25 Q. -- is the answer, no, we don't?



1 A. I'm sorry. Did not.

2 Q. You didn't prepare any Wireshark, did you?

3 A. No.

4 MR. CALDWELL: Now, could we look at the  
5 graphic that Mr. Powers used in opening and then  
6 Mr. Singh-Pall used in his direct? I believe it's  
7 probably my Slide No. 1.

8 Q. (By Mr. Caldwell) Do you recognize this slide?

9 A. Yes, I do.

10 Q. Did you use this slide as well?

11 A. I used a very similar slide. We're all using  
12 the same graphics people to help us prepare slides --

13 Q. Okay.

14 A. -- so that, you know, the graphical elements,  
15 the clip art is similar, yes.

16 Q. That's what I was looking for, yes, sir. You  
17 used a similar slide, fair?

18 A. Certainly, yes.

19 Q. Okay. Now, we see a computer on the left and  
20 a computer on the right. One says Sue. Is that an  
21 alliteration to the fact that this is a lawsuit, sir?

22 A. I have no idea. I didn't use this slide or  
23 prepare this slide and certainly had no input into the  
24 decision of the name there.

25 Q. Okay. Well, you see a computer on the left

1 and a computer on the right, fair?

2 A. Yes.

3 Q. And the one on the left has an IP address of  
4 204.11.52.127, correct?

5 A. That's correct, sir.

6 Q. And the one on the right has an IP address of  
7 122.12.164.24, correct?

8 A. That's correct, also, yes.

9 Q. Are those public internet addresses of those  
10 two machines?

11 A. Yes, sir.

12 Q. And that's how the traffic is going to go  
13 across the internet, fair?

14 A. That's correct, yes.

15 Q. Now, I assume that since we're talking about  
16 Office Communications Server and Office Communicator,  
17 the computers that are represented in this slide are at  
18 least reasonably modern computers, fair?

19 A. These are just typical-looking computers.  
20 They're not intended to represent anything particular  
21 about model of computer or a date of manufacture. They  
22 could be any computers.

23 Q. Okay. Well, I mean, they've got to be running  
24 Office Communicator and Office Communicator (sic) Server  
25 at least, fair?

1 A. Yes.

2 Q. Now, are you familiar with the kind of VPNs  
3 that Mr. Singh-Pall talked about yesterday?

4 A. Yes, I am.

5 Q. PPTP?

6 A. Yes, sir.

7 Q. Those are VPNs, are they not?

8 A. Yes, they are.

9 Q. You don't disagree about that fact?

10 A. They are VPNs.

11 Q. Could you set up a PPTP VPN between two  
12 computers if I stole a couple of laptops from my  
13 colleagues?

14 A. I believe I could, yes.

15 Q. Now, if we had those two computers -- we can  
16 just use the ones on your slide -- and we went to those  
17 two computers and set up a PPTP VPN between those two  
18 computers --

19 A. Okay.

20 Q. -- what IP addresses would be used across the  
21 internet?

22 A. PPTP means -- we talked before about  
23 encapsulation. PPTP --

24 Q. Dr. Johnson, I want to know what IP addresses  
25 would be used across the internet with those same

1 computers that are right there.

2 A. There would be a public IP address and a  
3 private IP address.

4 Q. And the public IP address used to navigate  
5 across the internet would be the same two IP addresses  
6 we see on the slide, correct?

7 A. Yes.

8 Q. So the fact -- and the hacker could see those,  
9 correct?

10 A. That's correct. That's correct.

11 Q. But you just told us that PPTP is a VPN.

12 A. That's correct, yes.

13 Q. So the fact that you can see 204.11.52.127 and  
14 122.12.164.24, that fact does not negate that those two  
15 machines can be in a VPN.

16 A. That's correct. But an attacker still will  
17 not see which two --

18 Q. Dr. Johnson?

19 A. I'm sorry.

20 Q. The same exact two machines would be  
21 identified by the same exact two IP addresses, correct?

22 A. As the outer IP addresses in the encapsulation  
23 used by PPTP, that is correct.

24 Q. So if Mr. Powers or Mr. Fall in opening or in  
25 direct left the wrong impression with the jury that

1 seeing 204.11.52.127 and 122.12.164.24 negated  
2 anonymity, that would be incorrect, fair?

3 A. I disagree with you.

4 The private IP addresses are still hidden, and  
5 you still have anonymity. The attacker can still not  
6 tell which two computers are in communication with each  
7 other. The attacker has no way to even know that these  
8 two computers we see on the picture here are the only  
9 two computers.

10 Q. Okay. Doctor, did you understand my question?

11 A. On, I'm sorry. I believe I did.

12 Q. I asked you, if the jury was left with the  
13 impression that seeing the two IP addresses right there  
14 in that envelope negated anonymity, that would be  
15 incorrect; isn't that true?

16 A. If there were no other IP addresses -- I mean,  
17 there's multiple IP addresses in the packet. You can  
18 see two of the IP addresses, and you can't see the two  
19 other.

20 Q. Dr. Johnson, I asked you about the two IP  
21 addresses we see right there in that envelope. I've  
22 read them a number of times, and I'm starting to feel  
23 sorry for Ms. Judy over there having to retype them, so  
24 I'm not going to do it again.

25 If the hacker can see those two IP addresses

1 on that envelope, that does not negate anonymity, does  
2 it?

3 A. In the case of PPTP, it does not negate  
4 anonymity.

5 Q. Okay. And if the jury was left with the  
6 impression that seeing those two IP addresses negated  
7 anonymity necessarily, that's the wrong impression,  
8 correct?

9 A. If the jury had that impression in an example  
10 of using PPTP, that would be the wrong impression.

11 Q. Is part of the point you're trying to make  
12 that Office Communicator doesn't have some other IP  
13 address besides those?

14 A. I'm sorry. Can you repeat that?

15 Q. Yes, sir.

16 Is part of the point you try to make when you  
17 keep interjecting into these answers, that Office  
18 Communicator does not have some other IP address besides  
19 those?

20 A. Office Communicator does not have other IP  
21 addresses, and that is important.

22 Q. You say it's important, because -- precisely  
23 which claim term or precisely which claim construction  
24 or element of the claim requires another set of IP  
25 addresses that would be in the transmission?

1           A.     The construction of privately communicate,  
2 which is part of the construction of virtual private  
3 network, requires that the attacker not be able to  
4 identify which two computers are in communication.  
5 Hiding those private IP addresses, having those private  
6 IP addresses and thus hiding them is important.

7           Q.     So now, in order to protect -- in order to  
8 provide privacy, you have to have a private set of IP  
9 addresses inside the public set of IP addresses and hide  
10 them?

11          A.     That's not the only way to meet the Court's  
12 construction, but as I described in my, you know,  
13 typical VPN example, that's that typical way that it's  
14 done.

15          Q.     And, Dr. Johnson, didn't we just agree that  
16 the typical VPN example you gave was IP tunneling, which  
17 is not a requirement of the claims or the claim  
18 construction?

19          A.     That's correct.

20          Q.     Okay. Now, since you've prepared your report  
21 and you gave a deposition, have you changed your mind on  
22 what anonymity means?

23          A.     No, I have not.

24          Q.     You will agree with me, sir, won't you, that  
25 the simple English meaning of anonymity requires an

1 identity that remains hidden?

2 A. Yes. I mean, it requires (pause) --

3 Q. I just want to know if --

4 A. Yes. Yes.

5 Q. Okay. An identity that remains hidden. And  
6 my memory is not all that good, so I'm going to write  
7 that down nor is my handwriting. So sorry.

8 That's what I've written down, okay?

9 A. All right.

10 Q. So, for instance, Dr. Johnson, if you have  
11 sender anonymity, that would be anonymity, correct?

12 A. Could you clarify what you mean by sender?

13 Q. Sure. If you can't tell who sent the original  
14 message, that would be anonymity.

15 A. And I'm sorry. Also, can you clarify, are we  
16 talking about your English definition of anonymity, or  
17 are you talking about the definition of anonymity in  
18 this case as described in the patents?

19 Q. Oh, okay. So now you're retreating from this  
20 definition right here in the context of the patents; is  
21 that fair?

22 A. I'm -- I don't believe I'm retreating from  
23 anything. I just want to be clear what we're talking  
24 about.

25 Q. Well, I want to know if this definition right



1 here, an identity that remains hidden, is fair and  
2 applicable to anonymity in these patents.

3 A. No, it's not.

4 Q. Okay.

5 A. I mean, the --

6 MR. CALDWELL: Well, Mr. Moreno, can you  
7 pull up Dr. Johnson's deposition at 113, Lines 22  
8 through 7 of the next page? His 2009 deposition.

9 And let me give a copy to you.

10 May I approach, Your Honor?

11 Page 113.

12 THE COURT: Yes, you may.

13 MR. CALDWELL: Now, do you see where it  
14 starts at Line 22, Mr. Moreno? I want to get that, and  
15 I want to get the next -- the next page whenever we can.

16 So will you blow out that question and  
17 answer and then...

18 Q. (By Mr. Caldwell) In your deposition, I asked  
19 you: And if you see somebody's outer address without  
20 knowing their inner address, does that not defeat  
21 anonymity?

22 Your answer: If you see someone's outer  
23 address without knowing their inner address, does it not  
24 defeat anonymity?

25 It preserves anonymity, because, as you said

1 in the question, you don't know the inner address.  
2 Anonymity requires -- I mean, just the simple English  
3 meaning of anonymity requires an identity that remains  
4 hidden.

5           That's what you said in this answer, is it  
6 not?

7           A. That is correct, yes, sir.

8           Q. Were you and I just generally talking about  
9 anonymity outside of the context in that deposition?

10          A. I think I'm clear here that I'm talking about  
11 the simple English meaning. I was -- as I recall our  
12 discussion at this point in the deposition, I was trying  
13 to clarify, you know, what anonymity is.

14           And after talking about it in the context of  
15 the patent multiple times in your questions during the  
16 deposition, I was simply trying to, you know, ground the  
17 idea of anonymity in -- in something that would be very  
18 familiar to all of us.

19          Q. Okay. Well, do you -- do you agree that  
20 sender anonymity is a type of anonymity?

21          A. I'm still not sure, sir, what you mean by  
22 sender.

23          Q. Okay. Well, we'll get back to that in a  
24 minute.

25          A. Okay.

1 Q. And I'm sure the jury has heard a lot about  
2 senders and receivers and -- of messages, so...

3 Do you agree that receiver anonymity is a type  
4 of anonymity?

5 A. I'm still also not sure. I mean, receiver is  
6 a fairly broad, vague word.

7 Q. Okay. Are there different degrees of  
8 anonymity, Dr. Johnson?

9 A. No, there are not.

10 Q. Is there no such thing as degrees of  
11 anonymity?

12 A. If you're referring to sort of slightly  
13 anonymous, you know, mostly anonymous, almost fully  
14 anonymous, no, there's no such thing as degrees of  
15 anonymity.

16 Q. Is that even remotely legible?

17 A. Not to me, sir.

18 Q. Okay. Sorry. I just wrote down: No such  
19 thing as degrees of anonymity.

20 A. Okay. Thank you.

21 Q. Have you read the patents in this case?

22 A. Yes, I have.

23 Q. Did you read their file history?

24 A. Yes.

25 Q. Is that important, to read the file history?

1 A. Yes, it is.

2 Q. Did you read them completely?

3 A. I certainly looked at all of it. Some parts  
4 of it I read certainly in much more detail than other  
5 parts, but I've read the whole thing and -- yes.

6 Q. Well, one of the reasons you do that is to  
7 help understand words that are pertinent to the  
8 technology or pertinent to the patent, fair?

9 A. That's fair, yes, sir.

10 Q. And surely you consulted the file history in  
11 order to find out what the meaning of anonymity is,  
12 correct?

13 A. I'm sure I did. I don't recall specifically  
14 that issue versus other issues that I read in the file  
15 history.

16 Q. I see.

17 Well, I mean, you saw when Dr. Jones presented  
18 the fact that there's the patent and the first and  
19 second page, and they list all the references that have  
20 been considered by the Patent Office.

21 A. Yes, sir.

22 Q. Do you recall skimming those to see, hey, are  
23 there any references there that relate to anonymity?

24 A. I recall there are -- I don't remember -- two,  
25 three. More than one.

1 MR. CALDWELL: Can we show Slide 4,  
2 Mr. Moreno?

3 Q. (By Mr. Caldwell) All right. Now -- so here's  
4 the first page of the patent. And on the second page, I  
5 want to show you an article.

6 There's an article there titled, Crowds:  
7 Anonymity for Web Transactions.

8 Do you see that?

9 A. Yes, sir.

10 Q. That would be fairly pertinent to the meaning  
11 of anonymity for web transactions, correct?

12 A. I don't know about fairly pertinent. It's a  
13 reference that was before the Examiner in the Patent  
14 Office in reviewing this application.

15 Q. The Examiner considered it and -- in  
16 understanding what the state of the art is, right?

17 A. Yes, sir.

18 Q. Okay.

19 MR. CALDWELL: Mr. Moreno, could we pull  
20 up Plaintiff's Exhibit 2, which is the file history of  
21 the '135 patent?

22 And now, can we go to the first page of that  
23 Crowds article?

24 Q. (By Mr. Caldwell) So this is the article we  
25 talked about just a second ago. Crowds: Anonymity for

1 Web Transactions.

2 MR. CALDWELL: But what I'd really like  
3 to do now is go to the -- skip two more pages. Go to  
4 the third page of this article.

5 Now, Mr. Moreno, can you zoom in on the  
6 top couple of inches of that right there? More down  
7 the -- there you go.

8 Q. (By Mr. Caldwell) Now, what do we see here as  
9 this scale that's shown on the screen in the Anonymity  
10 of Web Transactions article in the file history?

11 A. We see a scale describing what, in the context  
12 of this particular reference, is described as degrees of  
13 anonymity.

14 Q. I thought there was no such thing as degrees  
15 of anonymity.

16 A. Not in the context of the patent. There's  
17 nothing in the specification that suggests degrees of  
18 anonymity in the context of the patent.

19 Q. It's very plainly represented in the intrinsic  
20 record, the file history that the Patent Office  
21 considered, right?

22 A. I don't believe the Patent Office considered  
23 this as a -- as a source of a definition of anonymity.  
24 The bulk of the specification in the patent relates to  
25 this technology that's been mentioned a few times here

1 this week of IP address hopping.

2           And the Crowds article -- the technology  
3 described in this Crowds article directly relates to  
4 this IP address hopping mechanism. It doesn't relate to  
5 the claims at issue in this case, for example, other  
6 than the general context that it has the word anonymity  
7 in it.

8           Q.    I see.

9           And did you find that in the Patent Office's  
10 record, that, oh, Crowds doesn't relate to the claims of  
11 this patent that we're citing the Crowds article in; it  
12 only relates to this other part of the patent on IP  
13 hopping?

14          A.    I considered the technical content of this  
15 Crowds article --

16          Q.    Did you find that in the Patent Office's  
17 record?

18          A.    No, sir, I did not.

19          Q.    Okay.

20                   MR. CALDWELL: Can we go to Slide 3 of my  
21 slides there, Mr. Moreno?

22          Q.    (By Mr. Caldwell) Now, you recall this slide.  
23 We've seen it before, fair?

24          A.    Yes, sir.

25          Q.    Now, did you help design this slide? I think

1 I might have asked you that.

2 A. You asked me that, and my answer was no, I did  
3 not.

4 Q. Now, who is the user, Sue, sending a message  
5 to here?

6 A. Some other Office Communicator user.

7 Q. That's kind of what I figured. She's probably  
8 not asking the server to go to lunch or something like  
9 that, fair?

10 A. Presumably not, no, sir.

11 Q. All right. So, I mean, it's not very  
12 practical to think a company is going to buy Office  
13 Communications Server and install it for one user to  
14 send messages to themselves, fair?

15 A. That's correct, yes, sir.

16 Q. All right. So let's go ahead and -- you don't  
17 mind if I make this a little bit more realistic, do you?

18 A. Certainly. Well, I'm not sure I agree with  
19 your characterization of realistic. You're making it  
20 more complete.

21 Q. Okay. Well, let's make it more complete.  
22 I've added more users.

23 Do you see that?

24 A. Yes, sir.

25 Q. That's more complete, isn't it?



1 A. Yes, sir.

2 Q. It's more similar to what Dr. Jones presented  
3 for Microsoft Office Communicator, correct?

4 A. Yes, sir.

5 Q. Okay. Now, if we add these other users, there  
6 has to be a way to get messages to these other users,  
7 correct?

8 A. Yes, sir, that's correct.

9 Q. So the other Office Communicator clients here  
10 on the screen, they have SIP addresses, fair?

11 A. Presumably. I don't know whether, you know,  
12 these other users are using Office Communicator. It's  
13 not shown in the slide, but I'll assume they are.

14 Q. We'll assume they are. So they'll have a SIP  
15 address, fair?

16 A. All right.

17 Q. Now, let's be frank. How long have you been  
18 studying Office Communicator and Office Communicator  
19 (sic) Server for this litigation ahead of both your  
20 deposition that I took and the testimony today in Court?

21 A. I've been working on this case for, basically,  
22 a year and a half, and throughout that time, in various  
23 ways studying Office Communicator and Office  
24 Communications Server.

25 Q. And you talked a lot in your direct about

1 these SIP addresses that Dr. Jones had talked about and  
2 Mr. Powers had cross-examined Dr. Jones about, fair?

3 A. That's correct, yes.

4 Q. All right. Now, do you even know if the  
5 Office Communicator clients have SIP addresses,  
6 Dr. Johnson?

7 A. The technical term for what they have is SIP  
8 uniform resource identifiers.

9 Q. I just want to know, do you even know if  
10 Office Communicator clients have SIP addresses?

11 A. It is sometimes expressed that way, yes, that  
12 they do. And for --

13 Q. Let's take a look at what --

14 A. -- simplicity, I have used that terminology,  
15 because everyone else here this week has been using that  
16 terminology.

17 Q. Okay.

18 MR. CALDWELL: Well, let's take a look at  
19 Dr. Johnson's deposition at Page 236, Line 22, that  
20 question and answer.

21 Q. (By Mr. Caldwell) Now, this deposition I took  
22 of you around Thanksgiving, right, not too long ago?

23 A. Somewhere in that timeframe. I don't  
24 remember.

25 Q. Do you recall that I asked you: Do Office

1 Communicator clients have SIP addresses?

2           And your response was: I'm not sure,  
3 actually.

4           A. I was -- that is exactly what I said, yes,  
5 sir.

6           Q. Okay. And then I was a little bit surprised  
7 by that.

8                       MR. CALDWELL: I think if we go to the  
9 next page, Mr. Moreno, I might have double-checked.

10                      Can you -- can you get the -- starting  
11 with -- right there, down through the answer.

12           Q. (By Mr. Caldwell) I followed up there  
13 saying -- I started to talk over you at one point, and I  
14 said: I'm sorry. I didn't mean to interrupt you.

15                      My question was: Do OC clients have SIP  
16 addresses?

17                      And your response was: And I said I'm not  
18 sure, correct?

19           A. That is correct. That's what I said, yes,  
20 sir.

21           Q. But today you're telling us they're commonly  
22 called SIP addresses. Have you studied up on that since  
23 your deposition?

24           A. I've studied up only in one respect. As I  
25 said, the technical name, the name that's used in the

1 standard specification, the RFC, is SIP uniform resource  
2 identifiers.

3 Q. I see.

4 Well, Dr. Johnson --

5 A. And I was not sure whether the term SIP  
6 address, which is not the way I would normally refer to  
7 them, say, in talking to colleagues -- I was not sure  
8 whether the term SIP address was really an appropriate  
9 term and what -- you know, what you meant by SIP  
10 address, because, you know, I just think about it in the  
11 technical term.

12 I had sort of forgotten the colloquial term  
13 that -- the simplified term that is certainly to talk  
14 about here today.

15 Q. Okay. Professor Johnson, the protocol that's  
16 used to send instant messages and presence information  
17 on the Office Communicator network is the SIP protocol,  
18 correct?

19 A. That is correct.

20 Q. All right. The SIP protocol carries data,  
21 doesn't it?

22 A. Yes, it does.

23 Q. Now, if these -- if the Office Communicator  
24 network is in the secure mode using TLS, our hacker  
25 cannot see those SIP addresses as messages are sent

1 across the internet, can he?

2 A. That's correct.

3 Q. You agree with Dr. Jones on that, don't you?

4 A. I agree that the hacker cannot see the SIP  
5 addresses, that's correct.

6 Q. And you didn't show that part of the story to  
7 the jury in your presentation, did you?

8 A. No, I didn't. It's not relevant to the  
9 definition of anonymity.

10 Q. Dr. Johnson, did you show that part of the  
11 story to the jury?

12 A. No, I did not.

13 Q. I want to talk a little bit about the meaning  
14 of the word website. I'm going to play court reporter  
15 for just a second here, and I'm going to take down a  
16 couple of notes. You tell me if I misunderstood this  
17 from your direct.

18 Website and OC, quote, have nothing in common.  
19 Did I hear that correctly?

20 A. I'm not sure it's a direct quote, and in fact,  
21 in one way, it's certainly not, because I believe I said  
22 OCS, not OC.

23 Q. Okay. Well, I'll change that OCS.

24 A. The second half, I can't read where your  
25 quotation marks are, if you have any.

1 Q. And I'll make this OCS. Is that better?

2 A. All right. Yes.

3 Q. Does that reasonably represent your testimony?

4 A. It's a good paraphrase at least.

5 Q. Okay. Well, another two words I know I got  
6 right were completely different.

7 Do you recall saying that?

8 A. Yes, I do.

9 Q. Let me write that one down.

10 A. Or I believe I said something very similar.

11 Q. SIP is a protocol, correct?

12 A. Yes, that's correct.

13 Q. You know lots and lots of protocols, don't  
14 you, Dr. Johnson?

15 A. Yes, sir.

16 Q. You listed several for me in the deposition.  
17 I didn't count, but probably in the order of 15-ish we  
18 talked about?

19 A. A large number, yes, sir.

20 Q. Okay. But, I mean, how many protocols have  
21 you heard of?

22 A. I have no idea.

23 Q. Ballpark, wild guess. Dozens? A hundred?

24 A. Many dozens, probably well over a hundred, but  
25 I wouldn't know.

1 Q. Okay. I'm just asking for a ballpark. That's  
2 fine.

3 One of the protocols you've heard of and are  
4 familiar with is http, right?

5 A. That's correct, sir.

6 Q. Http is used for websites, isn't it?

7 A. Yes, sir.

8 Q. Now, will you agree with me that what makes a  
9 website a website is that it is running the http  
10 protocol?

11 A. Websites -- well, web servers and web clients  
12 run the http protocol. Website's sort of implicitly do,  
13 but that's not a full --

14 Q. I just want to very specifically --

15 A. That's not a definition, though.

16 Q. Okay. I want to know very, very specifically,  
17 do you agree that what makes a website a website is that  
18 it is running the http protocol?

19 A. That's not a complete definition, no, sir.

20 Q. Okay.

21 MR. CALDWELL: Now, Mr. Moreno, can you  
22 do me a favor and pull up that one portion of the  
23 transcript that I identified for you?

24 Q. (By Mr. Caldwell) You're familiar with the  
25 concept of claim construction, fair?

1 A. Yes, sir.

2 Q. And what's known amongst the patent lawyers as  
3 a Markman hearing where issues are argued and terms are  
4 construed?

5 A. That's correct, sir.

6 Q. Okay. I'm asking Mr. Moreno to focus in on  
7 two lines. This is part of the transcript of the  
8 Markman hearing. This is an argument that Mr. Powers  
9 made to Judge Davis, okay?

10 A. I'll take your representation for that. I  
11 have not actually read the transcript of the Markman  
12 hearing, no.

13 Q. You have not?

14 A. Of the transcript, no.

15 Q. You can read this portion right here, can't  
16 you? What does it say in the highlights?

17 A. It says what you just said, what makes a  
18 website a website is that it is running the http  
19 protocol.

20 Q. Okay. So now we've heard that what makes a  
21 website a website is that it's running the http  
22 protocol, and then we've also heard that that's not  
23 correct.

24 Which one is it?

25 A. I did not say that's not correct. I said



1 that's not a complete definition.

2 Q. Okay. So Mr. Powers' presentation to the  
3 Court was an incomplete definition. Is that what you're  
4 saying?

5 A. I -- you've shown me two lines of what I  
6 assume is a very long transcript. I don't know the  
7 context of this. But I would assume this is in the  
8 context of -- I mean, I see at the beginning of the  
9 second line here an FTP server dot, dot, dot.

10 What differentiates a website from a FTP  
11 server --

12 Q. I never asked you what differentiates a web  
13 server from an FTP server. I'm just asking you about  
14 this sentence.

15 And what -- and let's just short circuit this  
16 a little bit. That sentence is pretty darn clear that  
17 what makes a website a website is that it is running the  
18 http protocol, fair?

19 A. I don't think that's fair. I think that  
20 sentence is simply contrasting a website versus an FTP  
21 server.

22 Q. Okay. Well, you will agree that an equivalent  
23 of a website would use a protocol substantially similar  
24 to http, right?

25 A. Yes, sir.

1 Q. Okay. Is Microsoft a fairly sophisticated  
2 company?

3 A. They would seem to be, yes. They make some  
4 sophisticated products.

5 Q. In your estimation, do they know a lot of  
6 protocols?

7 A. I imagine they do.

8 Q. Didn't we hear them take credit yesterday, or  
9 the day before maybe, for a whole bunch of virtual  
10 private network protocols?

11 A. They described a number of them, and some of  
12 which were invented by Microsoft, yes, sir.

13 Q. Okay. Dr. Johnson, if you, knowing lots and  
14 lots of protocols, probably north of a hundred, had to  
15 pick one protocol to compare Office Communicator SIP to,  
16 you would pick the http website protocol, wouldn't you?

17 A. If I was going to be focusing on the protocols  
18 spoken by an ht -- http or a web server versus the  
19 protocol spoken by Office Communicator, I would  
20 certainly focus on http.

21 Q. Okay. Now, Microsoft, same thing. Knowing  
22 lots and lots about protocols and having invented  
23 several themselves, if they had to pick one protocol to  
24 compare Office Communicator's SIP protocol to, they  
25 would pick the http website protocol, wouldn't they?

1           A.    If you're looking at protocols and comparing  
2 one type of server versus another type of server, of  
3 course, you're going to focus on the protocols spoken by  
4 both, and in the case of a web server, that is http.

5                    That seems very natural.

6           Q.    Pretty darn similar to SIP, isn't it?

7           A.    I'm sorry?

8           Q.    It's going to be really similar to SIP, isn't  
9 it, http?

10          A.    Http is going to be similar to SIP?  No, I  
11 don't agree with that.

12          Q.    Okay.  Well, let's see what the documents say,  
13 Dr. Johnson.

14                   MR. CALDWELL:  Can we pull up Plaintiff's  
15 Exhibit 972?

16          Q.    (By Mr. Caldwell) Now, have you seen this  
17 document before, Dr. Johnson, Windows XP Entering a New  
18 Era of Real-Time Communications?

19          A.    It looks familiar, yes.

20          Q.    Real-time communications, that's the area of  
21 the business that has OC and OCS, fair?

22          A.    That's correct, yes, sir.

23          Q.    All right.

24                   MR. CALDWELL:  Mr. Moreno, can I have you  
25 go to Page 6?

1 Q. (By Mr. Caldwell) Now, I was not fair to you,  
2 sir, but would you do me a favor and grab that --

3 MR. CALDWELL: You know what? I may have  
4 actually told you the wrong page. So would you do me a  
5 favor and go to the next page?

6 Was that Page 6 of the PDF? Oh, that's  
7 it. That's the paragraph. I'm sorry. I just can't  
8 read.

9 Will you highlight the last sentence,  
10 which starts right here (indicates)?

11 Q. (By Mr. Caldwell) This is a Microsoft  
12 technical document talking about the real-time  
13 communications industry, the very industry, the very  
14 part of their business that has the accused OC products.  
15 And I'm going to read along, and you tell me if I make a  
16 mistake.

17 It says: SIP, which is similar to the  
18 hypertext transfer protocol, http, is well suited for  
19 multimodal communications and is rapidly being adopted  
20 across the industry.

21 It says that, correct?

22 A. That seems to be a correct reading.

23 Q. Okay.

24 MR. CALDWELL: Can we go to Page 11 of  
25 the PDF, sir?

1                   Now, can we get this -- there you go --  
2 that blown up. Will you do me a favor and highlight the  
3 first sentence there, Mr. Moreno?

4           Q.     (By Mr. Caldwell) Just so we're convinced that  
5 first mention isn't a fluke, we'll -- I'm going to read  
6 the first sentence here (indicates).

7                   SIP has a number of inherent advantages over  
8 other protocols because it is much like http and other  
9 IP-based protocols.

10                   That's what it says, isn't it?

11           A.     Yes. It says it's similar to not only http  
12 but some number of other IP-based protocols, and I don't  
13 know what --

14           Q.     I'm asking if it's similar to http, right?

15           A.     You read it correctly, yes, sir.

16           Q.     All right. Had you seen that document before?

17           A.     I believe I haven't seen this one.

18           Q.     Have you read that paragraph before?

19           A.     I believe I have.

20           Q.     Okay. Do you think it's just a fluke that  
21 this old document says that?

22           A.     Well, I don't know what you mean by fluke. I  
23 don't think there's any surprise in the way this  
24 document is written.

25                   MR. CALDWELL: Can we pull up Plaintiff's

1 Exhibit 973 and go to the second page?

2 I'm sorry. Let's go the first page just  
3 so Dr. Johnson can see what it is.

4 Q. (By Mr. Caldwell) This is off Microsoft's  
5 website, the Microsoft real-time communications  
6 protocols and technologies page.

7 Do you see that?

8 A. Yes.

9 Q. It says last updated in 1993, although I'll  
10 note I printed this in February of 2010, okay?

11 A. Okay. I'll take your representation, that's  
12 fine.

13 MR. CALDWELL: Can we go to the second  
14 page, Mr. Moreno?

15 Q. (By Mr. Caldwell) Now, do you see where it  
16 says: Session Initiation Protocol, the big heading?

17 A. I can read that barely on the monitor.

18 Q. All right.

19 MR. CALDWELL: Let's pull it up.

20 Q. (By Mr. Caldwell) This document, which is  
21 still available on Microsoft's website to this very day,  
22 says: Session initiation protocol, which is similar to  
23 the http protocol is a text-based application-layer  
24 signaling and call control protocol, correct?

25 A. Again, you've read it correctly. I don't

1 agree with your apparent conclusion from it, but you've  
2 read it correctly, yes.

3 Q. Well, you will agree with me that we pretty  
4 much have established that the SIP and http protocols,  
5 SIP used for OC and http used for websites, it's  
6 definitely not true they have nothing in common,  
7 correct?

8 A. If you take that quote out of the context of  
9 the rest of my testimony, I would agree that that's not  
10 a correct interpretation of that quote.

11 Q. Okay. And now also -- it's also not correct  
12 that http and SIP are completely different, is it, sir?

13 A. And again, if you take that quote out of  
14 context of the rest of my testimony, I would agree that  
15 interpretation is not correct.

16 Q. Can we look at your PeerNet slide?

17 MR. CALDWELL: I believe it might have  
18 been Slide 28 of Dr. Johnson's presentation.

19 Given our time limitations, I'm going to  
20 get the stink eye shortly, so let me try and move along  
21 here.

22 Q. (By Mr. Caldwell) You moved -- you showed us  
23 this slide about the PeerNet software, correct?

24 A. This looks like one of my slides, yes.

25 Q. Now -- and you're claiming that this slide

1 shows -- or helps you demonstrate why there's no  
2 anonymity in the PeerNet environment, correct?

3 A. That's correct, yes.

4 Q. Now, I know you can't see me pointing over  
5 your head, but do you see the computer that ends in 55  
6 over here?

7 A. Yes, sir.

8 Q. Why does that thing have to have multiple  
9 links? What's going on there?

10 A. That's -- earlier this week -- I forget which  
11 day -- there was -- I guess this was yesterday -- there  
12 was a description of the three elements of the PeerNet  
13 software, the PNRP, graphing, and grouping.

14 That is an illustration of the graph that is  
15 formed as part of using the PeerNet software.

16 Q. Okay. Well -- and part of graphing was this  
17 graph maintenance where you find additional addresses,  
18 and you establish different connect -- additional or  
19 supplemental connections, correct?

20 A. Yes, sir. Once you establish the first  
21 connection, then you can find additional multiple  
22 connections, yes, sir.

23 Q. Okay. That's all I'm asking, because I just  
24 want to -- I want to modify your slide here, if I did  
25 this right, which maybe I didn't.



1 MR. CALDWELL: Do I have a -- oh, it's in  
2 my presentation. I'm sorry. I steered you -- I steered  
3 you wrong, Mr. Moreno. Right there, it's going to be  
4 No. 5.

5 Q. (By Mr. Caldwell) Okay. Now I'm going to  
6 modify your slide. That was just a joke earlier,  
7 apparently.

8 A. Okay. All right.

9 Q. And now we've added additional links for our  
10 computer on the far left, because this can happen,  
11 right?

12 A. Yes, sir.

13 Q. All right. And now, this is a little bit  
14 tough to identify the computers, so I'm going to put  
15 labels on them; is that fair?

16 A. All right. Yes, sir.

17 Q. We've got the PeerNet group up here, and we  
18 see computer A, B, C, and D. But we see your one  
19 message that's going from B to D, don't we?

20 A. That's correct, yes, sir.

21 Q. If our hacker looks at that message, does our  
22 hacker know which one of the computers initially sent  
23 that message?

24 A. You're using the word message, and I used the  
25 word packet, so I'm not entirely sure what you're

1 asking.

2 Q. Okay. Let me ask that a little bit  
3 differently.

4 There is -- there's payload inside that  
5 particular packet, fair?

6 A. There is data, which is technically commonly  
7 called payload.

8 Q. And in a group, it's going to be encrypted, is  
9 it not?

10 A. That's correct.

11 Q. Okay. So some -- somebody might be publishing  
12 their desktop so that the others can look at the desktop  
13 and they can work collaboratively as a group, fair?

14 A. All right.

15 Q. Is that fair?

16 A. Yes, sir.

17 Q. I just -- I mean, I want to make sure that  
18 we're at least on the same page here, that that is one  
19 of the key purposes of grouping, fair?

20 A. Yes, sir.

21 Q. Now, if the hacker looks at the message from B  
22 to D, can the hacker tell who's publishing their desktop  
23 to the rest of the group?

24 A. No. The hacker can't tell that. I don't  
25 think that changes anything about what I said about

1 anonymity.

2 Q. I --

3 A. I'm sorry.

4 Q. -- I didn't ask you if that changes anything,  
5 Dr. Johnson.

6 A. Excuse me.

7 Q. I just asked you, can they tell who is  
8 publishing their desktop?

9 A. No, they cannot.

10 Q. If the hacker intercepts that message, can  
11 they tell which one of those users is actually running  
12 an application listening to that message?

13 A. No, they cannot.

14 Q. So if I understand correctly, Dr. Johnson, you  
15 can see evidence, of course, that there's a sent message  
16 from B to D, fair?

17 A. Yes, sir.

18 Q. And that's sent from B to D, correct?

19 A. That's correct.

20 Q. All right. But, Dr. Johnson, that Sender B is  
21 really no more likely to be the originator of that  
22 message than any other potential sender in the graph,  
23 correct?

24 A. That's correct. My slide simply illustrates  
25 IP packet.

1 Q. It's -- it's correct that you can see evidence  
2 of a sent message, and the sender appears no more likely  
3 to be the originator of that message than any other  
4 potential sender in the system, correct?

5 A. No, that's not correct.

6 Q. Oh, I thought you told me yes to both of those  
7 questions the first time.

8 A. You rephrased it when you summarized it, or  
9 you added an element when you summarized it.

10 Q. In what way?

11 A. You can't see evidence of a sent message. You  
12 don't know what's inside that packet.

13 Q. Oh, fair enough. I mean, so it's even -- it's  
14 even more anonymous than what I just pitched in my  
15 question then. You can't even see evidence of a sent  
16 message?

17 A. I don't know what you mean by more anonymous.  
18 You can still identify the two computers that are in  
19 communication with each other --

20 Q. Okay. Dr. Johnson --

21 A. -- in B and D here.

22 Q. -- you can see that there is a sent message  
23 from B to D?

24 A. You can see there's a sent IP packet from B to  
25 D.

1 Q. Okay. And that's -- that's carrying a message  
2 in grouping, fair, of some sort? It's carrying records  
3 of something?

4 A. Carrying some grouping information, yes.

5 Q. And then the Sender B appears no more likely  
6 to be the originator of message than any other potential  
7 sender in the system.

8 We've agreed to that, right?

9 A. The payload contents --

10 Q. Yes. The payload contents, okay.

11 MR. CALDWELL: Now, Mr. Moreno --

12 MR. BOBROW: Your Honor, may the witness  
13 please be allowed to finish his answer? He was  
14 interrupted there.

15 THE COURT: Fine. Did you have something  
16 else to say?

17 A. I was simply going to say the payload contents  
18 is -- is encrypted, and -- and our hacker can't tell who  
19 the source of that payload contents is, but the IP  
20 packet is all I was illustrating here.

21 MR. CALDWELL: I apologize for that, Your  
22 Honor, because I had thought we had actually answered  
23 the question and then retreated, and we were going back  
24 to it again.

25 So I apologize, Your Honor.

1 Q. (By Mr. Caldwell) You will agree with me that  
2 in terms of the content of the message, B is no more  
3 likely to have been the sender of that message than,  
4 say, A in this layout?

5 A. In terms of the payload of the message, the --  
6 the send -- the author, if you will, of the payload  
7 could have been any of these computers. The IP packet  
8 is what I was focusing on.

9 Q. Okay. Well, I was asking about the message,  
10 though. Understood?

11 MR. CALDWELL: Now, Mr. Moreno, can you  
12 pull up Plaintiff's Exhibit 2?

13 Now go back to that Crowds article for us  
14 and go to Page 3 of it. That's the one right there.

15 Now, do you see there's sort of an inset  
16 block of text about two-thirds of the way down?

17 Would you grab the first centimeter of  
18 that and blow that up real big for us?

19 Q. (By Mr. Caldwell) Here's a level, one of those  
20 degrees of anonymity, that the Crowds article that's in  
21 the file history says -- I'll read along; you correct me  
22 if I'm wrong, sir.

23 A sender's anonymity is beyond suspicion, if  
24 though the attacker can see evidence of a sent message,  
25 the sender appears no more likely to be the originator

1 of that message than any other potential sender in the  
2 system.

3 Do you see that, sir?

4 A. Yes, I do.

5 Q. Now, were you here for the whole trial?

6 A. Almost all of it, yes.

7 Q. You were here early on when our -- when  
8 Mr. Munger and Dr. Short were on the stand, correct?

9 A. Yes, I was. That's correct.

10 Q. Did you hear that they were cross-examined for  
11 a while on the fact they were having trouble getting  
12 funding?

13 A. Yes, I did hear that.

14 Q. Now, let's just make this clear. You yourself  
15 have lost funding when the dot-com bubble burst in the  
16 early 2000 timeframe, 2000/2001 timeframe, correct?

17 A. That's correct, yes, sir.

18 Q. That's not an uncommon phenomenon, is it?

19 A. No, it's not. I recall our discussion of that  
20 in my deposition. I had funding for my research from  
21 Caterpillar Corporation, and they make large mining  
22 construction equipment. And the economy changed and  
23 they redirected their resources to their primary  
24 business.

25 MR. CALDWELL: Can you pull up the

1 patent, PX4, actually, and go to Figure 35?

2           It's not going to be PDX35. Go back just  
3 a few pages. One more, two more.

4           There you go. Perfect. Thank you.

5           Q. (By Mr. Caldwell) Now, Dr. Johnson, right here  
6 we see in Figure 33 -- I'm sorry -- you're familiar with  
7 this figure, are you not?

8           A. Yes.

9           Q. And this is representing -- it's the block  
10 diagram that goes along with the '180 invention, isn't  
11 it?

12          A. Yes, sir.

13          Q. Okay. So what we see over here is this notion  
14 of having an scom, which I've done a really poor job  
15 again of pointing out, and dot-com right here, correct?

16          A. Yes, sir.

17          Q. Now, the dot-com, that's the unsecure  
18 connection, fair?

19          A. In this figure, that's correct, yes.

20          Q. And the dot-scom, that's the secure  
21 connection, fair?

22          A. Really, that's not quite accurate. It's the  
23 insecure domain name, yes.

24          Q. Okay. But that's -- it's represented in this  
25 patent figure as the -- where you're going to go connect



1 for the secure information or unsecure information?

2 A. Yes, sir, that's correct.

3 Q. All right. Well, let me clear this just a  
4 little bit.

5 And we see that coming into the secure side  
6 right here is one connection, so that's one IP address  
7 into the secure side, right?

8 A. Yes, sir.

9 Q. Because the circle is the internet, your  
10 connection to the internet, right?

11 A. That's correct.

12 Q. Now, we see right here one connection into the  
13 unsecure side.

14 A. Yes, sir.

15 Q. Now, that's sort of the point you made when  
16 you were talking about a secure computer network  
17 address. You would have to have a separate address in  
18 order to send the secure traffic versus an address where  
19 you would send the unsecure traffic, right?

20 A. That's not actually what I said, no.

21 Q. Well, it's very similar to what you said. I  
22 didn't write it down verbatim, so I apologize if I got  
23 it wrong.

24 A. May -- I described two scenarios with a secure  
25 computer network address, one that I described as being

1 in a typical VPN setup, and then I discussed, you know,  
2 what the equivalent would be or what it would look like  
3 in a, you know, PeerNet application where there is no  
4 secure network address.

5 Q. Okay. Well, Dr. Johnson, I just want to  
6 direct you to another part of this figure right here.  
7 We didn't really talk about this in your direct, did we,  
8 this section that's -- excuse me. I cannot draw.

9 This section right there where both the secure  
10 connection -- the secure address and the unsecure one  
11 are combined at the same address on the internet.  
12 That's in the very figure of the patent that describes  
13 the '180 patent invention, isn't it?

14 A. I don't recall what the text explaining  
15 this -- this figure actually describes as -- as that  
16 element of the figure.

17 Q. Okay. Now --

18 MR. CALDWELL: All right. Thank you, Mr.  
19 Moreno.

20 Q. (By Mr. Caldwell) Let's move on to my -- my  
21 last topic here. I want to talk a little bit about  
22 Windows Meeting Space.

23 You were here when Mr. Tyler Barton testified  
24 yesterday, right?

25 A. Yes, sir, I was.

1 Q. I've never actually met Mr. Barton personally.  
2 He seems like a nice young man.

3 Now, do you think everything he told the jury  
4 about the PeerNet APIs and Windows Meeting Space is all  
5 correct?

6 A. From my understanding, yes, it was all  
7 correct.

8 Q. Well, did you think that everything Professor  
9 Jones said about the PeerNet APIs and Windows Meeting  
10 Space was correct?

11 A. I don't recall his -- exactly what he said in  
12 his testimony here versus what he had said in his  
13 earlier reports, so I'm not sure I could separate that  
14 in my mind as whether everything he said here was  
15 correct or not.

16 Q. But you're not identifying for me anything in  
17 particular that Dr. Jones said about Windows Meeting  
18 Space or the PeerNet APIs that was incorrect, correct?

19 A. At this point, what he actually said in the  
20 room here is -- is not clear versus, as I said, what he  
21 said in his report. So I'm not identifying something he  
22 said in the room right now, no.

23 Q. Okay. Well, let's talk about one place I  
24 understand that you guys disagree.

25 Dr. Johnson, isn't it correct, that you

1 contend that Windows Meeting Space does not work over  
2 the internet?

3 A. It -- it does not work over what we use or  
4 think of as the internet today in a normal way at least.  
5 It's designed to use what's called a version of IP  
6 called IP Version 6, which is not deployed in the -- in  
7 the internet, except in limited cases.

8 It's designed to work in a local network, and  
9 it can -- if you try hard, can be configured and set up  
10 to work on the internet, yes.

11 Q. So -- okay. All right. Well, let's see what  
12 you said in your report on that issue.

13 MR. CALDWELL: Can you pull up  
14 Dr. Johnson's non-infringement report on Page 76?  
15 -- oh, Page 62. I'm sorry.

16 No, that's not it. It must be Page --  
17 no, that's not it. I'm looking -- I'm looking for his  
18 Paragraph 112 out of his report.

19 I'm sorry, Paragraph 116. Can you go to  
20 the next page of that? I wrote down the wrong number.

21 I'm sorry.

22 That's it. Can you blow up that top  
23 paragraph for us there?

24 Q. (By Mr. Caldwell) Now, Dr. Johnson, I'm  
25 starting about halfway through that column right there.

1 It says the word moreover.

2 Do you see that?

3 A. Yes, sir.

4 Q. Okay. I'm going to read along. It says:  
5 Moreover, since Windows Meeting Space is only supported  
6 for link local networks -- that's saying Windows Meeting  
7 Space is not supported for connections over the  
8 internet.

9 Isn't that what that statement is saying?

10 A. That's what it's saying, which is different  
11 than the way you were characterizing things before you  
12 pulled up this part of my report.

13 Q. Well, I apologize then, if that's true.  
14 But what we're looking at right now says: Windows  
15 Meeting Space is only supported for link local networks,  
16 i.e., it's not supported for connections over the  
17 internet; fair?

18 A. That's what it says, whereas before you talked  
19 about whether it works or doesn't work.

20 Q. Okay. Now, Dr. Johnson, yesterday when  
21 Mr. Barton was here, Mr. Barton testified:

22 Question: Now, you mentioned in a meeting.  
23 Is Windows Meeting Space typically used in face-to-face  
24 meetings, or is it used over the internet?

25 Answer: Windows Meeting Space is designed for

1 what we call face-to-face meetings. So it's designed  
2 for the situation when everybody is in the same room.  
3 It's not designed for use on the internet.

4 Did you hear that testimony?

5 A. I did hear that testimony. That sounds  
6 probably like a direct quote. I will assume it is.

7 Q. It is, and I'll be happy to show you the  
8 transcript.

9 A. I don't question that.

10 Q. Now, do you still believe in the accuracy of  
11 that statement?

12 A. Yes, I do.

13 Q. You know your way around the Microsoft website  
14 fairly well, sir?

15 A. Reasonably well. It's a very large website.

16 MR. CALDWELL: Can we pull up Plaintiff's  
17 Exhibit 800?

18 Now, in Plaintiff's Exhibit 800 on Page  
19 1, I would like to pull out both this area right here,  
20 Mr. Moreno?

21 Q. (By Mr. Caldwell) We're looking at the Windows  
22 Vista Meeting Space step-by-step guide, fair?

23 A. Appears to be.

24 Q. The third bullet says you can include local  
25 and remote attendees, doesn't it?

1 A. Yes.

2 Q. All right.

3 MR. CALDWELL: Now, can we lose that  
4 call-out, sir, and now, Mr. Moreno, can we grab down  
5 here?

6 There you go.

7 Q. (By Mr. Caldwell) Windows Meeting Space  
8 focuses on helping information workers and addresses  
9 their needs by providing a collaborative application  
10 focused on sessions that work in topologies.

11 Topologies in this instance means like is it  
12 linked local? Is it remote on the internet and things  
13 like that, correct?

14 A. Yes.

15 Q. It's focused on sessions that work in all  
16 topologies, isn't it?

17 A. I'm not -- I don't completely agree with the  
18 use of the word focused here. I understand that's the  
19 word they used here.

20 Q. That's Microsoft's words, right?

21 A. Yes.

22 Q. Okay. And they say you can use a computer to  
23 computer, an ad hoc network. You can use at home and  
24 manage your corporate network, right?

25 A. Yes.

1 Q. And then, fourth, it says you can use Windows  
2 Meeting Space on the internet. That's one of the  
3 topologies it's supported for, correct?

4 A. All right. Yes, sir.

5 MR. CALDWELL: Can we go Page 11 of this  
6 document, Mr. Moreno?

7 Now, classically, I have forgotten to  
8 highlight for myself what I wanted to pull out. Can you  
9 scroll -- can you scroll the other direction?

10 There you go. Scroll down for me.  
11 Scroll down -- all the way down.

12 Q. (By Mr. Caldwell) All right. Now, this is  
13 what I was looking for, this middle paragraph right  
14 here.

15 MR. CALDWELL: Thank you, Mr. Moreno, for  
16 being so patient with me. The middle of those  
17 paragraphs, can you focus on that?

18 Q. (By Mr. Caldwell) Windows Meeting Space -- do  
19 you see where I'm reading along, Windows Meeting Space  
20 allows you?

21 A. The bottom paragraph?

22 Q. Yes, sir.

23 A. Yes, sir.

24 Q. Windows Meeting Space allows you to  
25 collaborate with individuals nearby and with individuals



1 who are remote.

2 That's what it says, isn't it?

3 A. Yes, sir.

4 Q. Okay. And, again, and remote, it's talking  
5 about across the internet, fair?

6 A. I don't know the context, but from the limited  
7 portion of this document you've shown me, I would assume  
8 that's what they're talking about. I don't believe  
9 I've --

10 Q. Let --

11 A. -- seen this whole document, and I'm actually  
12 noticing this document was only published less than --  
13 you know, like six weeks ago on the Microsoft website.

14 Q. It was published by Microsoft.

15 A. It is published by Microsoft in the end of  
16 January of 2010, after I submitted my report in this  
17 case. I have not reviewed this document before.

18 Q. I see.

19 So your report may just be flat wrong on  
20 whether or not Windows Meeting Space is supported for  
21 the internet, correct?

22 A. It appears that at least this document is --  
23 is, you know, telling someone that you can use it in the  
24 internet.

25 Q. And that's the environment that Dr. Jones

1 showed the jury, correct, where the Windows Meeting  
2 Space was used across the internet?

3 Do you recall that?

4 A. I recall that, yes, sir.

5 Q. Now, were you and Mr. Barton suggesting that  
6 Windows Meeting Space couldn't be used across the  
7 internet to leave the impression that Dr. Jones'  
8 graphics using the internet were inaccurate or  
9 misleading?

10 A. I don't -- that was certainly not my  
11 intention. I believe we both described accurately and  
12 fairly the way in the case of Mr. Barton was designed  
13 for, in the case of the section of my report what -- at  
14 the time I wrote my report, what Microsoft was  
15 supporting it for.

16 Q. Dr. Johnson, would you agree with me right now  
17 that I could show you probably three more documents just  
18 off of the ones that are in my notes that would say  
19 Windows Meeting Space works on the internet?

20 A. I don't know if you could or not.

21 Q. Okay.

22 MR. CALDWELL: Pass the witness.

23 THE COURT: All right. Redirect?

24 MR. CALDWELL: Your Honor, may I mark my  
25 flip charts as a demonstrative exhibits, and we'll get

1 the numbers --

2 THE COURT: You may.

3 MR. CALDWELL: -- whenever?

4 REDIRECT EXAMINATION

5 BY MR. BOBROW:

6 Q. Mr. Johnson, I have a few follow-up questions  
7 for you. What I would like to start with a  
8 demonstrative that you used, which is No. 11.

9 MR. BOBROW: And if we can put that up on  
10 the screen and dim the lights, please, I would  
11 appreciate that. Thank you.

12 Q. (By Mr. Bobrow) Now, Professor Johnson, what  
13 you showed here earlier was a setup for communication  
14 between on the one hand an Office Communicator computer  
15 and on the other hand Office Communications Server; is  
16 that right?

17 A. That's correct sir.

18 Q. You've shown two computers; one on the left  
19 side as the source and one the destination on the right;  
20 is that right?

21 A. That's correct.

22 Q. This is a two-computer model as you've shown  
23 it, correct?

24 A. Yes, sir.

25 Q. And as I understood your testimony, both on

1 direct examination and on cross-examination, there is no  
2 anonymity in this scenario, because the IP addresses of  
3 the source and the destination are visible to a hacker;  
4 is that right?

5 A. That's correct. And thus, an eavesdropper  
6 would easily know that these two computers are in  
7 communication with each other.

8 Q. Now, on cross-examination, Mr. Caldwell  
9 posited for you a scenario where you had two computers  
10 like this, and instead of having an OC/OCS connection,  
11 forget about that. Instead you create a PPTP VPN  
12 connection between those computers.

13 Do you remember that question -- those set of  
14 questions, sir?

15 A. Yes, sir, I do.

16 Q. Now, when you set up a PPTP VPN between those  
17 two computers, is there or is there not anonymity for  
18 the source computer and the destination computer?

19 A. There certainly is anonymity --

20 Q. Now --

21 A. -- if an attacker --

22 Q. -- let me -- let me ask you.

23 A. Okay.

24 Q. Why is that? Why is there anonymity when you  
25 have a VPN between those two computers but not when you

1 have an OC/OCS connection?

2 A. In the case of PPTP, you have the encrypted  
3 private IP addresses that are hidden inside the packet.  
4 So the possible eavesdropper who's looking at that  
5 packet only can see the outside IP addresses, the public  
6 IP addresses.

7 The inside IP addresses identify the real  
8 source computer and the real destination computer. So  
9 even though this picture shows only two computers  
10 connected together through the internet, the attacker  
11 actually has no way to know whether there might be only  
12 one computer on the left side or maybe there's a second  
13 computer or a hundred or a million computers on the left  
14 side, and the same thing on the right side.

15 Observing that packet in the middle of the  
16 network as -- if the computer on the left in the case of  
17 PPTP is using this PPTP VPN and it is serving as a VPN  
18 gateway and the computer shown here on the right is also  
19 serving as a VPN gateway, the attacker who's  
20 eavesdropping in the middle of the network can only see  
21 that it's -- the public IP addresses and cannot identify  
22 which of the possibly a million computers on the left  
23 side was actually the source of that packet, or same  
24 thing on the right side.

25 In the case of Office Communications (sic) and

1 Office Communications Server, it's -- it's different.  
2 There's only the public IP addresses. There are no  
3 private IP addresses. The attacker actually can even  
4 tell from the packet that there are no private IP  
5 addresses.

6 Remember, I talked about the -- the port  
7 number. That port number identifies this packet as  
8 belonging to Office Communicator/Office Communications  
9 Server communications. And from that port number, we  
10 know -- because the format of the packets are not a  
11 secret, we know that the packet contains what it  
12 contains.

13 The attacker knows that there's no private IP  
14 addresses hidden inside the packet. The attacker knows  
15 the only thing that's in there is encrypted data.

16 There's no private IP addresses. The two  
17 computers that are in communication with each other are  
18 clearly identified by the public IP addresses in the IP  
19 packet's header.

20 Q. Let me switch subjects.

21 Mr. Caldwell also asked you some questions  
22 about SIP, the SIP protocol, and the http protocol.

23 Do you recall those questions?

24 A. Yes, I do.

25 Q. Now, first of all, let me ask you this just

1 straight out: Does the OC and OCS Server, which  
2 protocol is used on the OC Server?

3 A. SIP.

4 Q. Does it use http protocol? Is that the  
5 protocol it uses?

6 A. No, it does not use http at all.

7 Q. All right. Now, there were some statements  
8 about how SIP may be similar in some ways to http.

9 Do you recall that?

10 A. Yes, I do.

11 Q. Does that change your view and opinion in any  
12 way that an OCS Server is not a website?

13 A. It does not change my opinion in any way.

14 Q. Why not?

15 A. The similarities are -- are superficial to  
16 the -- if I can make an analogy, I guess I would say, if  
17 we write English, we punctuate it with commas and  
18 periods. And we do that whether we're writing in -- I  
19 don't know -- English or French or I think it was on the  
20 first day of the trial, there was one page of the  
21 Microsoft source code that was shown on the screen up  
22 here that was probably very hard to read.

23 Similar punctuation marks are used there.  
24 There's similarities between languages that makes -- I  
25 guess in the case of languages, it makes printing --

1 typing the languages easier.

2 But that's really where the similarities end  
3 in the case of SIP versus http. You know, there's some  
4 of the formatting of how the protocol is -- is -- the  
5 language is formatted are similar. But the  
6 functionality, what it does and even the pattern of  
7 communication is -- is -- is very different.

8 In http, the web browser requests a web page,  
9 and the web server sends the web page back.

10 In SIP, the client sends an instant message,  
11 and it doesn't come back to the client. It goes through  
12 the SIP server -- the OCS Server to the other client.  
13 This structure of the protocol, the way the protocols  
14 work is very different.

15 Q. All right. Third topic, very briefly.

16 MR. BOBROW: Can we pull up Plaintiff's  
17 Exhibit 800, please?

18 Q. (By Mr. Bobrow) You were asked some questions  
19 about this towards the end of your cross-examination  
20 about Windows Meeting Space.

21 Do you recall looking at least portions of  
22 this document?

23 A. Yes, sir.

24 MR. BOBROW: Please turn to, I believe  
25 it's Page 11, and if you can go to the bottom and



1 highlight the paragraph that starts IPv6.

2 Q. (By Mr. Bobrow) Do you see that, sir?

3 A. Yes, I do.

4 Q. All right. Now, here towards the bottom, it's  
5 talking about Windows Meeting Space and IPv6, which I  
6 think you said is sort of the future version of the IP  
7 protocols; is that right?

8 A. Yes, sir. IPv6 is sometimes called IP next  
9 generation. It's what the internet will become when  
10 they finally someday finish changing the internet to be  
11 that protocol.

12 Q. Now, in the bottom paragraph, it refers to  
13 several ways of obtaining IPv6 hardware. Then it says:  
14 The simplest way is to set up a ISATAP Server.

15 Now, very briefly can you just tell us what  
16 that's talking about?

17 A. It's talking about ways of being able to carry  
18 IPv6 packets over the -- IPv6 is a version number of IP;  
19 the current version is IP is IP Version 4, so if I use  
20 the numbers 4 and 6, which I'm sure I will accidentally  
21 do -- it's a way of carrying IP Version 6 packets over  
22 the IP Version 4 internet.

23 Q. All right. So is it fair to say from the  
24 portions of this article that you looked at that for  
25 Windows Meeting Space operating over the internet, you

1 need to take special steps to set up special servers and  
2 have special hardware for that to work?

3 A. That's correct.

4 Q. All right. I have one last topic, and that  
5 has to do with the PeerNet software.

6 You have been talking, when you were asked  
7 questions, about IP packets going from one peer computer  
8 to another peer computer.

9 Do you recall using that word, IP packet?

10 A. Yes, I do, sir.

11 Q. On cross-examination, Mr. Caldwell kept asking  
12 you over and over about messages from one peer to  
13 another peer.

14 Do you recall that?

15 A. I do recall that, yes, sir.

16 Q. Tell us, if you would, whether there's any  
17 difference between IP packet on the one hand and a  
18 message on the other?

19 A. Yeah, there's -- there's definitely  
20 differences.

21 An IP packet, again as I've already said,  
22 really is the basic unit of communication between  
23 computers and the internet. Without an IP packet, two  
24 computers simply cannot communicate.

25 A message is, you know, a piece of information

1 from an application program. It's data. It's not -- it  
2 exists disembodied from a network protocol. It's just a  
3 piece of information.

4 To carry that piece of information from one  
5 computer to another computer, you have to put that into  
6 an IP packet and transmit that IP packet from the source  
7 computer to the destination computer.

8 Q. And if you can see the IP packet, when one  
9 peer computer is sending a message -- sending an IP  
10 packet to another computer, what happens then? If you  
11 intercept that packet, what can you see?

12 A. If you intercept that packet, you can plainly  
13 see the IP address of the source computer and the IP  
14 address of the destination computer. Those are public  
15 IP addresses. They're plainly visible.

16 And they plainly tell you that that source  
17 computer is in communication with that destination  
18 computer. And so it simply means there's no anonymity.

19 Q. Thank you.

20 MR. BOBROW: Pass the witness.

21 THE COURT: Any further recross?

22 MR. CALDWELL: Just very, very briefly  
23 Your Honor.

24 (Discussion between Mr. Moreno and  
25 Mr. Caldwell.)

RECROSS-EXAMINATION

1  
2 BY MR. CALDWELL:

3 Q. Do you remember talking about this slide, Dr.  
4 Johnson?

5 A. I'm not sure if it's the same slide. I think  
6 it may be. I certainly prepared a similar slide, yes.

7 Q. I asked you about PPTP, which is Mr. Pall's  
8 VPN, correct?

9 A. Yes, sir.

10 Q. And you can set that up between a computer and  
11 the computer on the other side, can't you?

12 A. Between those two computers, yes.

13 Q. And you see the very same addresses, correct?

14 A. Yes, sir.

15 Q. That we would have seen in Office  
16 Communicator?

17 A. That's correct.

18 Q. Now, Dr. Johnson, does PC Magazine need to  
19 take back that award they gave Mr. Pall, because he  
20 actually didn't invent the VPN?

21 A. No. I think we've covered this already. It's  
22 still a VPN, because there are private IP addresses that  
23 are hidden. The attacker cannot tell the identity of  
24 the source computer -- you know, which computer is in  
25 communication with which other computer.

1 Q. Dr. Johnson, will you look at the jury and  
2 tell them whether or not it is a requirement of the  
3 patent or the claims that there be a private IP address  
4 that is hidden?

5 A. It is not a requirement of the claims as was  
6 just now stated.

7 Q. Is it a requirement of Judge Davis' claim  
8 construction? Tell the jury that, if you would.

9 A. It is not part of Judge Davis' construction as  
10 just now stated.

11 Q. And did you understand Mr. Bobrow to say that  
12 in order the use Windows Meeting Space on the internet,  
13 you had to buy special hardware?

14 A. I did hear him say that, yes.

15 Q. That's not true, is it?

16 A. You either need special hardware as was  
17 described in the passage there, or special software.

18 Q. But that special software is -- I don't want  
19 to get too technical here -- it's something like  
20 Terrado, T-E-R-R-A-D-O, correct?

21 A. That's correct.

22 Q. That's built right in to Windows Vista, isn't  
23 it?

24 A. And -- yes, sir. It has to be set up and  
25 configured. And we've all heard lots about setting up

1 and configuring software.

2 Q. Okay. So you don't have to actually go buy  
3 separate hardware as Mr. Bobrow suggested, correct?

4 A. That's correct. There was only a limited time  
5 period that document -- that it talked about overhead  
6 and efficiency a little bit, I noticed. And that  
7 affects that.

8 Q. And, Dr. Johnson, if you use Windows Meeting  
9 Space even in a link local network, like on this table  
10 right here, you use an IPv6 address then, don't you?

11 A. Yes, I certainly do.

12 Q. So that's not part of the criteria of using  
13 Windows Meeting Space just on the internet, right?

14 A. I'm not sure of your point. I can use IPv6 in  
15 this room, because we're all connected to the same local  
16 area network.

17 Q. Dr. Johnson, my point is, it's not -- you  
18 don't have to use IPv6 because you're going to use the  
19 internet. It's just the way Windows Meeting Space is  
20 configured. It always uses IPv6, correct?

21 A. That's correct. That was not the point of  
22 talking about IPv6.

23 Q. Well, I think it was the point. Mr. Bobrow  
24 suggested you had to go buy special hardware to use  
25 Windows Meeting Space over the internet, didn't he?

1           A.     The issue with using IPv6 is not whether I can  
2 use it in this room or -- the issue is whether it can go  
3 across the internet and whether internet routers support  
4 forwarding those packets.

5           Q.     Every bit of the software you need -- I'm  
6 sorry. You don't need to go buy this ISATAP hardware,  
7 correct?

8           A.     You don't need to.

9           Q.     The software -- the software, Windows Vista,  
10 can provide everything you need for the IPv6, correct?

11          A.     You have to set up and configure that  
12 software, and it consumes memory and CPU cycles. It can  
13 be done.

14          Q.     Dr. Johnson, is that, yes, Windows Vista  
15 provides it all?

16          A.     Yes.

17          Q.     All right.

18                   MR. CALDWELL: Pass the witness.

19                   THE COURT: Any redirect?

20                   MR. BOBROW: No, Your Honor.

21                   THE COURT: All right. Ladies of the  
22 Jury, I believe we're going to take our noon recess at  
23 this time. I'll ask you to be in recess -- be back here  
24 and ready to go by, let's say, 1:15 today.

25                   That will give you an hour and 20

1 minutes. See if you can get your lunch in in that time.  
2 Remember my instructions, and we'll see you back at  
3 1:15.

4 Be in recess.

5 COURT SECURITY OFFICER: All rise.

6 (Lunch recess.)

7 \* \* \* \*

8

9 CERTIFICATION

10

11 I HEREBY CERTIFY that the foregoing is a  
12 true and correct transcript from the stenographic notes  
13 of the proceedings in the above-entitled matter to the  
14 best of my ability.

15

16

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18 /s/ \_\_\_\_\_ Date \_\_\_\_\_  
SUSAN SIMMONS, CSR  
19 Official Court Reporter  
State of Texas No.: 267  
20 Expiration Date: 12/31/10

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23 /s/ \_\_\_\_\_ Date \_\_\_\_\_  
JUDITH WERLINGER, CSR  
24 Deputy Official Court Reporter  
State of Texas No.: 731  
25 Expiration Date: 12/31/10



EXHIBIT F10

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IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION

VIRNETX \* Civil Docket No.  
\* 6:07-CV-80  
VS. \* Tyler, Texas  
\*  
\* March 12, 2010  
MICROSOFT CORPORATION \* 1:15 P.M.

TRANSCRIPT OF JURY TRIAL  
BEFORE THE HONORABLE JUDGE LEONARD DAVIS  
UNITED STATES DISTRICT JUDGE

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(Proceedings recorded by mechanical stenography,  
transcript produced on CAT system.)

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\* \* \* \* \*

P R O C E E D I N G S

COURT SECURITY OFFICER: All rise.

(Jury in.)

THE COURT: Please be seated.

MR. POWERS: Your Honor, before we begin,

1 can we submit our list of exhibits that were admitted  
2 yesterday?

3 THE COURT: That would be great.

4 MR. CALDWELL: Your Honor, for the  
5 record, we've marked as demonstratives now our numbers.  
6 So just for the record, I would like to move into  
7 evidence Plaintiff's Demonstrative Exhibits 18, 19, 20.

8 THE COURT: Be admitted.

9 MR. BOBROW: I was going to say as  
10 demonstratives.

11 THE COURT: Right. Uh-huh.

12 Okay. Anything else?

13 MR. BOBROW: Microsoft would simply ask  
14 to call its next witness, Your Honor.

15 THE COURT: All right. That will be  
16 fine.

17 MR. BOBROW: So our next witness is  
18 Stephen Wicker.

19 THE COURT: All right.

20 STEPHEN WICKER, Ph.D., DEFENDANT'S WITNESS, PREVIOUSLY

21 SWORN

22 DIRECT EXAMINATION

23 BY MR. BOBROW:

24 Q. Good afternoon.

25 A. Good afternoon.

1 Q. Would you please introduce yourself to the  
2 jury, please?

3 A. My name is Steve Wicker.

4 Q. And, Mr. Wicker, where do you live?

5 A. I live in Ithaca, New York.

6 Q. What do you do there?

7 A. I'm a professor of electrical and computer  
8 engineering at Cornell University.

9 Q. Okay. And how long have you been a professor  
10 at Cornell University?

11 A. Fourteen years.

12 Q. So taking us back, then, to about 1996?

13 A. Yes.

14 Q. All right. And what about before that, were  
15 you a professor before that?

16 A. I was a professor in electrical and computer  
17 engineering at Georgia Tech in Atlanta.

18 Q. All right. Now, could you please tell us,  
19 sir, what the focus of your work has been at both  
20 Georgia Tech and at Cornell?

21 A. I have conducted research and I've taught in  
22 the area of computer networks, communication networks.  
23 I have focused on security, reliability, and privacy in  
24 those networks.

25 Q. All right. Now, I wanted to ask you, sir,

1 before we get into a lot of the details in this  
2 afternoon, if you could just give us a brief explanation  
3 of why you're here today.

4 A. Okay. I'm here to talk about the validity of  
5 VirnetX's patents, and in particular, the claims that  
6 are asserted in this case.

7 Q. Okay. Now, before we get into your specific  
8 opinions on the validity of the two patents involved  
9 here, let me go ahead and ask you some more questions  
10 about your background and experience, if I may.

11 And I'd like to ask you to please explain for  
12 the jury your education since high school.

13 A. Okay. I received a bachelor's degree in  
14 electrical engineering from the University of Virginia.  
15 I received a master's degree in electrical engineering  
16 from Purdue University, and I have a Ph.D. also in  
17 electrical engineering from the University of Southern  
18 California.

19 Q. And while you were getting your Ph.D., did you  
20 work at the same time?

21 A. Yes, I did.

22 Q. Where did you work?

23 A. I was an engineer for the Space and  
24 Communications Group of the Hughes Aircraft Company in  
25 Los Angeles.

1 Q. What kind of projects were you working on at  
2 Hughes Aircraft?

3 A. I designed communication payloads for  
4 satellites and for deep-space probes. It's the part of  
5 the satellite that actually talks.

6 Q. Okay. Now, let's jump forward to your time as  
7 a professor, and I wanted to ask you specifically what  
8 kind of courses you teach as a professor in electrical  
9 engineering and computer science.

10 A. Well I, teach courses in computer networks,  
11 communication networks. I've taught courses in  
12 cryptography. Next semester, I'll be teaching a  
13 freshman course on both security and privacy in  
14 information networks. So, basically, networking of  
15 various types.

16 Q. Have you taught any courses where that course  
17 work has involved virtual private networks or VPNs?

18 A. Yes. In fact, in both my graduate and  
19 undergraduate courses on computer networks, I do talk  
20 about VPNs.

21 Q. Now, have you published any books or articles  
22 or conference papers on networks and network security  
23 and privacy?

24 A. Yes. I've published five books and a number  
25 of journal articles and conference papers that deal with

1 various aspects of networks and communication links that  
2 form those networks.

3           And a great deal or a significant amount of  
4 that work deals with reliability and security in those  
5 networks.

6           Q. All right. In connection with your work as a  
7 professor, have you done any work for the United States  
8 government in the areas of networks and network security  
9 and privacy?

10          A. Yes, I have.

11          Q. Can you please describe that for us?

12          A. Okay. Most of the work I've done for the  
13 government was for DARPA. Now, that's the Defense  
14 Advanced Research Projects Agency. I think it's been  
15 mentioned several times over the course of the past  
16 week.

17               A lot of the work I did for them focused on  
18 sensor networks. I was very interested in creating  
19 networks that could detect different kinds of attacks;  
20 primarily, germ warfare and chemical warfare. The  
21 design of these networks was intended to protect troops  
22 against attacks, but it's also, since 9/11, been  
23 considered for use in protecting cities.

24          Q. Okay.

25          A. And what-not, water supplies in particular.



1 Q. All right. Have you done any work for any  
2 agencies of the federal government other than DARPA?

3 A. Yes.

4 Q. Can you tell us about that work, please?

5 A. Well, throughout my career, I've worked for  
6 the National Science Foundation. That's a part of the  
7 government that funds faculty and students to do  
8 research of various types.

9 Q. Okay. And what technologies have you  
10 developed in your work for the National Science  
11 Foundation?

12 A. Well, actually quite a few. I've been doing  
13 work for the NSF since the very beginning, but probably  
14 the biggest thing I've worked on most recently has been  
15 for a science and technology center called Trust. It's  
16 a large consortium of different universities, and our  
17 main goal is to protect critical infrastructure, to  
18 protect the power grid, to protect the transportation  
19 system, large objects like dams, and things that make  
20 the economy go.

21 Q. So what work have you done for Trust in the  
22 area of networks and network security and the like?

23 A. Once again, my emphasis was on sensor  
24 networks. And for Trust, I've looked at using these  
25 sensor networks to protect the power grid in particular,

1 what delivers electricity to our homes.

2 I've looked at ways of using sensors to both  
3 control the power grid as well as to protect it against  
4 hackers and actual physical attack as well.

5 Q. And has any of your work on networks involved  
6 any medical applications?

7 A. Yes. One of the more recent applications  
8 we've looked at has been sensor networking for patients  
9 at home. The basic idea is to get information about the  
10 patient's status, you know, well-being. We can monitor  
11 heart rate, blood glucose, all kinds of stuff so that  
12 someone can stay home instead of having to stay in  
13 intermediate care facility of some kind.

14 Q. All right. Now, in addition to your work for  
15 the government, have you done work in private industry  
16 on networks and network security?

17 A. Yes, I have.

18 Q. Can you tell us about that?

19 A. Okay. I've done work for some large companies  
20 like Motorola, a lot for Texas Instruments, Lockheed  
21 Sanders. And I've also worked for some smaller  
22 companies and even some startups over the years.

23 Q. All right. What I'd like to do now with that  
24 background about you is I would like to shift gears and  
25 ask you about the work that you did in studying and

1 evaluating the question presented to you of whether the  
2 VirnetX patents at issue here are valid or not.

3           And what I would like you to do, please, is  
4 describe for us the work that you did in preparing to  
5 give your opinion.

6           A.    Okay.  The first thing I did was to actually  
7 read the patents.  I went through them several times,  
8 and I read the claims.  That's the part that tells you  
9 what's actually claimed.

10           I studied the file histories.  That's the  
11 history of everything that happened in the Patent Office  
12 during the prosecution of the application.

13           I studied the Court's claim construction so  
14 that I would understand what the Court had determined  
15 certain terms in the claims meant.

16           I also studied the various prior art documents  
17 that were cited in that file history as well as a number  
18 of prior art documents, systems, software that was not  
19 cited in the file history.

20           Q.    All right.  Well, that's what I was going to  
21 ask you was whether, in the course of your preparation  
22 to give opinions here today, did you study any prior art  
23 that the Patent Office did not consider when it granted  
24 the '135 patent and the '180 patent?

25           A.    Yes, I did.

1 Q. What prior art did you study that the Patent  
2 Office did not?

3 A. Well, actually, I looked at a variety of  
4 things, quite a few systems, articles, et cetera. But  
5 the three main things that I focused on recently were  
6 the Aventail system, which I think has been discussed;  
7 DVPN, dynamic virtual private network; and the third one  
8 was Windows NT 4 with AutoDial and PPTP.

9 Q. All right. Now, can you tell us, please, how  
10 you know that that prior art -- the Aventail, the DVPN,  
11 and Microsoft NT 4.0 with PPTP and AutoDial -- how is it  
12 that you know that the Patent Office didn't consider  
13 that when it granted the two patents to VirnetX?

14 A. Well, if you look on the front of one of the  
15 patents, either one, there will be a list of everything  
16 that the Patent Office looked at. It says references  
17 cited or something like that.

18 But basically, it's a listing of everything  
19 that the Patent Office considered. The things that I  
20 just mentioned -- Aventail, Windows NT with AutoDial,  
21 and DVPN -- were not listed. So that's how I know that  
22 they weren't considered by the Patent Office.

23 Q. Okay. And in terms of how close -- the DVPN  
24 system and the Aventail system and NT 4 in terms of how  
25 close those are to the patents that VirnetX got and are

1 involved here in this lawsuit -- can you compare  
2 Aventail and DVPN and the NT 4 system in terms of their  
3 relevance or closeness to the patent to the prior art  
4 that the Patent Office did consider?

5 A. Okay. In my studies, I found the three  
6 systems that he just listed -- Aventail, DVPN, and the  
7 Windows NT system -- they were actually closer to what  
8 was claimed.

9 When I studied these systems, I found that I  
10 could actually read the claims that were asserted in  
11 this case on to these prior art systems. So that told  
12 me that they were very relevant. Extremely relevant.

13 Q. All right. Now, one thing that you've  
14 mentioned here and that I think we've seen over the  
15 course of the week is that Aventail and DVPN and the  
16 Microsoft NT 4 system, those are not patents, right?

17 A. That's right.

18 Q. Okay. Now, in your understanding, can things  
19 other than patents be prior art and considered for the  
20 validity of other patents?

21 A. That's my understanding. You can look at  
22 things other than older patents.

23 Q. All right. Now, after the description of your  
24 work that you just gave us, what I'd like you to do is  
25 to tell me whether you have formed opinions on whether

1 the claims of the '135 patent and the '180 patent that  
2 VirnetX is asserting here, whether or not those claims  
3 are valid or invalid in light of the prior art?

4 A. Through my studies, I found that they were  
5 invalid in light of the prior art. They were both  
6 anticipated and obvious in light of DVPN and Aventail  
7 and the Windows NT system with AutoDial and PPTP.

8 Q. All right. In your last answer, you used the  
9 word anticipated, and I'd like you to tell us what that  
10 means from your point of view from your understanding?

11 A. Okay. Well, it's my understanding that  
12 anticipation means that you can read the claims on to  
13 the system or the device or the document. And by that,  
14 I mean the system or the document, the prior art, has to  
15 have every single element of the claims. Nothing can be  
16 missing.

17 Q. Okay. And when you said that you found the  
18 claim of the '135 patent and the '180 patent to have  
19 been anticipated, what does that mean?

20 A. That's what I just described. Anticipation is  
21 where you can find every single element of the claims in  
22 one system, one document, one patent.

23 Q. All right. And did you so find that here in  
24 this matter?

25 A. Yes.

1 Q. All right. And you also mentioned that you  
2 found the claims of the VirnetX patents to be obvious  
3 and therefore invalid.

4 Can you tell us what you meant by that?

5 A. Okay. Obviousness is different. In the case  
6 of obviousness, the first thing I had to do was think  
7 like a person of skill in the art at the time of the  
8 invention, and just try and figure out what that person  
9 would have known.

10 I then asked myself whether this person would  
11 have found what was claimed obvious in light of one or  
12 more references, references like Aventail, and the ones  
13 that we've listed several times.

14 Q. All right. And after doing that, and putting  
15 yourself in the position of ordinary skill, what did you  
16 conclude?

17 A. I concluded that what's been asserted in this  
18 case, the asserted claims would have been obvious to a  
19 person of skill at the time of the invention.

20 Q. All right. Well, since we were talking just  
21 then about the state of the art at the time of the  
22 invention, at the time these patents were filed, let's  
23 go back to that time period, February of 2000, and I'd  
24 like you to tell us, generally speaking, if you could,  
25 what the patents that are at issue here are about.

1           In other words, what are the problems that  
2 they're directed to? What are they about?

3           A. Well, put -- put simply, the problem that was  
4 being addressed was the problem of finding a way to  
5 communicate securely over an unsecure network, such as  
6 the internet.

7           Q. Now, after you read these patents, was it your  
8 view that these patents were claiming always and all  
9 technologies for securing the internet or another  
10 unsecure network?

11          A. No. No. What was being claimed was actually  
12 quite narrow in terms of how that security was going to  
13 be obtained.

14          Q. All right. Now, Professor Wicker, I  
15 understand that you have prepared some slides to assist  
16 in your testimony here today; is that right?

17          A. That's correct.

18          Q. And assist in your explanations?

19          A. Yes.

20          Q. All right. What I'd like to do now is ask you  
21 to please help describe for us what the state of the art  
22 was back in the year 2000, when these patents were  
23 filed, and explain generally for us what kinds of  
24 technologies were already known in the field.

25          A. Okay. And it looks like my first slide is up.



1 What I've done here is I've listed five key technologies  
2 that were -- were available or were well-known at the  
3 time the VirnetX patents were applied for in 2000.

4           The first of these you've heard about many  
5 times over the past week, the domain name system. Just  
6 to remind you, the domain name system is like a phone  
7 book. You provide a -- a domain name, like Amazon.com,  
8 and what you get back is an IP address, an address that  
9 will let you route packets through the internet.

10           We can remember Amazon.com, but we can't  
11 remember those numbers, and so that's what the DNS does  
12 for us.

13           The second technology is encryption.

14           Oh, by the way, I should mention, DNS was  
15 around at the time the patents were applied for. In  
16 fact, it had been around for a long time. DNS, as we  
17 have it now, was standardized in 1982. There have been  
18 variations since then, but, essentially, DNS, as we know  
19 it, came about in 1982.

20           Encryption, we've also discussed over the past  
21 week. Encryption is the process of taking something  
22 like this slide and rearranging things and confusing  
23 things so that we can't tell what it says anymore.  
24 Basically, encryption makes sure that an unauthorized  
25 person can't read, for example, this slide because it's

1 been encrypted.

2           Encryption has been around for thousands of  
3 years. There were literally Egyptian hieroglyphics that  
4 were encrypted, but more relevant to us, since the very  
5 beginning of the internet and its predecessor networks,  
6 encryption's been used. So I would say the earliest  
7 examples are probably from the late '60s, 1960s.

8           Authentication is the process by which you  
9 prove to a computer that you are who you say you are.

10           So let's suppose that you want to check your  
11 e-mail. You'll type in your user name, and then you'll  
12 provide a password.

13           Well, what you're doing is authenticating  
14 yourself to the mail servers so you can read your mail.  
15 Authentication has been around for a long time, too.  
16 But authentication, as we have it in standard computer  
17 networks, goes back to at least 1975.

18           Https, I think that's been discussed. First,  
19 there's two pieces. The first part is the http. That's  
20 the hypertext transfer protocol. That's how your web  
21 browser gets web pages.

22           The S on the end stands for secure. Https is  
23 a combination of http and an encryption technology,  
24 originally something called SSL, that allows you to  
25 securely go to web sites and buy things like books or

1 shoes or whatever; whatever you're buying, airline  
2 tickets for that matter.

3           Https, again, is two parts. The first part  
4 has been around since 1991, essentially. It was  
5 invented a little before that, but the S part was  
6 invented by Netscape around 1995. So that's been around  
7 for some time.

8           Then finally, VPNs we've discussed those a lot  
9 over the past week. VPNs have been around for some time  
10 as well. And, in fact, prominent examples at the time  
11 the VirnetX patents were applied for included Aventail,  
12 DVPN, and Windows NT using PPTP and AutoDial.

13           Q. All right. Now, when you described https back  
14 before these patents were filed in 2000, was it easy for  
15 a user to get a secure connection using https?

16           A. Yes, it was. And, in fact it was a big deal  
17 that it was easy, because it enabled all the e-commerce.  
18 You know, all those dot-coms that are now such a big  
19 part of our shopping experience, like Amazon, it made it  
20 possible.

21           Q. And for VPNs back before 2000, was it easy for  
22 a user of a VPN to obtain a VPN connection?

23           A. Yes, it was. In fact, several of the examples  
24 I'll talk about will show you that a user could have one  
25 set up automatically.

1 Q. All right. What I'd like to do now, after  
2 discussing the state of the art as of 2000, is shift and  
3 ask you some questions about the patents themselves.

4 MR. BOBROW: And, Your Honor, with your  
5 permission, may I ask the witness to approach the easel?

6 THE COURT: Yes, sir.

7 MR. BOBROW: Thank you, Your Honor.

8 THE WITNESS: Thank you, sir.

9 Q. (By Mr. Bobrow) So, Professor Wicker, what I  
10 wanted to ask you was, could you please describe for the  
11 jury some of the core concepts, core principles that are  
12 involved, first of all, in the '135 patent of VirnetX?

13 A. All right. Well, the '135 patent -- I will  
14 have to come around. I'm left-handed.

15 The '135 patent has three key concepts, and  
16 they're concepts that have been discussed quite a bit  
17 already in Court.

18 The first of the concept of a domain name  
19 request.

20 So I'll write domain name request.

21 And, again, domain name request is part of our  
22 desire to take a name, like Amazon, and turn that into  
23 an address that can actually be used throughout the  
24 packets, something we can't remember, but we can get  
25 through the DNS system.

1           The second piece that I want to point to is  
2 this idea of determination. It's determining that  
3 what's been requested corresponds to a secure website.  
4 So I'll write determine secure website. I won't use  
5 perfect grammar. There's not much room up here.

6           Now, the third part, once a domain name has  
7 been requested and it's been determined that that name  
8 is associated with a secure website, the third part is  
9 the automatic creation of a virtual private network.

10           So I'll write automatic VPN.

11           Those are the three elements, the three key  
12 elements of the '135 patent.

13           Q.    Okay. Now, could I ask you to do the same for  
14 the '180 patent and explain for the jury some of the  
15 core concepts, the core principles underlying the '180  
16 patent.

17           A.    Sure.

18           For the '180 patent, once again, there are  
19 three key concepts. The first is the idea of a secure  
20 computer network address.

21           Now, a secure computer network address is an  
22 address that's associated with a computer that requires  
23 that you have authorization before you can access it.

24           The second key element is a secure DNS, a  
25 secure domain name service. This is a domain name

1 service that associates secure computer network  
2 addresses with secure domain names.

3 And the final piece, the third piece is, once  
4 again, the virtual private network or VPN.

5 Q. All right. Thank you, Professor Wicker.

6 What I would like to do, then, is actually  
7 shift gears -- now that we have some of those core  
8 concepts in place and shift gears and have you answer  
9 some questions about the Aventail software guide and the  
10 Aventail software.

11 So perhaps you could resume the witness stand,  
12 please.

13 A. (Complies.)

14 Q. Now, if you -- if you may, as I understand it,  
15 you may have a slide that shows at least some of this  
16 Aventail software guide that we've discussed.

17 A. Yes. And I think this clicker will -- yes.

18 MR. BOBROW: Perhaps the lights could be  
19 dimmed, if I may.

20 Thank you.

21 Q. (By Mr. Bobrow) So to begin, on the Aventail  
22 Connect software guide, can you please tell us who it  
23 was that developed this software and the accompanying  
24 guide.

25 A. Okay. So this software is developed by a

1 company called Aventail. They were based in Seattle,  
2 Washington, and they did this development of Aventail  
3 from roughly 1996. And we'll talk about the time period  
4 up through 1999.

5 Q. Okay. What problem did the Aventail Connect  
6 software address?

7 A. Well, the problem that they addressed is the  
8 same that the VirnetX patents addressed; namely, finding  
9 a way to communicate securely over an unsecure network,  
10 like the internet.

11 Q. How was the Aventail software used?

12 A. It was used both by road warriors, folks who  
13 were away from home, away from their home office, and  
14 wanted to dial in and have a secure connection so they  
15 could access their files at their main office.

16 It was also used by companies who had branch  
17 offices. You'd literally have two offices that wanted  
18 to communicate using the internet, and so they'd use  
19 Aventail to make that connection secure.

20 Q. Now, in forming your opinion that the Aventail  
21 software guide disclosed all the requirements and all  
22 the limitations of these patents, I'd like you to tell  
23 us, please, what materials you reviewed and studied to  
24 form your opinion.

25 A. Okay. My primary reference was this guide,

1 and that's what I'll be pointing to throughout my  
2 discussion of this material.

3           But I did look at some other references to  
4 make sure I knew what was going on. So that I knew more  
5 about Aventail, basically as much as I could find out.  
6 And as you can see, there are administrator's guides.  
7 I've already mentioned that one. But there's also some  
8 material regarding the ExtraNet Center, a PC Week  
9 article, an InfoWorld article, and an RFC.

10           This RFC -- it's second from the bottom -- is  
11 a request for comments. That's an internet standard.  
12 And this is for SOCKS. SOCKS is an acronym, and it  
13 refers to a secure server. Aventail implements SOCKS.  
14 And then finally, the transcript of Mr. Chris Hopen, who  
15 was familiar with Aventail.

16           Q. All right. Now, is it your understanding that  
17 the Aventail user guide had been distributed in the  
18 United States prior to September of 1999?

19           A. Yes, that's correct.

20           Q. Can you please tell us what your understanding  
21 of that is based on?

22           A. Well, my understanding is that this  
23 administrator's guide was distributed with the software.  
24 And, again, that understanding is based on Mr. Hopen's  
25 testimony.



1 Q. All right. So with that background on  
2 Aventail, what I'd like you to do for the ladies of the  
3 jury is to explain how Aventail works and how it created  
4 connections across the internet.

5 MR. BOBROW: And, Your Honor, to do that,  
6 I would like to ask the witness to have permission to  
7 approach an exhibit on the large board.

8 THE COURT: All right.

9 MR. BOBROW: Thank you.

10 THE WITNESS: Thank you, Your Honor.

11 Q. (By Mr. Bobrow) Okay. So using -- using this  
12 illustrative exhibit of Aventail, first of all, what I  
13 would like you to do is what you have depicted here, and  
14 then show us how the Aventail software worked prior to  
15 the year 2000.

16 A. All right. There are a couple of pieces to  
17 this. I want to start by noting the client, okay?

18 This is someone who's working perhaps in an  
19 office, and they want to make a secure connection  
20 through the internet to a secure website on this end.  
21 And so they're going to use Aventail to do this.  
22 And Aventail is going to support this process through  
23 software on the client, a SOCKS server. Again, Aventail  
24 is basically an implementation of SOCKS.

25 And over on the far end, there will be another

1 SOCKS server.

2           So what's going to happen here is the Aventail  
3 client will try to make a connection to that secure  
4 website, and the first thing we're going to see is a DNS  
5 request.

6           Hard to write on a moving board.

7           But anyway, so this DNS request happens to be  
8 a secure DNS request, because we're trying to get  
9 through to that secure website.

10           Now, at this point, the SOCKS server will  
11 determine that that is, in fact, a secure DNS request.  
12 So we can write determination right here.

13           And in response to that determination, the  
14 SOCKS server will send a response -- and by the way, I  
15 should explain this part here.

16           This configuration tool is what the SOCKS  
17 server uses to determine that this request is, in fact,  
18 for a secure website. It's got its own phone book, and  
19 it's going to look up what's been requested, and it will  
20 see that, oh, wait a second, I need to divert this to a  
21 SOCKS server on the other end of the cloud so that I can  
22 create a secure connection.

23           So that determination is done through a  
24 lookup. There is, then, a response that goes back in  
25 this direction. And at the same time, this server will

1 create a connection, an encrypted tunnel, through the  
2 internet -- see if I can't do a little bit better than  
3 that; there we go -- between those two.

4           So we know we're going to be using the  
5 unsecure resources of the internet for secure  
6 communication. And then on the other end, this SOCKS  
7 server will make a connection to this secure website.  
8 And so now we have a complete connection from the client  
9 all the way to this secure website so that this client  
10 can securely access that secure website.

11           Q. And in describing that connection across the  
12 internet, would you describe that as a VPN?

13           A. Yes.

14           In fact, this is definitely a VPN. In the  
15 references that I'll show, primarily the administrative  
16 guide, will show that it's called a VPN.

17           Q. Okay. Now, once you have created that  
18 connection across the internet, once you've done that,  
19 do you have a network of computers?

20           A. Yes, you do.

21           As you can see right here, there are both  
22 client computers, servers, and all the computers in the  
23 internet. So there's definitely a network of computers  
24 involved in creating this connection from the client to  
25 the secure web address.

1 Q. Thank you.

2 Now, with that background on how the Aventail  
3 software works --

4 MR. BOBROW: And, again, with Your  
5 Honor's permission -- sorry, Professor Wicker. I'm  
6 going to ask you to stand up again.

7 I would like Professor Wicker to again  
8 approach an easel that has simply a board that sets out  
9 the claim.

10 THE COURT: All right.

11 MR. BOBROW: Thank you, Your Honor.

12 Q. (By Mr. Bobrow) Now, first of all, Professor  
13 Wicker, in your opinion, does the Aventail software  
14 guide describe all of the elements of Claim 1 of the  
15 '135 patent?

16 A. Yes, it does.

17 Q. All right. Now, can you please explain why  
18 that's using the materials you've described?

19 A. Okay. What I'm going to do is, I'm going to  
20 show how each of these can be found in the admin guide  
21 by showing you excerpts from the guide so you can match  
22 up the language in the claim to the guide itself.

23 So the first requirement -- it's a little  
24 bright.

25 MR. BOBROW: May I ask the Court to dim

1 the lights, please?

2 A. This is a diagram that actually comes from the  
3 administrator's guide. And you can see it's basically  
4 what I've -- it's trying to draw -- actually, it's hard  
5 to see with the ink on the board.

6 But what I tried to do was recreate this  
7 drawing for you.

8 You see the client communicating with the  
9 server. The server is connected to another server using  
10 this authenticated and encrypted tunnel. You see the  
11 language down there.

12 So we're getting both the privacy and the  
13 security that's required for VPN. So that's a VPN right  
14 there. And then we've got additional connection to the  
15 destination server. So the client talks to the  
16 destination server through a VPN.

17 So we know we're in the right ballpark.

18 The next requirement, the next -- the first  
19 element of the claim is for generating from the client  
20 computer a DNS request.

21 Now, there's some more language here which  
22 I'll get to, but the first thing I want to do is focus  
23 on that part that says generating from the client  
24 computer a DNS request.

25 Now, what I did was I went through the

1 administrator's guide, and I found lots of language like  
2 this. The application does a DNS lookup to convert the  
3 host name to an IP address.

4 So clearly, we have the client computer  
5 generating a DNS request.

6 Well, the next step is to determine whether or  
7 not it's associated with a secure website. So we look  
8 at this language and it says determining whether or not  
9 the connection needs to be redirected to an Aventail  
10 ExtraNet server and/or encrypted in SSL.

11 So the second element of the claim requires  
12 determination. And here we see that very language. And  
13 this is from the administrator's guide. Determines  
14 whether or not the connection needs to be redirected to  
15 an ExtraNet server and/or encrypted in SSL.

16 All right. Then finally, there's one more.

17 Actually -- excuse me -- there's another  
18 piece. I forgot.

19 It has to be with a secure website. A secure  
20 website is part of the claim. So I need to address that  
21 part. And if I look in the administrator's guide, I see  
22 there's explicit reference to websites that can be  
23 accessed through a SOCKS server through an Aventail  
24 server or to get around an Aventail server.

25 So what this language here tells me is that

1 Aventail has explicitly considered web pages, both  
2 secure web pages and web pages that aren't secure.

3           And so one more step: Automatically  
4 initiating the VPN.

5           Well, what we see here is that Aventail is  
6 designed to run transparently. And down here, we see  
7 the language that says Aventail Connect does not require  
8 administrators to manually establish an encrypted  
9 tunnel. Aventail Connect can establish an encrypted  
10 tunnel automatically.

11           So here we see the language calling for  
12 automatic creation of a VPN.

13           So -- I've too much stuff in my hands. Let me  
14 see. Here we go. Excuse me.

15           So what I can do now is I can check off  
16 everything that I've found in the Aventail reference,  
17 and I've shown you there's language that clearly shows  
18 that each and every one of these elements can be found  
19 in that one administrator's guide.

20           Q.    (By Mr. Bobrow) So in your opinion, then, the  
21 Aventail guide anticipates Claim 1 of the '135 patent?

22           A.    Yes, sir; that's correct.

23           Q.    All right. While you're up, I would like you  
24 to now turn to the other claim of the '135 patent, which  
25 are Claims 10 and 12, and compare those claims to the

1 Aventail guide and give us your opinion on whether those  
2 claims are also disclosed by the Aventail guide.

3 A. Okay. What this shows is Claim 10. And Claim  
4 10 has a lot of similar language, but it does require  
5 some definite differences.

6 Claim 10 calls for a DNS proxy server that  
7 does a lot of the things we've already talked about and  
8 shown. So the question, then, is does this  
9 administrator's guide show a DNS proxy server. And I  
10 found that it did. In fact, I've already pointed it  
11 out.

12 This server is acting in this configuration as  
13 a DNS proxy for this client. So it can resolve DNS  
14 requests through that client.

15 The next question is dealing with the language  
16 further on down this particular claim element.

17 Does it return the IP address if access to a  
18 non-secure website is requested?

19 So the question is -- here, is it only for  
20 secure websites, or can it deal with websites that are  
21 not secure?

22 Well, what I found was that when Aventail  
23 receives a host name that is not associated with a  
24 secure website that does not match a redirection rule,  
25 Aventail lets it just go through the stack as if



1 Aventail wasn't there.

2           The TCP/IP stack performs the lookup as if  
3 Aventail Connect were not running. So it treats  
4 Amazon.com just as your system would at home. It just  
5 goes ahead and connects you to Amazon.com without  
6 redirecting you to a server.

7           Q. All right. And so with that and with that  
8 description, did you form an opinion about whether  
9 Claims 10 and 12 of the '135 patent are anticipated by  
10 the Aventail patent?

11           A. Well, there was one more piece here that I did  
12 not cover, so maybe I should mention the rest of what I  
13 did.

14           There's a requirement for a gatekeeper  
15 computer that allocates resources of the VPN. This has  
16 to somehow provide what's needed to establish a VPN.

17           Well, as I've shown you already, this server  
18 helps establish this authenticated and encrypted tunnel.

19           Now, there's been a lot of talk about tunnels  
20 and what-not. This is a VPN, because it provides both  
21 privacy and security as the Court determined was  
22 necessary for a VPN. And it's this server that helps to  
23 create it.

24           And so that server does satisfy this  
25 gatekeeper language.

1           Let's see. Then, I had one more for 12. 12  
2 is a dependent claim that requires everything that's in  
3 this earlier claim, but it's got an added limitation.  
4 The gatekeeper computer also has to determine whether  
5 there are sufficient security privileges, whether the  
6 person who's talking to it is on the list allowed  
7 access.

8           And what Aventail does is it provides user  
9 authentication before allowing access. So that  
10 gatekeeper computer I pointed out, which is a SOCKS  
11 server, does provide authentication services. It  
12 determines whether or not you're allowed to go to that  
13 website or whatever the case may be.

14           And then there's a lot more detail here as to  
15 the kinds of authentication that can be provided.

16           So that box needs to be checked as well.

17           So, again, using the guide, I've shown you  
18 that this element is present; this element is present  
19 (indicates). And that's Claim 10.

20           And since Claim 10 is covered, I just have to  
21 have this extra part here. And that takes care of Claim  
22 12.

23           So I've read Claims 10 and 12 on the Aventail.

24           Q. And you reviewed the Aventail administrator's  
25 guide, Claims 10 and 12 of the '135 patent?

1 A. Yes.

2 Q. Now, the final set of claims at issue are from  
3 the '180 patent. And what I'd like you to do is to  
4 please walk us through those claims and compare them to  
5 the Aventail guide.

6 A. All right. I just remembered before they take  
7 this away, I should write Aventail on it.

8 Okay. So this is -- these are Claims 1, 4,  
9 and 15 of the '180 patent, and as you can see here,  
10 Claim 1 requires a method for accessing a secure  
11 computer network address.

12 Well, as we've seen, the administrator's guide  
13 talks about accessing sites that require user  
14 authentication before allowing access. So that's how  
15 the Court defined a secure computer network -- secure  
16 computer, one that requires authorization before you can  
17 get to it.

18 Well, there's the discussion of the  
19 authorization or authentication before you can get  
20 access.

21 And once again, there are the various means by  
22 which those authentication protocols have been  
23 implemented by SOCKS servers.

24 Now, these next two parts I've combined.  
25 We've got sending a query message to a secure domain

1 name service, and then receiving from a secure domain  
2 service a response message containing the secure  
3 computer network address.

4           Okay. So receiving and sending, I've already  
5 shown that if the destination host name matches a  
6 redirection rule, there's a redirection of that request.  
7 So the secure computer network address is received here,  
8 recognized as requiring a secure connection, and then  
9 right here we see that the Aventail Connect forwards the  
10 host name to the SOCKS server.

11           So we have receipt, processing, and  
12 forwarding, receiving, and sending a secure domain name.

13           The next requirement for receiving was  
14 receiving a response message. So what's required here  
15 is receiving a response message containing the secure  
16 network address.

17           All right. So what happens here is that  
18 Aventail sends the domain name. That's what that  
19 means -- fully qualified host name; that's another way  
20 we talk about domain name -- to the SOCKS server with  
21 the SOCKS connection request.

22           Now, I've highlighted the SOCKS connection  
23 request, because that is an official standardized  
24 request. And so to know what the response is, we simply  
25 have to know what the standard says. And the standard

1 says in reply to a connect, we send a response that  
2 includes the associated IP address.

3           So that associated IP address right there is  
4 exactly the address that's being called for right here,  
5 okay?

6           And then finally, the last piece is sending an  
7 access request message. Sending an access request  
8 message using a VPN.

9           Here, you see that you can use Aventail  
10 Connect as a simple proxy client for managed outbound  
11 access.

12           So there is the access we're talking about in  
13 this claim limitation. And that access, outbound  
14 access, is through an encrypted tunnel. Aventail  
15 Connect can establish an encrypted tunnel automatically.

16           So all the pieces are there for Claim 1.

17           Q. And what about for Claims 4 and 15?

18           A. Well, we go to Claim 4 and, once again, it's a  
19 dependent claim. So it's saying we got to have some  
20 other stuff other than what's in Claim 1.

21           Claim 1 has to be satisfied, but we also have  
22 to have this added piece wherein the response message  
23 contains provisioning information. So there's got to be  
24 something else besides just that IP address.

25           Well, the SOCKS standard tells us that not

1 only does the response include the IP address, but it  
2 includes a port number.

3           Okay. A port number is basically an  
4 identifier. It says when you receive this packet, you  
5 should pass it on to this particular software process.  
6 It's additional information besides the IP address that  
7 tells you what to do with the packet.

8           So it's additional information for  
9 provisioning the virtual private network that's created  
10 as you can -- well, you might be able to see over there.  
11 It faded on me.

12           All right. Then finally, Claim 15, the method  
13 of Claim 1, while I've shown you that all of Claim 1 is  
14 satisfied, performed by a client computer.

15           All right. So once again, we look at this  
16 proxy chaining implementation, and I want you to note  
17 that Server 1 appears as a user to Server 2. So what  
18 this is saying is that Server 1 is a client to Server 2.  
19 And so Server 1 is acting as a client with respect to  
20 Server 2, when it's performing those steps.

21           And so I can check off that box, too.

22           Q. All right. And would you do so, please?

23           A. All right. So I showed in the Aventail guide  
24 that that element is satisfied. That element is  
25 satisfied (indicates), receiving, sending.

1 All of Claim 1, the provisioning information  
2 for Claim 4, and the client computer requirement for  
3 Claim 15.

4 Once again, I'll try to write Aventail on  
5 this, if I can.

6 Q. So in your view, Professor Wicker, does the  
7 Aventail guide disclose all of the elements of Claims 1,  
8 4, and 15 of the '180 patent and anticipate it?

9 A. Yes, it does.

10 Q. All right. Now, we know from the week's  
11 proceedings that there are other claims involved with  
12 the '180 patent. Those would be Claims 17, 20, 31, 33,  
13 and 35.

14 Now, can you please walk us through those  
15 claims and give us your opinion on whether they, too,  
16 are anticipated by Aventail?

17 A. Yes.

18 Claim -- Claims 17, 20, and 31 are associated  
19 with a computer readable storage medium.

20 Well, when I looked in the admin guide, I  
21 found a discussion of delivering the software on CD ROMs  
22 and loading that software on to a computer. Well, once  
23 it's on the computer, it's stored on a hard disk, and  
24 that hard disk is certainly a computer-readable storage  
25 medium, because it's the hard disk in your computer that

1 stores all of your programs. It has to be readable or  
2 you couldn't open your web browsers or open your Word  
3 documents or whatever.

4 Q. Now, do you need to go through and show the  
5 jury all the remaining language there in Claim 17, 20,  
6 and 31 after the discussion you've already had?

7 A. No, because if you look at all of this claim  
8 language, it's exactly what we've covered before. It's  
9 very much like Claim 1. It's simply -- instead of a  
10 series of steps, it's associated with this  
11 computer-readable storage medium.

12 And similarly, Claim 20 looks like Claim 4,  
13 and Claim 31 looks like Claim 10.

14 Q. So in your opinion, does the Aventail guide  
15 disclose all the elements of Claims 17, 20, and 31 of  
16 the '180 patent and anticipate them?

17 A. Yes, it does.

18 Q. Now, please turn to Claims 33 and 35. And  
19 please explain for us whether Aventail anticipates these  
20 claims.

21 A. Okay. Well, these are, again, a different  
22 type of claim, different flavor.

23 What's being called for here is a data  
24 processing apparatus, and then there's a lot of steps  
25 required of that apparatus. It has to have memory



1 storing executable instructions and so forth.

2 Well, reading all that, basically what it's  
3 calling for is a computer. It's saying, well, you need  
4 a computer that does these things. And, of course,  
5 that's exactly what the Aventail admin guide describes.

6 Servers, as we see here, that when loaded with  
7 the software do these things as well as the client's  
8 here and here.

9 So Claim 33 is satisfied, because we have  
10 computers that are doing steps from Claim 1.

11 And then 35 has the additional requirement  
12 that it contain provisioning information. We talked  
13 about that. 35 is simply a version of Claim 4, except  
14 that it's to run on a computer. It's not just a step.

15 Q. So in your opinion, does the Aventail guide  
16 disclose all of those elements of Claims 33 and 35 and  
17 therefore anticipate them?

18 A. Yes.

19 Q. All right. Professor Wicker, at this point,  
20 why don't I ask you to take the stand again, because I  
21 want to shift from Aventail to the DVPN, or Dynamic VPN,  
22 demonstration that's been talked about some already this  
23 week.

24 A. (Complies.) Thank you.

25 Q. So if I may ask you, Professor Wicker, to show

1 a picture, and I believe you may have one, of some  
2 information about DVPN.

3 Now, who was it that developed DVPN?

4 A. DVPN was developed by TIS, Trusted Network --  
5 Trusted Information Systems. You can see that right  
6 there, sort of.

7 It's a company that was in Glenwood, Maryland,  
8 outside of D.C.

9 Q. And who was it that was funding the  
10 development by TIS of DVPN?

11 A. DARPA.

12 Q. What was it that DVPN was designed to do?

13 A. It was designed to provide secure access over  
14 an unsecure network, like the internet.

15 Q. And can you provide for us some scenarios that  
16 were envisioned for DVPN to provide those connections?

17 A. Yes. In fact, it would be the same scenarios  
18 we talked about with regard to Aventail.

19 For example, the road warrior, the person  
20 who's on the road, needs to connect to the office, and  
21 the situation in which you have two offices that want to  
22 connect with each other.

23 Q. Now, in the development of DVPN, was DARPA  
24 interested in applications for DVPN that involves  
25 something that is sometimes called crisis management?

1           A.    Yes.  One of the specific concerns for DARPA  
2 was being able -- and for DVPN and Trusted Information  
3 Systems, was being able to link the various crisis  
4 management organizations, like the Red Cross and FEMA,  
5 for example, so that, for example, folks in the Red  
6 Cross could access the FEMA databases and websites and  
7 be able to determine things that they needed quickly to  
8 deal with a crisis.

9           Q.    All right.  Now, from the materials that you  
10 reviewed, perhaps we can take a look at those first.  
11 Did you have a chance to read some materials about DVPN  
12 in forming your opinion?

13           A.    I did.  There were quite a number of things I  
14 looked at.

15                    One I focused on in this analysis was an  
16 actual demonstration of DVPN.  Basically, DARPA had a  
17 number of people together, but the folks at TIS  
18 demonstrated DVPN for DARPA.  And that was my main  
19 focus.

20                    And in learning about that demonstration, I  
21 looked at a number of different things.

22                    First, we have the presentation that described  
23 the demo, and then there were several e-mails.  There  
24 was another description of the demonstration, a  
25 contractor's progress report.  I was able to see the

1 source code that actually showed how it worked.

2 And I also studied the deposition transcripts  
3 of three people who were involved in DVPN.

4 Q. And from your review of that material, when  
5 was it that DVPN was demonstrated for DARPA?

6 A. It was demonstrated for DARPA in March of  
7 1998.

8 Q. All right. Thank you.

9 Now, similar to what you did for Aventail,  
10 what I would ask you to do, using an illustrative  
11 exhibit of this type, is to explain for the jury how the  
12 DVPN demonstration worked back in 1998.

13 THE WITNESS: May I leave the stand?

14 MR. BOBROW: Your Honor, may I please ask  
15 permission for the witness to approach?

16 THE COURT: All right.

17 MR. BOBROW: Thank you.

18 THE WITNESS: Thank you, Your Honor.

19 Q. (By Mr. Bobrow) Okay. Professor Wicker, if  
20 you could, explain for us how the DVPN system worked  
21 back in 1998.

22 A. Okay. DVPN, once more, means Dynamic VPN.  
23 And the DVPN developers assumed a situation in which  
24 someone, for example, on the Red Cross that were working  
25 on the Red Cross local area network wanted to talk to

1 someone or communicate with a database or see a secure  
2 website on the FEMA local area network.

3           Just to remind you, FEMA is the Federal  
4 Emergency Management Agency. They are the folks that  
5 respond to disasters, along with the Red Cross and  
6 others.

7           So DVPN assumed that the Red Cross would be  
8 behind a firewall as we see here, and that FEMA would be  
9 behind a firewall. And so we have several different  
10 elements that are going to interconnect to allow for  
11 secure communication over the internet.

12           So the first thing that happens, let's suppose  
13 the Red Cross client computer wants to see a secure FEMA  
14 website. A DNS request -- a secure DNS request will be  
15 sent to the firewall.

16           The firewall will then send a message to a  
17 coalition manager to determine whether or not this  
18 connection request is involved with something called a  
19 secure association, whether or not it requires a secure  
20 VPN.

21           So that request will go like this down here.  
22 And then the coalition manager will respond with, yes,  
23 this does require a secure connection. At that point, a  
24 response will be sent to the client, and this firewall  
25 will set up a secure VPN with this firewall through the

1 internet.

2           So let's see if I -- as you see there.

3           And then the connection will be completed on  
4 the far side of the firewall with the FEMA secure  
5 website.

6           And so now the Red Cross client can speak with  
7 or view the secure website at FEMA.

8           Q. All right. Now, a couple of questions for  
9 you.

10           First, you've drawn this thick arrow, as it  
11 were, through the internet. What do you intend to  
12 depict with that thick arrow?

13           A. This is the VPN; it's a secure connection.

14           Q. All right. Now, on the board and in your  
15 testimony, you refer to a firewall.

16           Do you see a firewall for Red Cross and a  
17 firewall for FEMA? I know what a firewall is in my  
18 house, but can you please explain for us in this context  
19 what a firewall is?

20           A. Okay. The name firewall actually comes from  
21 cars. You've got a firewall that protects the passenger  
22 and the driver from the heat of the engine and anything  
23 bad that could happen with that engine -- most anything  
24 bad.

25           So the firewall in this case is something that

1 protects the people on the Red Cross network from  
2 hackers who might be coming in over the internet.

3           So it's a firewall that's designed to protect  
4 them. Basically, a firewall limits traffic in both  
5 directions. Only authorized traffic can come through  
6 this way or go through that way.

7           Q.    Okay. Now, sir, earlier, you had testified  
8 that the DVPN system demonstrated in 1998 anticipated  
9 claims of the patents at issue here.

10           What I'd like you to do, as you did with  
11 Aventail, to walk through and describe for the jury how  
12 it is a DVPN discloses the elements of the '135 and '180  
13 patents.

14           MR. BOBROW: Your Honor, may the witness  
15 approach the other easel?

16           THE COURT: Yes, he may.

17           MR. BOBROW: Thank you.

18           A.    Okay. So, once again, going through the  
19 claims, Claim 1, as you can see, requires a method for  
20 transparently creating a VPN.

21           Now, this diagram, what we're going to see a  
22 fair number of times, that's actually what I tried to  
23 reproduce over here, although it's not as clear over  
24 here as it is up here.

25           This diagram shows establishing a VPN. Okay.

1 This is a diagram that's from the literature I looked at  
2 that describes the demonstration from March of 1998.

3           Okay. So looking into the actual claim  
4 elements, the first claim element requires generating  
5 from the client computer a DNS request.

6           Well, when I looked at the documents, I found  
7 that the firewall, F-W, for the Red Cross system, the  
8 Red Cross firewall performs a lookup of the host name on  
9 the FEMA network and receives the IP address. That's a  
10 description of the DNS lookup in the response.

11           The next element, determining whether the DNS  
12 request is for a secure website.

13           Well, one of the things that I found in the  
14 literature was that after that lookup request is  
15 received, the system determines whether the site itself  
16 are members of same coalition.

17           Coalition is a secure association, whether  
18 you're part of a group, that can only communicate over a  
19 secure VPN.

20           The reference to a website, I determined that  
21 websites were accessible through this system through the  
22 testimony of Mr. Kindred. Mr. Kindred was involved with  
23 VPN -- DVPN -- excuse me -- and he talked a lot about  
24 web browsers and so forth.

25           Finally, the automatic initiation of a VPN,



1 well, that was referenced in a number of places. I'll  
2 simply point to this one as part of this demonstration,  
3 they showed the automatic activation of a VPN link.

4 So all the elements were there.

5 Q. (By Mr. Bobrow) So in your opinion, were all  
6 elements of Claim 1 through -- I'm sorry -- Claim 1 of  
7 the '135 patent matched by VPN and therefore  
8 anticipated?

9 A. They were. I showed the generation of a  
10 domain name request. I showed the determination of  
11 whether or not that request is associated with a secure  
12 website. And I showed a response on which VPN is  
13 automatically created.

14 Q. I think you have written Aventail on the top  
15 of that board.

16 A. Yes, that's a mistake. Of course, I'm  
17 referring to -- whoops, it's not coming off either. So  
18 let me get this correct. I'm sorry. I've, obviously,  
19 been referring to DVPN throughout. I was trying to  
20 write it neatly and forgot what I was writing. There we  
21 go.

22 Q. All right. Well, thank you, Professor Wicker.

23 Let's turn to the next set of claims in the  
24 '135 patent. That's Claims 10 and 12. And I'd like you  
25 to explain for us how it is that DVPN describes all of

1 these elements of those two claims.

2 A. Okay. Once again, there's a lot of the  
3 material here, but a lot of it we've already discussed.  
4 So when we come to Claim 10, the first thing to look at  
5 or look for that's different from Claim 1 is the  
6 presence of a proxy server, one that provides the DNS  
7 lookups as a proxy.

8 And that's actually what the firewall does.  
9 It sends a DNS request as you can see here.

10 Does that proxy return an IP address, if  
11 access to a non-secure website is requested?

12 This is code -- actual code from the DVPN  
13 system, and it's a little hard to see, but right here --

14 THE WITNESS: Can we blow it up a teeny  
15 bit? Is that possible? Maybe not.

16 A. But I'll read it to you. It says: Send back  
17 the response to the computer.

18 That's the -- that's the piece of code that  
19 returns that IP address if it's a non-secure address.

20 THE WITNESS: Thank you.

21 A. Yeah. Now you can see it very nicely. Send  
22 back the response to the requester.

23 THE WITNESS: Thanks.

24 A. Okay. Claim 10 also requires a gatekeeper  
25 computer. The gatekeeper computer allocates resources

1 for setting up the VPN. That's what the firewall's  
2 doing here. It's establishing a VPN between this  
3 firewall and this firewall (indicates).

4 And this is a little hard to see, but it says  
5 encrypted traffic, if I remember correctly.

6 All right. So then, finally, for Claim 12,  
7 the gatekeeper has to determine whether there are  
8 sufficient security privileges.

9 Well, once again, I showed you that a DVPN,  
10 that firewall, acts as a gatekeeper by determining  
11 whether the site itself are members of the same  
12 coalition, whether you and the site you're trying to  
13 access are part of a secure association.

14 And so that claim element is met as well.

15 Q. (By Mr. Bobrow) Okay. So, Professor Wicker,  
16 would you then -- in your opinion, does the DVPN system  
17 disclose all the elements of Claims 10 and 12 of the  
18 '135 patent and thus anticipate it?

19 A. Yes. And I showed the DNS proxy server,  
20 discussed all these other issues when talking about  
21 Claim 1, and I've discussed the gatekeeper, and then I  
22 showed how the gatekeeper determines sufficient security  
23 privileges.

24 And this time I'll get it right.

25 Q. Let's now turn to the '180 patent and go

1 through, to begin with, Claims 1, 4, and 15 of that  
2 patent.

3           And would you please compare those claims to  
4 the DVPN demonstration and tell us your opinion about  
5 whether the demonstration discloses all of these  
6 elements.

7           A.    Okay.  So now for the '180 patent, again, a  
8 method for accessing a secure computer network address.  
9 As you can see here, the attempt is to access a secure  
10 computer network address on this FEMA LAN.  And we see a  
11 method embodied in all of these various steps that  
12 result in the establishment of a VPN.

13           So we know we're talking about the right sort  
14 of thing.

15           Now, when we go to the actual claim elements,  
16 the first is, receiving a secure domain name and then  
17 the sending.

18           Now, once again, I've combined the two, so you  
19 can see them on one slide.  Here we have causing a DNS  
20 query by the host on Red Cross network.

21           So there is the transmission of a DNS query.  
22 It's received by the firewall, and then the firewall  
23 resolves it, as we've discussed here, returning an IP  
24 address.

25           The firewall, FW, performs a lookup and

1 receives the IP address as a response. So the firewall  
2 receives it, sends it, and obtains the response.

3 And a little more detail here. Sending a  
4 query message to a secure domain name service and  
5 receiving a response.

6 Well, the secure domain name service in this  
7 instance is the coalition manager that's resolving the  
8 request sent down by the firewall.

9 So the firewall has received the domain name.  
10 It attempts to resolve it by sending it down to this  
11 secure DNS.

12 Now, how do I know it's a secure DNS? Well,  
13 it associates domain names with addresses that require  
14 secure connections.

15 Then finally, sending an access request  
16 message using a VPN. Well, as I've already noted,  
17 there's rapid automated VPN, and it provides special  
18 access rights for community members.

19 So there's the access that's being talked  
20 about in Claim 1 through that automated VPN.

21 Q. Then what about Claims 4 and 15?

22 A. All right. Well, Claim 4, once again,  
23 requires provisioning information.

24 Now, at least for my eyes, this is a little  
25 hard to see, but the provisioning information you can

1 see down here (indicates).

2 THE WITNESS: Can you blow that up right  
3 there? Well, I can tell you what it says. I've seen it  
4 before. There we go.

5 A. It says: Key or certificate. Actually, it's  
6 still kind of hard to read, but basically what that is,  
7 that's information.

8 Those are keys or something like keys that  
9 allow us to create an encrypted connection between the  
10 firewalls. So key or certificate, basically secret keys  
11 that can be used in encryption and decryption.

12 And that's part of the response that comes  
13 back up to the firewall. And the firewall can then  
14 establish an encrypted connection with the other  
15 firewall.

16 And then finally, Claim 15 calls for all of  
17 this to be done by a client computer. Well, again, this  
18 firewall is acting as a client both to the coalition  
19 manager and to this firewall. And I've shown that it  
20 has executed all the steps that are required here.

21 Q. (By Mr. Bobrow) All right. Now, why don't we  
22 turn to the remaining claims of the '180 patent, Claims  
23 17 and 21 and -- I'm sorry -- 20 and 31 and also 30 and  
24 35.

25 A. Okay.

1 Q. And I think you may have a slide on that.

2 A. Let's get my checkmarks in.

3 And then I do have slides for the remaining  
4 claims.

5 This particular set of claims, 17, 20, and 31,  
6 once again, deals with computer-readable storage medium.  
7 And this, once again, would be the hard disk and the  
8 demonstration that contain the code that caused all  
9 these things to happen.

10 And, again, 17 is like 1; 20 is like 4; and 31  
11 is like 10 with the exception that instead of steps, we  
12 are dealing with the computer-readable storage medium.  
13 And so these would be anticipated as well by the  
14 demonstration.

15 Q. And what about Claims 33 and 35?

16 A. Okay. And 33 and 35 -- lost my pointer --  
17 once again, a data processing apparatus containing all  
18 these things. It's a computer or a set of computers  
19 that do the things -- the steps in Claim 1.

20 And of course, the DVPN demonstration involved  
21 a lot of computers that were talking to each other to  
22 create this secure connection.

23 Claim 35, again, simply requires the  
24 provisioning information like Claim 4.

25 Q. All right. So in your opinion, Professor

1 Wicker, does the DVPN demonstration from 1998 disclose  
2 all of the elements of the claims of the '180 patent and  
3 thus anticipate them?

4 A. All the asserted claims of the '180 and the  
5 '135, yes.

6 Q. All right. Thank you.

7 Now, if I can ask you to return to the stand,  
8 I would like to now show you the third and the last  
9 reference that we're going to go through, the last piece  
10 of prior art, which is the NT 4 system with PPTP and  
11 AutoDial.

12 A. (Complies.)

13 Q. Now, can you please begin by telling us what  
14 the NT 4 software was.

15 A. Okay. NT 4 was an operating system. It was  
16 sold by Microsoft in the '90s.

17 Q. All right. And was the NT 4 system broadly  
18 available in the United States before 1998?

19 A. Yes. NT 4 system was made for sale, sold from  
20 1996 through the '90s and was widely available.

21 Q. Did the NT 4 operating system include  
22 networking software?

23 A. Yes, it did.

24 Q. What networking software did it include that  
25 pertains to VPNs?



1           A.     Well, as has been discussed, it included  
2 AutoDial and the point-to-point tunneling protocol.

3           Q.     All right. And tell us, please, what PPTP  
4 was, and essentially, what it did.

5           A.     Okay. PPTP, again, is the point-to-point  
6 tunneling protocol. What it did was provide a secure  
7 encrypted tunnel between two points.

8                     And in many configurations, it would provide  
9 what we're calling a VPN in the sense that it provided  
10 both anonymity and security.

11          Q.     All right. And what about AutoDial that was  
12 in NT 4? Can you tell us, please, what AutoDial did in  
13 the NT 4 system back in the 1990s? I think you said  
14 1996 and forward.

15          A.     That's correct.

16                     What AutoDial was, it was a way of getting  
17 automatic connections. In the really olden days, you  
18 had to actually tell your modem to connect.

19                     Well, AutoDial made that automatic, and it  
20 also made automatic connections to other kinds of  
21 networks besides modem connections.

22          Q.     Now, I know that you've had a chance to review  
23 some materials about NT 4 and PPTP and AutoDial. Can  
24 you briefly tell the jury what materials you had a  
25 chance to review?

1           A.     Sure.  I made a list, and there's actually a  
2 fair amount.

3                     I looked at the software, and I also looked at  
4 a number of documents that told me how it worked,  
5 focusing on AutoDial and PPTP.

6                     So you see a technical support for hands-on,  
7 self-paced training server, virtual private networking,  
8 Microsoft Windows NT server, installing, configuring,  
9 and using PPTP.  I spent some time with that one.

10                    There's a server administrator's guide, a  
11 server virtual private networking guide, and then  
12 finally, the deposition testimony of Mr. Anthony  
13 Discolo.

14           Q.     All right.  Now, with the Court's permission,  
15 I'd ask you to, again, approach the easel, and using a  
16 board to please walk through how it was that the NT 4  
17 system with PPTP and AutoDial worked.

18                    MR. BOBROW:  Your Honor, may the witness  
19 approach?

20                    THE COURT:  Yes, he may.

21                    MR. BOBROW:  Thank you very much.

22           A.     (Complies.)  Okay.  So this is, again,  
23 Microsoft NT 4 operating system point-to-point tunneling  
24 protocol, VPN, with AutoDial.

25                    All right.  So, once again, we'll start with

1 our client. And the client wants to obtain access to a  
2 secure website. So the client will send a DNS request  
3 to a tunnel client in this case -- excuse me. I skipped  
4 a step.

5 Let's start with the client simply assuming  
6 he's connected. And so the first thing the client will  
7 do is attempt to contact a DNS server, okay, with a DNS  
8 request.

9 I want to assume that that didn't work, so  
10 there was an attempt to contact a DNS server down here,  
11 and it didn't work.

12 So what happens in NT 4 is that when things  
13 don't work, it keeps looking for other solutions,  
14 looking for other ways to connect.

15 So the next step in my scenario here would be  
16 to send that DNS request -- and I'm assuming it's  
17 secure -- send that DNS request to this server here  
18 (indicates). It's a tunnel client that's running NT 4.  
19 Well, that tunnel client is going to determine that this  
20 request is associated with a secure website.

21 It will then respond to the client, providing  
22 the information necessary, and it's then going to create  
23 a tunnel through the internet to another server, and  
24 then this tunnel server will provide the access to the  
25 secured website.

1           So what we'll then have is a connection from  
2 the client to the tunnel server, a tunnel through the  
3 internet, a tunnel that constitutes a VPN, because it  
4 provides anonymity, and it provides security.

5           At the other end, the tunnel server will pass  
6 on the traffic, the request for information, to this  
7 secure website, and this secure website can then respond  
8 with a web page to the client through the VPN.

9           Q.     (By Mr. Bobrow) All right. Now, in the -- a  
10 couple of questions for you.

11           First of all, you said that when the client  
12 initially sends out a DNS request, it failed. How might  
13 that happen?

14           A.     There are a number of ways that can happen.  
15 One of the most common ways it can happen is, there is  
16 no connection.

17           In other words, suppose we've got a system  
18 that's not yet hooked up to the internet. What happens  
19 then is, when the client tries to resolve a DNS -- a  
20 domain name through a DNS request, it can't get there.  
21 So this failure could be because there's no connection.  
22 Other reasons as well, but that's one that's common.

23           Q.     All right. Now, in the upper left portion,  
24 there seems to be a window or a representation of a  
25 window that a user of a computer might use, and

1 underneath -- and above it, it says AutoDial.

2           Could you please tell us what is depicted in  
3 that portion of this illustrative exhibit?

4           A.    Okay.  Well, this is a page from the phone  
5 book.  In fact, it literally -- I don't think you can  
6 read it from this far away, but it says:  Edit phone  
7 book entry.

8           And what this is, is an entry in a table that  
9 in this scenario, the tunnel client's going to use to  
10 determine how to make the connection.

11           And so what happens in this case is the tunnel  
12 client's looking up this secure DNS request, and the  
13 tunnel client finds it.  This entry name is  
14 PPTPserver.mycompany.com, okay?

15           The tunnel client finds that name and then  
16 uses this information to see how it's supposed to  
17 connect.

18           Well, in this case, it says, you have to  
19 connect using an adapter that's called RAS/PPTP/M.  So  
20 that PPTP means it's going to be a tunneling VPN  
21 connection to this particular website.

22           Q.    All right.  Thank you.

23           Now, what I'd like you to do is what you've  
24 done before for the two other references, is to walk us  
25 through the claims of the '135 patent and the '180

1 patents and explain for us how -- explain for us your  
2 opinion about NT 4 PPTP with AutoDial and whether it  
3 discloses all of the elements of these asserted claims.

4 MR. McLEROY: Your Honor, may we  
5 approach?

6 THE COURT: Yes, you may.

7 (Bench conference.)

8 MR. McLEROY: This isn't in his  
9 description, Windows NT 4 and AutoDial. His report was  
10 like Mr. Pall's deposition -- or excuse me -- Mr. Pall's  
11 demonstration where there are four computers.

12 Dr. Wicker has never disclosed a system  
13 that has the five computers that are demonstrated on  
14 this graphic here.

15 We would, I assume, have made our  
16 objections earlier, and we just got those demonstratives  
17 late this morning, and I didn't notice it until just  
18 now.

19 MR. BOBROW: Well, that's not correct,  
20 Your Honor. In his report, there is a picture that has  
21 these four computers with the internet in between, and  
22 we'd be happy to provide you and show you what that  
23 picture looks like, but that is in his report.

24 THE COURT: Get that, if you would, and  
25 let me see it.

1 MR. BOBROW: Okay. Thank you.

2 MR. McLEROY: May I grab a copy of the  
3 report, also?

4 (Bench conference concluded.)

5 THE COURT: Ladies of the Jury, this is  
6 going to take just a minute, so I think we'll go ahead  
7 and the take our afternoon break at this time, give you  
8 a chance to refresh yourselves a little bit.

9 We'll be in break until 3:00 o'clock.

10 COURT SECURITY OFFICER: All rise for the  
11 jury.

12 (Jury out.)

13 THE COURT: You may be seated.

14 All right. Y'all find what you need.  
15 I'll be back in shortly before the recess.

16 COURT SECURITY OFFICER: All rise.

17 (Recess.)

18 (Jury out.)

19 COURT SECURITY OFFICER: All rise.

20 THE COURT: Please be seated.

21 All right. Now, what's our objection?

22 MR. McLEROY: The objection, Your Honor,  
23 is that the testimony of Dr. Wicker is about to go into  
24 exceeds the scope of his report.

25 THE COURT: Uh-huh.

1 MR. McLEROY: And we have two specific  
2 problems with the --

3 THE COURT: Can you turn that a little  
4 more to where I can see it?

5 MR. McLEROY: Yes, Your Honor.

6 THE COURT: Okay. That's good. Thank  
7 you.

8 MR. McLEROY: I think we can identify two  
9 specific problems we have with this description of the  
10 Microsoft NT 4 prior art.

11 First is that any embodiment of this  
12 Windows prior art with a tunnel client and a tunnel  
13 server, it was only disclosed once in Dr. Wicker's  
14 expert report, and that was in the context of Claim 12  
15 of the patent.

16 It appears that Dr. Wicker is about to  
17 show how this embodiment invalidates Claim 1, and I  
18 presume he's going to do every claim of the '135 patent  
19 and '180 patents like he's done for the past prior art.

20 THE COURT: It's only addressed to  
21 Claim 12.

22 MR. McLEROY: Yes.

23 And the second issue we have, Your Honor,  
24 is that there's nothing in the report that ever says  
25 that AutoDial works with the tunnel client/tunnel server



1 description of the prior art, which is actually referred  
2 to, I believe, as the ISP/FEP tunnel arrangement. It's  
3 a separate internet service provider I don't believe  
4 that's even part of Windows.

5 THE COURT: Okay. Response?

6 MR. BOBROW: Yes, Your Honor.

7 So, first of all, what Dr. Wicker is  
8 doing right now with this board is essentially  
9 describing the basic functionality of it. It was not  
10 intended to be a specific implementation but an overview  
11 of how the technology works.

12 Secondly, we did disclose in here a  
13 figure that shows client and what's called a tunnel  
14 client, and then the internet and a tunnel server on the  
15 other side, and that is disclosed.

16 The third thing is, is that Dr. Wicker, I  
17 think, was explaining, this tunnel client, as it's  
18 called there, can live, as it were, in many different  
19 places. It can live, for example, in the client and be  
20 part of the client.

21 So sometimes these -- when you're  
22 depicting these things rapidly, you can depict them as  
23 boxes or monitors or whatever, but the point is that  
24 it's software, and that software functionality is  
25 described.

1 Dr. Wicker disclosed in his report, and I  
2 just put Post-It notes on the places in his report where  
3 he went through this system and talked about AutoDial  
4 and talked about how it works, and this is simply one  
5 way to do it.

6 It would be very difficult to have the  
7 expert disclose and describe every, every single way  
8 that it works. It was simply as an overview of the  
9 technology.

10 And what he's going to do is what he did  
11 before, which is walk through the claims, citing  
12 specific pieces of evidence, and compare those to -- to  
13 the claims that have been asserted.

14 MR. McLEROY: I guess two points, Your  
15 Honor.

16 First of all, I didn't hear him disagree  
17 that this tunnel client/tunnel server was only disclosed  
18 in the context of Claim 12, which I believe to be the  
19 case.

20 And I can't remember what the second  
21 point I was going to make, Your Honor, but I will stick  
22 with that one.

23 THE COURT: Okay.

24 MR. BOBROW: Your Honor, if I may.

25 Even if it were only for Claim 12, he can still

1 illustrate this point. Again, he's not saying that, all  
2 right, this is something that is the only way to do  
3 something. He's giving an example of how AutoDial and  
4 the NT 4 system worked.

5 That's all he's doing. He will show  
6 specific evidence for specific claims.

7 THE COURT: Well, can he do it without  
8 using that chart?

9 MR. BOBROW: Well, I think that he can.  
10 We would certainly want to have it marked as an  
11 illustrative, but -- but even without that, he can  
12 certainly walk through the evidence that he presented in  
13 his report and do that on a claim-by-claim basis as he  
14 did the last time. And he's certainly prepared to do  
15 that.

16 THE COURT: What's your objection to  
17 that?

18 MR. McLEROY: Well, Your Honor, just that  
19 his report does not disclose AutoDial being used with  
20 the tunnel client/tunnel server embodiment that's shown  
21 there.

22 THE COURT: And you say it does?

23 MR. BOBROW: I do say that it does.

24 THE COURT: All right. Bring it up and  
25 let me see where it's at.

1 MR. McLEROY: Your Honor, I remember my  
2 other point, if you're still interested.

3 THE COURT: All right.

4 MR. BOBROW: I'm sorry, Your Honor. I  
5 thought you asked to approach.

6 THE COURT: All right. Let's see.  
7 Okay. What is your response to this?

8 MR. McLEROY: Your Honor, that -- let me  
9 show you the page before, Your Honor.

10 May I approach?

11 THE COURT: Yes.

12 MR. McLEROY: So, Your Honor, this is the  
13 entire discussion of Claim 12 of the '135 patent. This  
14 is the only place in Dr. Wicker's report where a  
15 discussion of a tunnel client and tunnel server appears.  
16 And the word AutoDial -- the context of AutoDial is not  
17 mentioned anywhere in that section.

18 MR. BOBROW: But it is mentioned, Your  
19 Honor, in the preceding claim, Claim 10, and the  
20 discussion of Claim 12, of course, is dependent on 10.  
21 And he talks about AutoDial expressly in Claim 10.

22 THE COURT: Okay. Objection's overruled.

23 MR. BOBROW: Thank you, Your Honor.

24 THE COURT: Bring the jury in.

25 COURT SECURITY OFFICER: All rise for the

1 jury.

2 (Jury in.)

3 THE COURT: Please be seated.

4 All right. Counsel, you may proceed.

5 MR. BOBROW: Thank you, Your Honor.

6 Q. (By Mr. Bobrow) I believe before the break,  
7 where we had left off was, Professor Wicker, I was about  
8 to ask you to help to explain for us the NT 4 system  
9 with PPTP and AutoDial and to walk through the claims of  
10 the '135 patent, starting with Claim 1, and describe for  
11 us what your opinion is on whether or not the NT 4  
12 system with AutoDial and PPTP discloses the elements of  
13 Claim 1 of the '135 patent?

14 THE COURT: Mr. Wicker, if you'd get the  
15 microphone, please.

16 THE WITNESS: I'm sorry.

17 COURT SECURITY OFFICER: Right there,  
18 sir.

19 THE WITNESS: Thank you, Your Honor.

20 A. All right. So back to Claim 1 of the '135, a  
21 method for transparently creating a VPN.

22 And what we can see here, this is one of the  
23 many guides that I looked at for Microsoft NT 4. The  
24 Windows NT technical support, and it talks about  
25 including point-to-point tunneling protocol as you see

1 there. So it does indeed provide for the creation of a  
2 VPN.

3 Now, diving into the claim elements, the  
4 first element involves generating from a client a DNS  
5 request. Well, what I've got here is an AutoDial  
6 segment from one of the references.

7 It talks about how AutoDial maps and maintains  
8 network addresses to phone book entries. It keeps a  
9 phone book. It's got a way of mapping names to  
10 addresses or phone numbers.

11 But for our point of view, for our interest,  
12 it maps IP -- excuse me -- it maps domain names like  
13 Microsoft.com to IP addresses. So not only does it map  
14 domain names, but it also maps web page addresses as  
15 well.

16 Determining whether the DNS request is for a  
17 secure website. Well, this is one of those phone book  
18 entries, and I think here -- by the way, this is  
19 precisely -- this is one entry in the phone book, and  
20 that's a little hard to read, but it's a particular  
21 secure website name.

22 Now, what this phone book entry tells AutoDial  
23 is that we have to connect using this adapter. Now that  
24 adapter is highlighted. I think you can see it right  
25 here. It says RAS, remote access server, PPTP.

1           So what this phone book entry says is, if  
2 you're trying to resolve this name, you connect through  
3 this IP address, and you have to create a VPN that's  
4 secure.

5           And so that is the determination that that DNS  
6 request is for a secure website.

7           How do we know that websites are involved?

8           Well, here's an example: `Www.microsoft.com`.  
9 That happens to be an unsecure website. But this does  
10 show us that websites, secure and unsecure, can be  
11 included in that phone book.

12           Here's an example, by the way, of an unsecured  
13 connection.

14           In the previous case, we had a secure  
15 connection, and it said, okay, connect through PPTP.  
16 We can also have phone book entries that are unsecure.  
17 Connect using a simple modem at this phone number.

18           Finally, automatically initiating the VPN in  
19 response to that determination.

20           Well, here it talks about AutoDial  
21 automatically reconnecting clients. AutoDial makes  
22 connecting automatic. Automatically reconnects. We saw  
23 that automatic in the demo that was done in the  
24 courtroom yesterday.

25           And that's Claim 1.

1 Q. (By Mr. Bobrow) So, in your opinion, does a  
2 Windows NT 4 system with PPTP and AutoDial disclose all  
3 of the claims of the '135 patent and, therefore, it  
4 anticipates?

5 A. Yes, it does.

6 So I'll write NT 4 up here. I'm not going to  
7 write PPTP above, though.

8 I talked about generating the DNS request,  
9 determining that it was secure and the automatic  
10 reconnects and showed that it was --

11 Q. Let's turn then to Claim 10 and 12 of the '135  
12 patent.

13 Would you please walk through that claim and  
14 tell us whether NT 4 is PPTP and AutoDial anticipates  
15 these claims?

16 A. Okay. Claim 10. Once again, it's got a lot  
17 of the elements that we've already talked about. What I  
18 want to focus on is the DNS proxy server.

19 Well, once again, AutoDial allows us to create  
20 phone book entries, phone book entries that can include  
21 domain names. And associated with each address and the  
22 AutoDial database is a set of one or more entries.

23 So that shows us that AutoDial's database can  
24 be acting as a DNS proxy. It can take in domain names  
25 and return an IP address.



1           Here's an example. This is a phone book  
2 entry, domain name, and there's the IP address that's  
3 returned.

4           And I note down here, it says example phone  
5 book entry for PPTP server and a VPN device.

6           Continuing on, returns the IP address of  
7 access to a non-secure website as requested.

8           Well, here's an example of a non-secure  
9 website, [www.microsoft.com](http://www.microsoft.com). And it says the database  
10 can include IP addresses, and there is one for unsecure  
11 websites as well.

12           And then finally the gatekeeper computer  
13 portion of 10. This is a diagram that shows connecting  
14 through a tunnel client running NT 4 to a tunnel server,  
15 and that tunnel client is acting as the gatekeeper for  
16 information coming into the dial-up client as well as  
17 information going out.

18           And then, finally, the gatekeeper must  
19 determine sufficient security privileges. That's a  
20 little hard to read. But what it's talking about here  
21 is user authentication must verify the user's -- I'm  
22 having trouble reading that. Thank you very much --  
23 must verify the user's identity and restrict VPN access  
24 to authorized user's only.

25           And so that's Claim 10.

1 Q. All right. So in your opinion, Professor  
2 Wicker, does NT 4 with PPTP and AutoDial disclose all of  
3 the elements of Claims 10 and 12 of the '135 patent and,  
4 therefore, anticipate those claims?

5 A. Yes.

6 And, once again, I'll write NT 4 up here.

7 All right. We've got the DNS proxy server,  
8 the gatekeeper.

9 And then for Claim 12, the gatekeeper  
10 determines whether there's sufficient privileges. And  
11 that's what I showed on the previous slide. That slide  
12 says Claim 10; it should say Claim 12. So I'll just  
13 note that so that we won't be confused.

14 But the sufficient security privileges is  
15 associated with Claim 12.

16 Q. All right. Let's now turn the '180 patent  
17 and, again, Claims 1, 4, and 15.

18 Please walk us through this claim and let us  
19 know whether NT 4 with PPTP and AutoDial anticipates  
20 these claims.

21 A. Okay. So Claim 1 of the '180 patent, we've  
22 got a method for accessing a secure computer network  
23 address. We've seen it a few times. And, of course,  
24 what we can see here -- I'm holding too many things.  
25 What we can see here is that it is indeed a method for

1 accessing a secure computer network address. It talks  
2 about PPTP, uses Microsoft's implementation of RAS and a  
3 point-to-point tunneling protocol to establish  
4 connections. It's a method for accessing secure  
5 addresses.

6 Getting into the claim elements, receiving a  
7 secure domain name, I've talked about how the phone book  
8 acts as a proxy or acts as a DNS server to determine IP  
9 addresses associated with domain names.

10 Well, in this particular instance, this domain  
11 name is associated with a secure adapter, the PPTP  
12 adapter. So this is a secure domain name, because it  
13 requires the use of a secure connection in order to get  
14 to it.

15 So this is a secure domain name according to  
16 the Court's construction.

17 Sending a query message to a secure domain  
18 name service. Well, we've talked about that. The  
19 AutoDial maps various kinds of things, including domain  
20 names, to IP addresses. So when AutoDial is invoked and  
21 it receives that domain name, it's being sent a query  
22 message to a secure DNS.

23 And then finally, receiving from the security  
24 domain name service a response message. Well, what's  
25 provided is, in this case, an IP address. And that's

1 the response from AutoDial. It's saying this is how  
2 you're going to connect.

3           And then sending an access request message.  
4 What we see here is if dial-up networking is configured  
5 to use data encryption, the data sent by means of PPTP  
6 is encrypted when sent.

7           So that access request message will go out  
8 encrypted, if it's associated with that secure domain  
9 name access. So it's using a VPN.

10           And that's Claim 1.

11           Claim 4 calls for provisioning information.  
12 In this case, the provisioning information is the PPTP  
13 adapter. It's saying, all right, this is the secure  
14 domain name that you've sent me. Here's the associated  
15 IP address, and here's the additional information with  
16 which you will build a virtual private network. And  
17 that's the PPTP adapter.

18           Then finally Claim 15 calls for this to be  
19 performed by a client computer. NT 4 can reside in a  
20 client with AutoDial and PPTP. This is just a drawing  
21 that shows our road warrior calling in and receiving  
22 secure access.

23           Q.    Okay. So does the NT 4 system with PPTP and  
24 AutoDial disclose all the elements of Claims 1, 4, and  
25 15 of the '180 patent and therefore anticipate?

1 A. Yes, it does.

2 So, once again, NT 4.

3 And I just demonstrated of Claim 1 as well as  
4 the provisioning information for 4 and the fact that the  
5 client computer can do this in Claim 15.

6 Q. Now, in a similar fashion to the fashion  
7 you've used before, could you please walk us through the  
8 remaining claims of the '180 patent, and whether or not  
9 the NT 4 system with PPTP and AutoDial anticipates those  
10 claims as well.

11 A. Sure.

12 The remaining claims for the '180 patent are  
13 17, 20, and 31. And, once again, they are a lot like 1,  
14 4, and 10. So the same analysis will apply.

15 The difference being the computer-readable  
16 storage medium. We actually saw that here in Court.  
17 There were computers that had on their hard drives  
18 copies of NT 4. And, of course, the hard drive is a  
19 computer-readable storage medium, because that's how you  
20 can run programs on your computer. The computer reads  
21 what's on your hard disk.

22 Continuing on, Claims 33 and 35 require data  
23 processing apparatus, and as we've talked about already,  
24 that's a computer. It's a computer running NT 4 and,  
25 again, you saw that yesterday as well.

1 Q. Okay. So in your opinion, does NT 4 with PPTP  
2 and AutoDial anticipate all of the asserted claims of  
3 the '180 patent?

4 A. Yes, it does.

5 Q. All right. Thank you.

6 Now, if I could ask you please to resume the  
7 stand.

8 A. (Complies.)

9 Q. I just have a few more questions on this topic  
10 and then one final topic to cover.

11 Professor Wicker, were you here in Court the  
12 other day when Mr. Pall did a demonstration of the PPTP  
13 and AutoDial and NT 4? Were you here for that?

14 A. Yes, I was.

15 Q. And did you watch the demonstration as it was  
16 being conducted?

17 A. Yes, I did.

18 Q. And in your review, does that demonstration  
19 support your opinion that NT 4 with PPTP and AutoDial  
20 anticipates the asserted claims?

21 A. Yes, it does.

22 Q. Can you explain how?

23 A. Sure.

24 Well, what we saw was Mr. Pall trying to  
25 access a secure website. And so he typed in the secure

1 domain name. I believe it was -- I can't remember the  
2 name, but it was something like secure domain name.com,  
3 and the system went to the phone book, found the entry  
4 in the phone book, thus performing the determination  
5 step. And in response to that determination, set up a  
6 VPN automatically.

7 Q. All right. And did you also watch the  
8 demonstration when Mr. Cawley asked that a different  
9 domain name be entered? I believe it was eBay.com.

10 Do you recall that?

11 A. Yes.

12 Q. And were you watching the demonstration when  
13 that occurred?

14 A. Yes, I was.

15 Q. And did that demonstration change any of your  
16 opinions about whether NT 4 with PPTP and AutoDial  
17 anticipates the claim of these asserted -- I'm sorry --  
18 the asserted claims of these patents?

19 A. No, it didn't change my opinion.

20 Q. Can you explain why not?

21 A. Okay. So what would happen in that case, and  
22 I think as it was described -- I couldn't see it too  
23 well from the back -- but there were some wires in the  
24 middle of the courtroom, and that was acting as the  
25 internet.

1           But there really wasn't an internet  
2 connection. So there was no access to an outside domain  
3 name service.

4           So when eBay.com, I think it was, was entered,  
5 the system couldn't find it. It couldn't resolve that  
6 domain name, because there was no access to a DNS  
7 server. And so what the system kept doing was trying  
8 everything it could to get through, as I've mentioned  
9 before.

10           Eventually, it tried the one connection it had  
11 left, the VPN. It tried the VPN and that failed. I  
12 don't know if you saw it, but a little square came up on  
13 the screen when he tried to contact eBay. That little  
14 square said something like our attempt to contact  
15 failed. So there was no connection to eBay at all.  
16 And what we saw was really the system doing everything  
17 it could to try and get there, and it couldn't, because  
18 there was no external connection from the courtroom.

19           Q. All right. Now, let me shift gears. We've  
20 been talking about whether the claims that are in-suit  
21 here have been anticipated, and you've given us your  
22 opinions on that subject.

23           What I'd like to do now is get to the subject  
24 of obviousness and ask you some questions about whether  
25 the asserted claims would have been obvious to a person



1 of ordinary skill in the field in light of the prior  
2 art.

3           So if we could begin, then, with -- and I  
4 believe earlier you had expressed the opinion that the  
5 asserted claims are obvious; is that right?

6           A.    That's correct.

7           Q.    So can you please tell us what work you did  
8 and what you did in forming your opinions on  
9 obviousness?

10          A.    Yes.  And I wrote it down on a slide.  I think  
11 it -- yes, here it is.

12                  Okay.  There were a couple of steps to what I  
13 did.  As I mentioned, obviousness is different from  
14 anticipation.

15                  What I did was first to determine the scope  
16 and content of the prior art, to figure out what was in  
17 the prior art when the VirnetX folks came up with their  
18 invention.

19                  The next step was to determine the differences  
20 between the prior art and the claims at issue.  Well, as  
21 I've already showed you, there were no differences.

22                  There were several things in the prior art  
23 like Aventail, like Windows NT 4, and like DVPN that  
24 already had those claims, that already encompassed that  
25 invention.

1           So there was no difference there.

2           And then finally, I determined the level of  
3 ordinary skill in the relevant art -- shouldn't say  
4 finally -- but I did determine, you know, the person  
5 that I thought that these patents were targeted at, and  
6 I concluded that it was someone with a bachelor's degree  
7 in computer engineering or computer science and two or  
8 three years of experience in data networks.

9           And then finally, I considered something  
10 called objective considerations. These are  
11 considerations that indicate to me or would have  
12 indicated to me that it actually wasn't obviousness, the  
13 things that I have to consider that would move me  
14 towards non-obvious.

15           Q. Now, one thing I wanted to ask you had to do  
16 with the level of ordinary skill. I believe that we've  
17 heard from Dr. Jones that the level of ordinary skill  
18 would have been a bit higher than what you just  
19 described, and that of typically or ordinarily skilled  
20 person would have to have a master's degree rather than,  
21 I think, a bachelor's degree as you described.

22           Does that view that Dr. Jones expressed --  
23 first of all, does that level of ordinary skill in the  
24 art change your opinions at all and where you do apply  
25 it?

1           A.     Well, as you mentioned, it is a slight -- it's  
2 another degree, basically more course work. It actually  
3 doesn't change my opinions.

4           I think to someone with a little more course  
5 work and a little more experience, the claims would have  
6 been more obvious. But simply with the experience that  
7 I'm relying on, as my person of skill, the claims are  
8 still obvious.

9           Q.     And when you say that the claims would have  
10 been obvious to a person of ordinary skill, what is the  
11 date that you're applying there? Is that the date that  
12 the patent applications were filed?

13          A.     That's correct.

14          Q.     So back in that 1999/2000 timeframe, right in  
15 there?

16          A.     That's exactly right.

17          Q.     All right. Now, let's shift to your actual  
18 opinion, and let me ask you, was -- or were, I should  
19 say, the asserted claims of the '135 patent and '180  
20 patents, would those have been obvious to a person of  
21 ordinary skill back in 1999 or 2000, in light of the  
22 Aventail guide, the software guide that we looked at?

23          A.     Yes, they would have been.

24          Q.     And can you explain why, please?

25          A.     Yes.

1           Basically, as I've already shown, the Aventail  
2 guide describes everything that's in the claims. But if  
3 we were thinking about obviousness, we could not only  
4 look at the Aventail guide, we could also consider, for  
5 example, the standard that it embodies, the SOCKS  
6 standard, consider all the other things that I looked at  
7 describing Aventail.

8           And a person of skill, knowing these things,  
9 would have combined them to realize that, you know, the  
10 asserted claims in this case were obvious, you know, in  
11 light of what Aventail was already doing.

12           Q. Why would a person of ordinary skill have  
13 reason to combine the SOCKS protocol standard with  
14 Aventail?

15           A. Well, the SOCKS protocol is embedded in  
16 Aventail. If you look through, in fact, just the  
17 excerpts that we saw here in Court, there are references  
18 to SOCKS all over the place. Aventail is basically a  
19 system for implementing SOCKS.

20           Q. Now, have you formed an opinion on whether the  
21 asserted claims in this case would have been obvious in  
22 light of the Microsoft NT 4 system with PPTP and  
23 AutoDial?

24           A. Yes. And, again, it would be the same answer.  
25 A person of skill being aware of Windows NT 4 with PPTP

1 and AutoDial would have realized that these asserted  
2 claims are obvious.

3 Q. Now, you've described in the course of your  
4 testimony a number of different references, and I think  
5 you walked through some of those on that PowerPoint  
6 slide. There was an installer's guide and some other  
7 different materials like that.

8 Would a person of ordinary skill back in 1999  
9 or 2000 have been motivated to combine all of those  
10 different papers about NT 4 together?

11 A. Yes.

12 Q. Why?

13 A. Because they're all about NT 4. They all  
14 literally have NT 4 in the title, or at least I think  
15 most of them do.

16 So a person of skill would have known they  
17 were all talking about NT 4. In fact, some of them are  
18 explicitly talking about AutoDial and PPTP, so they  
19 would have known that, you know, we're all talking about  
20 the same subject, and so they would have combined these  
21 and then realized that, well, what's been asserted here  
22 in Court, these claims of the VirnetX patents, are  
23 obvious -- or were obvious at the time of the  
24 application of the patents.

25 Q. Now, let me ask you about DVPN.

1           Would the asserted claims have been obvious to  
2 a person of ordinary skill back in 1999 or 2000 in light  
3 of DVPN?

4           A.    Yes.

5           Q.    Tell us why.

6           A.    Well, the same answer, basically.

7           I focused for the anticipation analysis on the  
8 demonstration, but there was more than the  
9 demonstration. There was code. There were e-mails.  
10 There were descriptions of the demonstration.

11           A person of skill would have combined them  
12 all, because they all talked about DVPN, and in  
13 particular about the demonstration, and they would have  
14 realized that the VirnetX asserted claims are obvious --  
15 or were obvious, again, at the time the application was  
16 filed.

17           Q.    All right. Let me ask you now about what  
18 you've called objective considerations on this slide and  
19 just ask you some questions about that.

20           What objective considerations did you evaluate  
21 in determining whether the asserted claims in this case  
22 would have been obvious or not obvious to a person of  
23 ordinary skill back in 1999 or 2000?

24           A.    Okay. Well, I made a slide that had a list,  
25 because it's a fairly long list.

1           Basically, it's a list of things that I'm  
2 supposed to consider that would move me away from a  
3 conclusion of obviousness. And they include things like  
4 as you see here: Long-felt need, commercial success,  
5 et cetera.

6           Q. All right. So working your way through the  
7 list, could you please explain for us how you evaluated  
8 those different criteria and tell us what impact that  
9 had on your obviousness opinion?

10          A. Okay. Well, I start with long-felt need. The  
11 question that I was to consider was, when this invention  
12 was brought to light, did it satisfy a long-felt need?  
13 Did people say, oh, my gosh, we've been looking for this  
14 for a long time. This satisfies something we've needed  
15 for a while.

16                   And I'd say the answer is clearly no, because  
17 they had a lot of trouble getting financing. In fact,  
18 as I understand it, everywhere they went, they were  
19 turned down.

20          Q. Commercial success?

21          A. That sort of ties in. They had no commercial  
22 success. I'm not aware that they were ever able to sell  
23 a product. So I would say no to that as well.

24          Q. Failure by others?

25          A. Okay. Failure by others. The consideration

1 here is, did other people try and come up with a means  
2 for doing what the VirnetX claims say, and failed. And  
3 I'd say that's clearly not the case, because, as I  
4 showed you, both Aventail and DVPN as well as Windows  
5 NT 4 with PPTP and AutoDial, they were able to do it.  
6 So they didn't fail. And a number of others didn't fail  
7 as well. So I'd say no for that.

8           Praise for the invention, that's another  
9 indication that it might not have been obvious if  
10 someone -- when it comes out, if people start telling  
11 you how great your invention is. I'd say it's more the  
12 opposite. The market certainly said what it thought.  
13 And I had seen several indications that others thought  
14 it was actually more complex than they expected,  
15 something about complexity being moved around. I did  
16 not see praise for the invention.

17           Contrary to accepted wisdom. Now, in this  
18 element, what I'm supposed to consider is, did they do  
19 something that was different from what everyone else was  
20 doing and sort of go against the wisdom to achieve a  
21 really good result?

22           And I'd say the answer's no. People knew how  
23 to do this, and what is claimed in the VirnetX patent in  
24 the asserted claims was just right in line with what  
25 others were doing. So it was not contrary.



1           Unexpected results. Did they get a unique  
2 result, something unexpected, by combining various  
3 things like the DNS server and creation of a VPN?

4           No. No. They combined some things that were  
5 known in the art, and they got a result that people  
6 would have expected.

7           So I'd say no to that as well.

8           Skepticism. I don't think anyone expressed  
9 skepticism as to whether their system would work or not.  
10 I think that critiques were more in line with whether it  
11 was new and whether it was -- whether they were just  
12 moving the complexity around.

13           And the final one is lack of simultaneous  
14 invention. At least I think that's the final one.

15           Basically, the question here is, did no one  
16 else come up with this at about the same time? Was  
17 there no simultaneous group of people all coming up with  
18 this invention independently?

19           If that happened, if they were the only ones,  
20 that would tend to indicate that it wasn't obvious, to  
21 me. Of course, that wasn't the case, because we've seen  
22 DVPN, AutoDial with PPTP and NT 4 and Aventail all came  
23 up with it not exactly at the same time, but awfully  
24 close, 1996 to 1999.

25           Q. All right. So in light of all of those

1 objective considerations and all the other  
2 considerations that you've described here today, in your  
3 opinion, would a person having ordinary skill, back in  
4 1999 or 2000, considered all the asserted claims of the  
5 '180 patent and the '135 patents obvious?

6 A. Yes.

7 Q. Thank you, Professor Wicker.

8 MR. BOBROW: Pass the witness.

9 THE COURT: All right.

10 Cross-examination.

11 MR. BOBROW: Your Honor, if I may, before  
12 that happens, I would simply ask that as the practice of  
13 the parties that we be allowed to mark these  
14 illustratives as illustrative exhibits.

15 THE COURT: All right.

16 MR. BOBROW: Thank you.

17 MR. McLEROY: May I approach, Your Honor?

18 THE COURT: Yes, you may.

19 MR. McLEROY: May it please the Court.

20 CROSS-EXAMINATION

21 BY MR. McLEROY:

22 Q. Good afternoon, Dr. Wicker.

23 A. Good afternoon.

24 Q. One thing I'd like to cover right off the bat,  
25 like the other experts in this case, you have testified

1 in a patent infringement case before, haven't you?

2 A. Yes, sir, I have.

3 Q. Approximately how many times have you  
4 testified?

5 A. I actually testified in court -- I think it's  
6 on the order of 10 times, 12 times.

7 Q. And approximately how many times have you  
8 given a deposition?

9 A. I don't know the exact number, but I'd say  
10 it's 25 to 30.

11 Q. All right. Now, I believe you started  
12 testifying at about 1:15 this afternoon after a lunch  
13 break; is that right?

14 A. Yes, I think that's right.

15 Q. And we just finished up a couple of minutes  
16 ago, and there was a 20-minute break involved, right?

17 A. I believe so.

18 Q. So about two hours of testimony?

19 A. I think it was a little less, but that's --  
20 that sounds right.

21 Q. Pretty close.

22 During that two hours -- let me make sure I  
23 checked this list off right -- you explained how  
24 Aventail relates and invalidates the '135 patent.

25 A. Yes.

1 Q. You compared Aventail to the '180 patent.

2 A. Yes.

3 Q. DVPN to the '135 patent.

4 A. Yes.

5 Q. DVPN to the '180 patent.

6 A. Yes.

7 Q. Windows to the '135 patent. That's Windows NT  
8 4.

9 A. Yes.

10 Q. And Windows NT 4, you compared that to the  
11 '180 patent; is that right?

12 A. Yes.

13 Q. If you divide the two hours by the six  
14 different combinations we just talked about, that's  
15 about 20 minutes per combination; is that right?

16 A. Sounds right.

17 Q. Now, you were in the courtroom when Dr. Jones  
18 testified about the infringement of the VirnetX patents,  
19 weren't you?

20 A. Yes, I was.

21 Q. And he testified, I think, for more than three  
22 hours. Does that sound about right?

23 A. Yeah, I think so.

24 Q. It felt like it lasted forever at times,  
25 didn't it?

1 A. Well, I won't answer that.

2 Q. Now, he proved that the RTC APIs -- or excuse  
3 me.

4 He explained, in his opinion, how the RTC APIs  
5 infringe the '135 patent, right?

6 A. Yes, that's right.

7 Q. And he explained how the PeerNet APIs -- it's  
8 his opinion they infringe the '180 patent; is that  
9 right?

10 A. Yes, I think that's right.

11 Q. So if you split three hours in half, that's  
12 about an hour and a half combination, isn't it?

13 A. Yes. That sounds right.

14 Q. So you covered a lot more information in your  
15 direct testimony than Dr. Jones did, right?

16 A. I think so.

17 Q. Now, to get all that information covered, you  
18 had to skip a few things that Dr. Jones did; isn't that  
19 right?

20 A. Well, I wouldn't say I skipped a few things  
21 that he did. We did different things. It's my  
22 understanding, from what I heard, that he was talking  
23 about infringement.

24 That's a particular kind of analysis, and he  
25 was looking at a rather detailed system indicating where

1 things were within that system.

2 I was pointing to references and  
3 demonstrations simply showing that in three specific  
4 instances, the asserted claims were already being  
5 practiced or had already been discussed before the  
6 patents were applied for.

7 Q. You covered the same claims, didn't you?

8 A. We did.

9 Q. And -- and you -- for both infringement or  
10 validity, you have to show that either the prior art or  
11 the accused product meets every element of those claims,  
12 right?

13 A. That's right.

14 Q. And so of the things you didn't do, you didn't  
15 show any of the Court's claim constructions during your  
16 presentation, did you?

17 A. I didn't show them. I did reference them many  
18 times.

19 Q. You didn't show any of the Court's claim  
20 constructions, did you?

21 A. I didn't put them on the screen, no.

22 Q. And when you checked off the boxes on your  
23 charts, you checked off the boxes for one claim or two  
24 or more claims all at the same time, didn't you?

25 A. Yeah. I probably could have checked them off

1 as we discussed each element, but then I would have been  
2 going back and forth between my PowerPoints and the  
3 charts, and so I just did it as efficiently as I could  
4 to not take up the Court's time.

5 Q. Dr. Wicker, you checked them off one, two,  
6 three, four, in rapid fire, didn't you?

7 A. Yes.

8 Q. Dr. Jones, on the other hand, went through,  
9 checked the box after a thorough explanation of that  
10 element, didn't he?

11 A. He did check off one box at a time, if that's  
12 what you mean.

13 In other words, he would go to explanation to  
14 box.

15 Q. Now, let's talk about the legal standards that  
16 are involved in this case and talk about what happens  
17 when a Patent Office -- when the Patent Office grants a  
18 patent.

19 Were you in the courtroom -- I believe you  
20 were -- when Judge Davis gave his opening instructions  
21 to the jury?

22 A. Yes, I was.

23 Q. All right. And he discussed the legal  
24 standards for evaluating the validity of a patent,  
25 didn't he?

1 A. Yes, he did.

2 MR. McLEROY: Would you put up Slide 3?

3 Q. (By Mr. McLeroy) He told us a couple of times,  
4 actually, that the granting of a patent by the U.S.  
5 Patent & Trademark Office, however, carries with it the  
6 presumption that the patent is valid.

7 Do you see that?

8 A. Yes, I do.

9 Q. And then a little bit later on, he said that  
10 same thing again, didn't he?

11 A. Yes.

12 Q. All right. He also told us --

13 MR. McLEROY: If we could go to the next  
14 slide.

15 Q. (By Mr. McLeroy) -- that Microsoft has the  
16 burden of proving some of its invalidity defenses by a  
17 heavier burden called the clear and convincing evidence  
18 standard.

19 Do you see that?

20 A. Yes, I do.

21 Q. Did you reference the clear and convincing  
22 evidence standard in your direct testimony?

23 A. I did in my analysis. I don't think I  
24 mentioned it in my testimony.

25 Q. You didn't mention it to the jury, did you?



1 A. No, I didn't.

2 Q. All right. Did you apply the clear and  
3 convincing evidence standard?

4 A. Yes, I did.

5 Q. Okay. Just making sure.

6 And the clear and convincing evidence standard  
7 applies to every invalidity argument that you just made;  
8 is that right?

9 A. Yes. Yes. It's for both anticipation and  
10 obviousness.

11 Q. And Judge Davis --

12 MR. McLEROY: If we look at the next  
13 slide.

14 Q. (By Mr. McLeroy) -- also explained exactly  
15 what the clear and convincing evidence standard meant,  
16 didn't he?

17 A. Yes, he did.

18 Q. He said, when a party has a burden of proof by  
19 clear and convincing evidence, it means that the  
20 evidence must produce in your minds a firm belief or  
21 conviction as to the matter sought to be established.

22 Did I read that right?

23 A. Yes, that's exactly right.

24 Q. Now, that's a higher burden of proof than  
25 preponderance of the evidence, isn't it?

1 A. That's right.

2 Q. Preponderance of the evidence is what the jury  
3 will be asked to apply when they evaluate Dr. Jones'  
4 opinions on infringement; is that right?

5 A. That's correct.

6 Q. And clear and convincing evidence, which is  
7 what the jury will need to apply when they evaluate your  
8 invalidity opinions, is a higher burden of proof; isn't  
9 that right?

10 A. That's right.

11 Q. And despite your higher burden of proof, you  
12 spent approximately 20 minutes talking about each  
13 reference, whereas Dr. Jones spent about an hour and a  
14 half talking about each accused product; isn't that  
15 right?

16 A. The timing you mentioned is correct.

17 Q. Now, one thing you said in your direct  
18 examination really, really caught my attention.

19 You said that -- towards the end when you were  
20 talking about the PPTP AutoDial demonstration that Mr.  
21 Pall gave during his testimony yesterday -- do you  
22 remember that?

23 A. Yes, I do.

24 Q. You testified -- and then, I guess, you talked  
25 about the sequence of steps that Mr. Cawley asked

1 Mr. Pall to take with the system, right?

2 A. Yes.

3 Q. And you referenced the time that Mr. Cawley  
4 asked Mr. Pall to type in www.ebay.com into the browser.

5 Do you remember that?

6 A. That's correct, yes.

7 Q. And when Mr. Cawley typed www.ebay.com into  
8 his browser, the VPN wasn't connected, was it?

9 A. No, it was not.

10 Q. And do you recall --

11 MR. McLEROY: Actually, Your Honor, do  
12 you mind if I approach the easel?

13 THE COURT: You may.

14 Q. (By Mr. McLeroy) Can you see this, Mr. Wicker?

15 A. Yes, that's fine.

16 MR. McLEROY: Can the jury see it?  
17 Is that better?

18 Q. (By Mr. McLeroy) Mr. Pall, he told us three  
19 things to look for when a VPN connection was  
20 established.

21 Do you remember that?

22 A. Yes, I do.

23 Q. The first thing he told us to look for, if I  
24 remember correctly, was that you would hear a beep,  
25 right?

1           A.    I can't remember the order, but I know that a  
2 beep was involved, yes.

3           Q.    The second thing he told us to look for would  
4 be the ICON of a telephone down at the bottom right  
5 corner of the screen next to the time display.

6                    Do you remember that?

7           A.    Yes, I do.

8           Q.    And the third thing he told us to look for, if  
9 I remember correctly, was he told us to look for the  
10 ping connection that he tried.

11                   Do you remember that?

12          A.    Yes.

13          Q.    He didn't tell us to look for a box on the  
14 screen, did he?

15          A.    No. The box are for --

16          Q.    He didn't tell us to look for a box on the  
17 screen, did he?

18          A.    Oh, no.

19          Q.    And when Mr. Pall typed in -- and I believe  
20 the address he typed in, domain name, was  
21 www.securewebsite.test.com.

22                   Does that sound familiar?

23          A.    It sounds right.

24          Q.    Okay. And when he typed that in, you heard a  
25 beep, didn't you?

1 A. I did.

2 Q. You were -- how far back in the gallery were  
3 you; do you remember?

4 A. I think I was on the second row, but I was  
5 back there a ways.

6 Q. So close enough to hear the beep?

7 A. I did hear the beep, yes.

8 Q. And did you have a decent view of the screen?

9 A. I did.

10 Q. Okay. So you heard a beep. You saw the ICON  
11 show up in the bottom right corner of the screen, didn't  
12 you?

13 A. Yes, I did.

14 Q. Okay. And then finally, you saw him when he  
15 pulled up the new window that had the ping command in  
16 it.

17 Do you recall that?

18 A. Yes.

19 Q. He typed in ping, and after that, I believe it  
20 showed where the echo response was received, right?

21 A. That's right.

22 Q. And he told us that that echo response would  
23 be an indication that a VPN had been established.

24 A. That's correct.

25 Q. Okay. Then if you recall, I think on

1 cross-examination, Mr. Cawley asked Mr. Pall to  
2 disconnect the VPN again.

3 A. That's right.

4 Q. So it was disconnected. And then he asked him  
5 to type in www.ebay.com; is that right?

6 A. That's correct.

7 Q. eBay.com is not a secure website, is it?

8 A. No, it's not.

9 Q. When he typed it in, you heard a beep, didn't  
10 you?

11 A. That's right, yes.

12 Q. And I believe Mr. Cawley asked Mr. Pall to  
13 point out where in the bottom right corner of the screen  
14 there was a telephone ICON.

15 Did you see the telephone ICON?

16 A. No. But I'm pretty sure it did come on.

17 Q. Were you too far in the back to see the  
18 telephone ICON?

19 A. No. I just don't recall. I did hear the  
20 beep, and I think he did ask him to ping it as well.

21 Q. And he asked him to ping, right?

22 A. Yes.

23 Q. And echo responses were received, right?

24 A. That's correct.

25 Q. And that's the indication Mr. Pall told us to

1 look for to see if the VPN connection had been  
2 established.

3 A. That's correct.

4 Q. I believe after that, Mr. Pall disconnected  
5 the VPN again; is that right?

6 A. Yes. I think that's right.

7 Q. And this time Mr. Cawley asked him to type in  
8 www.thisisnotasecurewebsite.com.

9 Do you recall that?

10 A. Yes, I do remember that.

11 Q. Okay. And we heard the beep again, didn't we?

12 A. We did.

13 Q. All right. We saw the ICON again, didn't we?

14 A. I'll assume it came on since we did beep and  
15 ping. I don't recall seeing the ICON.

16 Q. So we did the ping, also?

17 A. Yes.

18 Q. Okay. After that happened, do you recall the  
19 question that Mr. Cawley asked Mr. Pall?

20 A. No. You'd have to remind me.

21 MR. McLEROY: Could you put up Slide 14,  
22 please, my slide?

23 Q. (By Mr. McLeroy) This is the testimony from in  
24 the courtroom yesterday, and we took it from the Court's  
25 transcript.

1           He asked him: So isn't it true -- don't you  
2 agree, Mr. Pall, that the system you're demonstrating is  
3 not determining whether the VPN DNS request transmitted  
4 is requesting access to a secure website?

5           Do you see that?

6           A. Yes, I do.

7           MR. McLEROY: Your Honor, do you mind if  
8 I pull up one of Dr. Wicker's boards that he was using  
9 earlier?

10           THE COURT: Yes, you may.

11           MR. McLEROY: Hopefully, I don't knock  
12 this one over.

13           Q. (By Mr. McLeroy) The question tracks the  
14 language -- I'm not sure you can see this.

15           A. I can see it. Thank you.

16           Q. -- of the second step of Claim 1 of the '135  
17 patent, doesn't it?

18           A. It does.

19           Q. Mr. Pall's answer was: The system is not  
20 determining that specifically, sir.

21           Do you see that?

22           A. That's correct.

23           Q. Mr. Pall admitted that his demonstration did  
24 not meet this claim element of the '135 patent that you  
25 checked off; isn't that right?



1 A. That's incorrect, no.

2 Q. He said no, didn't he?

3 A. He said no, that the demonstration involving  
4 eBay and this is not a secure website --

5 Q. Dr. Wicker, he said no --

6 MR. BOBROW: Excuse me, Your Honor. May  
7 the witness please be allowed to answer the question?

8 He was right in the middle of answering  
9 the question.

10 THE COURT: All right. Restate the  
11 question.

12 Q. (By Mr. McLeroy) Did you need to finish your  
13 answer, Dr. Wicker?

14 A. Yes, I would like to finish my answer.  
15 The demonstration to the first secure  
16 website --

17 THE COURT: Excuse me, Doctor.  
18 Re-ask the question, if you would.

19 MR. MCLEROY: Oh, I'm sorry, Your Honor.

20 Q. (By Mr. McLeroy) Dr. Wicker, Mr. Pall  
21 testified that his demonstration system did not  
22 determine when the VPN DNS request transmitted is  
23 requesting access to a secure website; isn't that right?

24 A. I don't agree with that for the following  
25 reason. First --

1 Q. Dr. Wicker, was that his testimony? That's  
2 all the question is.

3 A. He's saying the system is not determining that  
4 specifically, sir.

5 Q. Okay. Now, on your direct examination -- and  
6 this is the point that I wanted to get to originally  
7 that really surprised me -- you said a VPN connection  
8 was not initiated -- or actually, no. Let me get this  
9 right. I don't mess this up.

10 You said a VPN connection failed when he typed  
11 in eBay.com; isn't that right?

12 A. I believe what I said was that he was unable  
13 to contact eBay.com through a VPN connection --

14 Q. Dr. Wicker --

15 A. -- because eBay.com could not be reached  
16 through what was here in the Court.

17 Q. Well, I'm sure the jury heard your testimony.  
18 Did you or did you not say that the VPN connection  
19 failed --

20 A. Yes.

21 Q. -- when Dr. -- when Mr. Pall typed in  
22 eBay.com?

23 A. It failed to reach eBay, absolutely.

24 Q. Dr. Wicker, my question is, did you or did you  
25 not say that the VPN connection failed when Mr. Pall

1 typed in www.eBay.com?

2 A. I can't tell you exactly what I said. I can  
3 tell you what I meant. There was a VPN connection to  
4 the server. There was no connection to eBay. You can't  
5 reach eBay just through wires in this courtroom. You  
6 have to have access to the internet.

7 Q. Dr. Wicker, we'll be able to see the  
8 transcript. I'm sure we'll see it in closing arguments.

9 Is it your testimony right now that that VPN  
10 connection failed?

11 A. The VPN connection to the server was  
12 successful. It did not fail. The attempt to connect to  
13 eBay did fail.

14 Q. Sounds like a different answer than you gave  
15 earlier, Dr. Wicker. I guess we'll figure out what the  
16 transcript has to say.

17 You agree with me now, though, that the VPN  
18 connection did not fail.

19 A. It was successful in reaching a server, yes.

20 Q. Dr. Wicker, yes or no. Did the VPN connection  
21 fail?

22 A. It did not fail in reaching the server.

23 Q. Dr. Wicker, please answer the question asked,  
24 and give me a yes or no answer. Did the VPN connection  
25 fail?

1 A. No.

2 Q. There's one other housekeeping item that I'd  
3 like to cover with that demonstration.

4 Do you remember when Mr. Cawley and Mr. Pall  
5 crawled under the counsel table to look at the sticker  
6 on the computer?

7 A. Yes.

8 Q. They had their flashlight out, Mr. Cawley's  
9 flashlight?

10 A. Yes.

11 Q. Okay. And the sticker -- it said Windows 2000  
12 Professional, didn't it?

13 A. That's correct.

14 Q. Okay.

15 MR. McLEROY: Can you bring up Slide 1?

16 Q. (By Mr. McLeroy) Did you get a chance to look  
17 at that demonstration and --

18 MR. McLEROY: Can we dim the lights,  
19 please?

20 Q. (By Mr. McLeroy) Did you get a chance to go  
21 look at the sticker on the side of that computer after  
22 we finished in Court yesterday?

23 A. Actually, I didn't. But this does look like  
24 the Windows 2000 sticker.

25 Q. And I don't think the jury had a chance to see

1 it either. This is the sticker. It says Windows 2000  
2 Professional, doesn't it?

3 A. Yes, it does.

4 Q. And then after we -- well, after we -- after  
5 Mr. Cawley and Mr. Pall went down underneath the table  
6 to look at the sticker, there was some confusion about  
7 the date that Windows 2000 Professional was released.

8 Do you remember that?

9 A. I don't remember confusion. There was a  
10 discussion -- I think it was betas versus the regular  
11 release. I don't remember the details, no.

12 Q. Let me see if I can refresh your recollection.

13 MR. McLEROY: Your Honor, could I  
14 approach the easel and find the timeline from yesterday?

15 THE COURT: Yes, you may.

16 Q. (By Mr. McLeroy) Dr. Wicker, do you remember  
17 seeing this timeline?

18 A. Yes, I do.

19 Q. All right. And I think the February 15th,  
20 2000 date, that reflects the filing date of the '135  
21 patent; is that right?

22 A. That's correct.

23 Q. Okay. Then there was the July 2000 date, and  
24 I think that was the date that we found for the BIOS  
25 software inside the client computer; is that right?

1 A. That's correct.

2 Q. Now, then there's this other date here,  
3 February 17, 2000, with a question mark.

4 Do you remember when Mr. Cawley put that up on  
5 the board?

6 A. Yes. Now I do recall that.

7 Q. Okay. And I believe the issue was, Mr. Cawley  
8 thought that Windows 2000 Professional had been released  
9 on February 17th; is that right?

10 A. I -- I believe that's what he believed.

11 Q. And -- and two days after, that's two days  
12 after the patent was filed; is that right?

13 A. That's right.

14 Q. Now, Mr. Pall disagreed with him; is that  
15 right?

16 A. I think there was a question as to whether  
17 that was the actual release date.

18 Q. Mr. Pall didn't agree that that was the  
19 release date, right?

20 A. Yes.

21 Q. Okay.

22 MR. McLEROY: Would you put up the next  
23 slide, please?

24 And if we can dim the lights again.

25 Q. (By Mr. McLeroy) I searched on the internet

1 last night, and I wanted to find an answer to our  
2 question. This was a press release from the Microsoft  
3 website.

4 Do you see that? It's pretty small, but I've  
5 blown up part of it.

6 A. It's got it on my screen so I can see it.

7 Q. The title of this is: Gates ushers in next  
8 generation of PC computing with launch of Windows 2000.

9 Do you see that?

10 A. Yes, I do.

11 Q. All right. And then the very first sentence  
12 in this press release says: Microsoft chairman and  
13 chief software architect, Bill Gates, officially  
14 announced today the worldwide availability of the  
15 Windows 2000 Professional, and he listed some other  
16 operating systems.

17 Do you see that?

18 A. Yes, I do.

19 Q. This press release is dated February 17th,  
20 2000, right?

21 A. Yes, it is.

22 Q. You would trust Mr. Bill Gates on things  
23 related to Microsoft, wouldn't you?

24 A. Yes, I would.

25 Q. So you think it's pretty safe to say we can

1 take away that question mark now?

2 A. Yes, that was the official release date.

3 Q. Thank you.

4 All right. You covered three prior art  
5 references during your direct examination, right?

6 A. That's correct.

7 Q. All right. I'd like to talk a little bit more  
8 about Windows, and hopefully, if time permits, we'll get  
9 to talk about the other two.

10 To be clear, it is your opinion that Windows  
11 NT 4 anticipates -- you used the word anticipates  
12 there -- anticipates all of the claims at issue in this  
13 case; is that right?

14 A. That's correct.

15 Q. And you understand, Dr. Wicker, that the law  
16 doesn't allow you to combine two or more items of prior  
17 art to make out an anticipation; is that right?

18 A. That's correct.

19 Q. And actually, the Judge gave us an instruction  
20 on this point the first day of trial, also.

21 MR. McLEROY: Could you pull up Slide 6?

22 Q. (By Mr. McLeroy) He said: To prove that a  
23 claim is anticipated by the prior art, Microsoft must  
24 prove by clear and convincing evidence that each and  
25 every limitation of the claim was present in a single



1 item of prior art.

2 Do you see that?

3 A. Yes, I do.

4 Q. So to make out an anticipation with respect to  
5 Windows NT 4, you need to show that all of the elements  
6 of the VirnetX's patents can be found in that version of  
7 Windows; is that right?

8 A. That's correct.

9 Q. You can't combine that version of Windows  
10 with, say, a later version of Windows to make out an  
11 anticipation, can you?

12 A. No. You have to focus on a single version of  
13 Windows.

14 Q. And in light of that, it's still your opinion  
15 that Windows NT 4 anticipates VirnetX's patents; is that  
16 right?

17 A. That's correct.

18 Q. Now, to arrive at that conclusion, one thing  
19 you reviewed was the source code for the Windows  
20 software system; is that right?

21 A. That's correct.

22 Q. And actually, I'd like you --

23 MR. McLEROY: And if you could bring up  
24 Plaintiff's Exhibit 864.

25 Q. (By Mr. McLeroy) And, Dr. Wicker, I believe

1 there's a copy of that in your binder.

2 A. Yes, I've got it.

3 MR. McLEROY: And if you could pull down  
4 to the bold text, the first two or three paragraphs.

5 Perfect. That's good right there.

6 Q. (By Mr. McLeroy) This is a document you  
7 prepared, isn't it?

8 A. Yes, it is.

9 Q. This is a document you prepared and attached  
10 to one of the expert reports that you submitted in this  
11 case; is that right?

12 A. That's correct, yes.

13 Q. And although the jury cannot tell from the  
14 screen -- I'm going to hold it up -- it's 245 pages.  
15 This exhibit contains the source code that you believe  
16 shows the Windows NT 4 system anticipates the  
17 patents-in-suit; is that right?

18 A. Yes. It's exemplary samples from the source  
19 code. The source code is actually --

20 Q. That's right. This isn't all the source code,  
21 is it?

22 A. No, it's not.

23 Q. No.

24 And what you did was you sort of picked and  
25 choosed (sic) the portions of the source code you

1 thought were important to your analysis; is that right?

2 A. Yes. Well, I chose selections that were  
3 exemplary of what I was saying how the system worked.

4 Q. And you prepared this?

5 A. Actually, I had some help preparing it, but I  
6 directed what I wanted in it.

7 Q. Okay. So you directed the content of this.

8 A. That's correct.

9 Q. The files -- every file that's in here, you  
10 selected to put in there, right?

11 A. Yes.

12 Q. Okay. And at the very top here, you explain  
13 exactly what this is. It's what we've been talking  
14 about. This exhibit contains key source code relating  
15 to Microsoft Windows NT 4 VPN functionality and  
16 AutoDial.

17 Do you see that?

18 A. Yes, I do.

19 Q. All right. And then it really jumps pretty  
20 quick into the source code itself.

21 As you can see, there's a -- sort of an  
22 annotation or a brief summary you've described for each  
23 file that introduces what its purpose is in the AutoDial  
24 system, right?

25 A. Yes.

1 Q. And then if you look here, there's -- do you  
2 see the line that says from colon?

3 A. Yes, I did.

4 Q. Okay. And below that is sort of the location  
5 where you found this file in the source code files; is  
6 that right?

7 A. That's right.

8 Q. All right. And this one -- the part I want  
9 you to focus in, do you see about halfway into the first  
10 line, it says winNT\_4.0\_build.

11 Do you see that?

12 A. Yes, I do.

13 Q. And so that indicated to you that this came  
14 from the Windows NT 4 system; is that right?

15 A. That's correct.

16 Q. Now, Dr. Wicker, I'd like you to turn to Page  
17 174 of this document to see the file that you selected  
18 to include on that page.

19 MR. McLEROY: And if you could, blow up  
20 the bolded part right in the middle.

21 Q. (By Mr. McLeroy) Do you see this, Dr. Wicker?

22 A. Yes, I do.

23 Q. All right. You see here there's a location  
24 for the file that begins on this page. I think it's --  
25 you said it was Page 174.

1 Do you see that?

2 A. Yes, I do.

3 Q. All right. It doesn't say that this file came  
4 from Windows NT 4 like the other one did, does it?

5 A. No. This is beta 3 --

6 Q. It doesn't say it, does it?

7 A. This is beta 3 for Windows 2000. You can see  
8 that right here.

9 THE REPORTER: Can you pull the  
10 microphone down?

11 THE WITNESS: Yes, ma'am. I'm sorry.

12 A. As you can see right here, it says Windows  
13 2000 beta 3. It's an early version of Windows 2000.

14 Q. (By Mr. McLeroy) It is. Windows 2000 -- let's  
15 be clear on this -- in the beta 3, that was released in  
16 1999; is that right?

17 A. If you'll look at the copyright right here, if  
18 I can get it an arrow to appear.

19 THE WITNESS: Can you bring it down a  
20 little bit and expand this copyright date for me?

21 A. I think you'll find it says 1997.

22 Q. (By Mr. McLeroy) Dr. Wicker, that wasn't my  
23 question. Windows 2000 beta 3 was released in April  
24 1999, right?

25 A. Yes, I think that's correct.

1 Q. And even if we can't agree on the date, you  
2 will agree with me that Windows 2000 beta 3 is a  
3 different version of Windows than Windows NT 4, right?

4 A. That's right.

5 Q. Yeah. Windows beta 3 was a test version,  
6 right? It wasn't the final version of Windows 2000.

7 A. That's right. It was an earlier version.

8 Q. It had functionality and features that Windows  
9 NT 4 did not have; is that right?

10 A. Yes, that's correct.

11 Q. Okay. Now, Dr. Wicker, what you would find,  
12 if you would really study -- if you really study this  
13 exhibit is, from Page 174 to the end of this document,  
14 Page 245, this portion of the document, a substantial  
15 portion of the document, the last 70 pages, all comes  
16 from Windows 2000 beta 3.

17 A. That's right.

18 Q. Do you have any reason to disagree with that?

19 A. No. No. That's correct.

20 Q. Dr. Wicker, I thought you just told me that to  
21 make out anticipation, you had to use a single prior art  
22 reference; isn't that right?

23 A. Yes, it is right.

24 Q. But what you did is, you mixed and matched  
25 source code from different versions of Windows; isn't

1 that right?

2 A. No, that's not true.

3 Q. Dr. Wicker, this exhibit -- in this exhibit,  
4 you mixed and matched source code from different  
5 versions of Windows, right?

6 A. This exhibit does contain source code from  
7 different versions of Windows.

8 MR. McLEROY: And if we could go back to  
9 the first page.

10 Q. (By Mr. McLeroy) You say: This exhibit  
11 contains key source code relating to Microsoft Windows  
12 NT 4 VPN functionality and AutoDial.

13 Do you see that?

14 A. Yes.

15 Q. You didn't say it contains key source code  
16 relating to Windows NT 4 and Windows 2000 beta 3, did  
17 you?

18 A. Well, it does that, too, but, no, I didn't say  
19 that at the beginning of the --

20 Q. You didn't say that here in the introduction  
21 to this document, did you?

22 A. No.

23 Q. You prepared this document, didn't you?

24 A. Yes, I did.

25 Q. You selected and oversaw the content that was

1 put into this content -- into this document, didn't you?

2 A. Yes.

3 Q. But the last 71 pages are from a different  
4 version of Windows other than Windows NT 4; isn't that  
5 right?

6 A. That's correct.

7 Q. The next thing I'd like to talk about is  
8 regarding AutoDial.

9 AutoDial only reconnects a user. Do you agree  
10 with that?

11 A. Reconnect -- yes. I would say it reconnects  
12 in the sense that you have to have connected once before  
13 at some point in time.

14 Q. And its only function is to reconnect to a  
15 user, right?

16 A. Yes, that's correct.

17 Q. And you remember there was some disagreement  
18 yesterday between Mr. Pall and Mr. Cawley about whether  
19 AutoDial's only function was to reconnect a user.

20 Do you remember that discussion?

21 A. Yes.

22 Q. And I think it centered around the testimony  
23 of a Microsoft engineer named Mr. Discolo?

24 A. Yes. Now I recall what you're talking about.

25 Q. Now, it sounds like you agree with



1 Mr. Discolo, right, that AutoDial only reconnects the  
2 user, right?

3 A. Okay. I have to be careful and make sure I  
4 understand your question.

5 When you talk about reconnecting, I am  
6 assuming that you mean I went to Amazon yesterday  
7 morning, and when I go today, I'm reconnecting.

8 If you're referring to a link failure in the  
9 middle of a session, that's a different thing.

10 Q. No, no. Dr. Wicker, I'm referring to what you  
11 referred to earlier, which is --

12 A. Okay.

13 Q. -- you can't make the connection for the first  
14 time, right? It can only reconnect a user.

15 A. Okay. So when -- I understood --

16 Q. Those were your words, weren't they?

17 A. What I just said about the Amazon example --  
18 the reconnection means I've been there once before, and  
19 now I'm going to go there again. That's what I thought  
20 you meant by reconnection.

21 Q. And I'll stick with that definition.

22 A. Auto -- you want to stick with that? Okay.

23 Q. I'll stick with that definition. You've been  
24 there once before, and if you want to do it for a second  
25 or third or fourth time, that's a reconnection.

1 A. Yes. That's fine.

2 Q. So you agree with Mr. Discolo and Mr. Pall  
3 that that -- and that definition of reconnection is the  
4 only use of AutoDial, right?

5 A. I wouldn't say it's the only use. It's  
6 certainly a predominant use.

7 Q. All right. Not the only use.

8 MR. McLEROY: Could you go to Slide 7?

9 Q. (By Mr. McLeroy) All right. This is some of  
10 Mr. Discolo's testimony. You reviewed his deposition to  
11 prepare your opinions, didn't you?

12 A. Yes, I did.

13 Q. And you found him to be a credible source of  
14 information on Windows AutoDial?

15 A. For the most part, yes.

16 Q. For the most part. Well, I mean, let's see.  
17 The question was asked: What prior art VPN  
18 functionality in Windows do you have knowledge of?

19 Do you see that?

20 A. Yes, I do.

21 Q. He said: I implemented the AutoDial feature  
22 for Windows NT 4 shell release.

23 Do you see that?

24 A. Yes, I do.

25 Q. All right.

1 MR. McLEROY: Could you go to the next  
2 slide?

3 Q. (By Mr. McLeroy) He said: Do you know of  
4 anybody else at Microsoft with as much knowledge about  
5 AutoDial as you have?

6 Do you see that?

7 A. Yes, I do.

8 Q. His answer was: No.

9 A. Yes, that's right.

10 Q. And then finally, he said -- was asked on the  
11 next slide: Would you say that you have full knowledge  
12 of how AutoDial works and functions?

13 Do you see that?

14 A. Yes.

15 Q. And the answer was: Yes.

16 A. That's correct.

17 MR. McLEROY: Now, let's go to the  
18 next -- go to the next slide, please.

19 Q. (By Mr. McLeroy) Here he was asked about what  
20 the functions for the AutoDial were, and he was  
21 asked: And AutoDial stores this database of connections  
22 in order to be able to reconnect a user if he becomes  
23 disconnected; is that correct?

24 His answer was: Yes.

25 A. That's correct.

1 Q. Next question: Is that the only purpose that  
2 AutoDial serves?

3 Do you see that?

4 A. Yes.

5 Q. Answer: That was the purpose that -- my  
6 implementation, that was the purpose.

7 Do you see that?

8 A. Yes, I do.

9 Q. All right.

10 MR. McLEROY: Now, if you go to the next  
11 slide.

12 Q. (By Mr. McLeroy) We followed up on this. We  
13 asked him: Mr. Discolo, do you know if any -- or excuse  
14 me -- do you know if AutoDial has any other  
15 functionality apart from reconnecting a user that has  
16 become disconnected?

17 Do you see that?

18 A. Yes, I do.

19 Q. He said: Not that I'm aware of.

20 A. That's right.

21 Q. And that's coming from the guy who actually  
22 designed AutoDial in Windows NT 4; is that right?

23 A. That's right.

24 Q. Now, if AutoDial only reconnects a user, that  
25 means that the first time the connection is made, it has

1 to be created another way, right?

2 A. Yes. In that scenario, that's true.

3 Q. Did you hear Mr. Pall explain exactly what  
4 steps he had to do to create the VPN connection for the  
5 first time in his demonstration?

6 A. When I saw the demonstration, he simply was  
7 able to connect automatically right away. I --

8 Q. That was the reconnection, right?

9 A. There was no link failure, but he had  
10 connected once before.

11 Q. And he didn't tell you what he had to do to  
12 connect the first time, did he? He didn't explain that  
13 in Court yesterday in Court, did he?

14 A. I don't believe he was asked.

15 Q. He wasn't asked by his own attorney, was he?

16 A. He wasn't asked by anybody.

17 Q. He wasn't asked -- he wasn't asked by his own  
18 attorney.

19 A. No, he was not.

20 Q. So we don't have any idea what had to happen  
21 to connect -- make that connection the first time; is  
22 that right?

23 A. We don't know how the first connection was  
24 made.

25 Q. Can you tell us how the first connection was

1 made?

2 A. Actually, I don't know. I presume that the  
3 configuration table was set up for demonstration, and  
4 the first connection was made to test the configuration,  
5 and then we're done.

6 Q. Dr. Wicker, the claim language over here in  
7 the '135 patent says: Automatically initiating the VPN,  
8 right?

9 A. That's correct.

10 Q. We don't know how that VPN was initiated for  
11 the first time, do we?

12 A. No.

13 Q. All right. We're on a time limit, so let's  
14 move on to DVPN, okay?

15 With the legal standards we've discussed and  
16 have in mind, it's your opinion that DVPN anticipates  
17 the VirnetX patents; is that right?

18 A. Yes, that's correct.

19 Q. And with respect to DVPN, what we're really  
20 talking about is a March 1998 demonstration of the DVPN  
21 project; is that right?

22 A. That's correct.

23 Q. What Mr. Saydjari testified about in Court  
24 yesterday?

25 A. Yes.

1 Q. Okay. Now, do you believe with absolute  
2 certainty that you know what was demonstrated 12 years  
3 ago, March of 1998, at that DARPA meeting?

4 A. Well, I think the evidence is clear and  
5 convincing as to what was presented.

6 Q. All right. So not absolute certainty, but you  
7 do believe it meets the clear and convincing evidence  
8 standard.

9 A. Yes, it certainly does.

10 Q. You didn't attend those meetings, did you?

11 A. Oh, that's -- that's why I can't be absolutely  
12 certain. I wasn't there. I didn't see it and take  
13 notes, but I've seen other people's notes, other  
14 people's testimony; I've read e-mail.

15 Q. We'll talk about that.

16 A. I saw a lot of evidence.

17 Q. We'll talk about that.

18 So you used the DVPN software, I assume, to  
19 figure out what was shown at that demonstration?

20 A. I didn't use it. I did study it.

21 Q. You didn't use it.

22 Well, I guess you said you're relying on the  
23 testimony of some of the guys who actually created DVPN?

24 A. That's correct.

25 Q. All right. One of those guys was a Dan

1 Sterne; is that right?

2 A. That's correct.

3 Q. He was the team leader of the DVPN project?

4 A. I can't remember his exact title, but I think  
5 you're right.

6 Q. Okay. But he admitted that he didn't remember  
7 the details of that demonstration very well; isn't that  
8 right?

9 A. That's correct.

10 Q. And he told us that he didn't do the  
11 programming for that DVPN product, right?

12 A. That's correct.

13 Q. But -- but that's why you talked to  
14 Mr. Kindred; is that right?

15 A. One of the people that I referenced, yes.

16 Q. You talked to Mr. Kindred.

17 But Mr. Kindred -- do you remember when he  
18 started working at Trusted Information Systems, the  
19 company that did that DVPN technology?

20 A. I believe it was actually after the  
21 demonstration.

22 Q. It was a year and a half afterwards, wasn't  
23 it?

24 A. That's right.

25 Q. Now, he wasn't even one working at the company



1 when that demonstration was done, right?

2 A. That's correct.

3 Q. And he didn't attend that demonstration  
4 either, did he?

5 A. No.

6 Q. And finally, I believe you're also relying,  
7 you said on your slide, on the testimony of Mr. Sami  
8 Saydjari, who was in the courtroom yesterday?

9 A. Yes.

10 Q. And he's the witness that Microsoft is paying  
11 \$475 per hour to compensate him for his lost time?

12 A. I believe that's right.

13 Q. Now, was there anyone else that you would have  
14 liked to speak with to understand how that DVPN system  
15 worked?

16 A. No. It's always nice to talk to more people,  
17 to get more details, but, no, I felt I had sufficient  
18 evidence to pass the clear and convincing evidence  
19 standard.

20 Q. Dr. Wicker, there's one person in particular  
21 I'm thinking of. Is there anyone you can remember  
22 reading these deposition transcripts and you think, hey,  
23 it would have really been a good idea to talk to that  
24 guy?

25 A. I don't know who you're thinking of.

1 Q. Well, does the name Domenic Turchi ring a  
2 bell?

3 A. Yes. He read several e-mails that I did read  
4 that provided detailed technical information.

5 Q. He didn't just write e-mails, though, right?

6 A. I believe he had some responsibilities with  
7 regard to the code and the demonstration itself.

8 Q. I mean, Domenic Turchi was the only guy who  
9 wrote the source code for that project, right?

10 A. I recall that he was the main source code  
11 writer. I'm not sure he was the only one. But he  
12 certainly was --

13 Q. Let's look at the deposition, and we'll see  
14 what it says.

15 MR. McLEROY: Could you go to Slide 18,  
16 please?

17 Q. (By Mr. McLeroy) This is Mr. Sterne's  
18 testimony. He said: Who was the individual, to the  
19 best of your recollection --

20 MR. McLEROY: Or actually, Slide 19. I'm  
21 sorry.

22 Q. (By Mr. McLeroy) This is question of  
23 Mr. Kindred.

24 He said: Mr. Kindred, do you have an  
25 understanding of who -- of who wrote that code, that

1 Dynamic VPN code?

2 Do you see that?

3 A. Yes.

4 Q. Answer: My understanding was that Domenic  
5 Turchi had written most, if not all, of the code that  
6 existed at that time point that I was given.

7 Do you see that?

8 A. Right. That's what I was refer --

9 Q. No one testified that anyone else, other than  
10 Mr. Turchi, ever wrote that code; is that right?

11 A. No.

12 Q. Now, who actually conducted the demonstration  
13 at that March 1998 meeting?

14 A. I believe it was Mr. Turchi.

15 Q. That's right.

16 Now, you didn't speak to Mr. Turchi at any  
17 point in the two years this lawsuit has been pending; is  
18 that right?

19 A. I didn't know that he was available or I would  
20 have.

21 Q. Did you ever try to look?

22 A. Personally, me? No.

23 Q. Do you know if your attorneys -- or excuse  
24 me -- Microsoft attorneys ever tried to look?

25 A. It's my understanding that they did.

1 Q. They didn't find him?

2 A. Apparently not.

3 Q. Well, Dr. Wicker, did you ever think to look  
4 him up on Google?

5 A. Nope. I didn't try that.

6 Q. You've found people using the internet before,  
7 haven't you?

8 A. Yes, I have.

9 Q. You use the internet and computers in your  
10 office, right?

11 A. Yes.

12 Q. And you've used Google before, right?

13 A. Yes.

14 Q. All right. Do you remember from the  
15 deposition transcripts that you read that Trusted  
16 Information Systems was located in Maryland?

17 A. Yes, that's correct.

18 Q. Okay.

19 MR. McLEROY: If you could go to Slide 20  
20 now.

21 Q. (By Mr. McLeroy) This is actually a Google  
22 search I did just a couple of days ago. His name -- his  
23 full name is Domenic Turchi, Jr., in Maryland; is that  
24 right?

25 A. Yes, that is his name.

1 Q. And look, Google has a neat feature that gives  
2 you phone book results for Domenic Turchi, Jr., in  
3 Maryland.

4 Do you see that?

5 A. Yes, I do.

6 Q. His phone number is right up there?

7 A. Yes.

8 Q. His address is right there?

9 A. Yes, it is.

10 Q. The city?

11 A. Well, we assume it's him, but yes.

12 Q. And we'll assume it's him. I mean, let's talk  
13 about that.

14 Domenic Turchi, Jr.

15 A. You wouldn't expect a lot of them in Maryland,  
16 that's true.

17 Q. All right. You never did this search, did  
18 you?

19 A. No, I didn't.

20 Q. You know what I also thought to do -- do you  
21 use Facebook?

22 A. Yes, I do.

23 Q. Do you have an account?

24 A. Yes, I do.

25 Q. So you know how that works.

1 Facebook is another way to find people, right?

2 A. Yes, it is.

3 Q. I ran a search through Facebook, and you know  
4 what? He's got a page. Did you think to do that?

5 A. No. I wasn't searching for people to talk to.

6 Q. You didn't search for the person to talk to  
7 that actually wrote the code and actually demonstrated  
8 DVPN at this March 1998 meeting?

9 A. There was a lot of evidence to go through  
10 already.

11 Q. But wouldn't that have been the best evidence,  
12 the guy who actually wrote it and demonstrated it?

13 A. I don't know. I don't know.

14 Q. Because you didn't talk to him, right?

15 A. I did not talk to him, so I have no idea.

16 Q. Now, another piece of evidence you relied  
17 on -- so we've talked about the people you talked to.

18 You did rely on the source code, right?

19 A. Yes, I did.

20 Q. But there were multiple versions of the code  
21 that were produced in this case; isn't that right?

22 A. That's correct.

23 Q. And that's because the operation and the  
24 functionality and the way DVPN worked changed over time;  
25 is that right?

1 A. The primary functionality did not change.

2 There were variations and additional --

3 Q. Doctor, it changed over time.

4 A. It did change, yes.

5 Q. And, in fact, there was a second demonstration  
6 of DVPN; isn't that right?

7 A. I believe that's correct.

8 Q. I think it was in March of 2000?

9 A. That sounds correct.

10 Q. So that's -- March of 2000 is at least a month  
11 before the '180 patent was filed, right?

12 A. That's correct, yes.

13 Q. But you haven't offered any opinions that the  
14 DVPN technology from that meeting invalidates any claim  
15 of any VirnetX patents; isn't that right?

16 A. That's correct. I focused on the earlier  
17 demonstration.

18 Q. And that's because the later demonstration  
19 doesn't invalidate any claim of the VirnetX patents;  
20 isn't that right?

21 A. I don't know.

22 Q. Your attorney has not asked you to look at  
23 that one?

24 A. I didn't look at it, and I don't believe  
25 anyone asked me to.

1 Q. Now, back to the source code, we talked about  
2 how there were multiple codes in this case, right?

3 A. That's right.

4 Q. There was a Defendant's 3353?

5 A. I can't see it.

6 Q. Take my word for it. It's some source code.  
7 Defendant's Exhibit 3062, some more source code.

8 A. Okay.

9 Q. Can't really see it. I think there were  
10 multiple versions of the DVPN code on this one.

11 You looked at all of this code, right?

12 A. Yes, I did.

13 Q. And it had different dates?

14 A. That's correct.

15 Q. Some from 1998; some from '99; some from 2000;  
16 some from '97?

17 A. Exactly.

18 Q. All right. But then you chose Defendant's  
19 Exhibit 3061. That's the one you relied on, right?

20 A. That sounds correct, yes.

21 Q. You relied on your attorney's guidance.  
22 They're the ones that helped you identify the right  
23 source code to look at, right?

24 A. I did look at all the source code. I did have  
25 some guidance as to which was older and which was



1 younger, et cetera.

2 Q. Your attorneys helped you identify Defendant's  
3 Exhibit 3061 to look at; isn't that right?

4 A. Again, no. They provided me with all the  
5 source code.

6 Q. They told you to look at this one for your  
7 opinions in this case, didn't they?

8 A. I don't recall that being the case.

9 Q. Look at your deposition.

10 MR. McLEROY: Would you pull up Page 249  
11 of your deposition?

12 THE WITNESS: Do I have that in front of  
13 me?

14 MR. McLEROY: Oh, I don't think I've  
15 given it to you yet.

16 THE WITNESS: Thank you.

17 MR. McLEROY: If you could, Mr. Moreno,  
18 blow up the portion starting at Line 11 of Page 249.

19 Q. (By Mr. McLeroy) You remember when I took your  
20 deposition, Dr. Wicker?

21 A. Yes, I do.

22 Q. It was, I think, in New York City, right, when  
23 I came up to New York to visit you?

24 A. Yes, that's right.

25 Q. It was at your law firm's office there in

1 downtown Manhattan, right?

2 A. Yes, it was.

3 Q. And you were under oath then just like you're  
4 under oath today?

5 A. Yes.

6 Q. And I think the first question in this  
7 sequence that I asked you was: Now, was there only one  
8 version of the DVPN source code provided?

9 ANSWER: The one I looked at -- actually, I  
10 take that back. I think I saw several. But I did see  
11 the one that was associated with the public  
12 demonstration.

13 And I asked you: Well, how were you able to  
14 determine that it was associated with the public  
15 demonstration?

16 And your answer was, at that time at least:  
17 That would have been through the deposition testimony.

18 Do you see that?

19 A. Yes.

20 Q. And I followed up, skipping down a little bit.

21 Question: Whose deposition; do you remember?

22 You said: Actually, I don't. I don't  
23 remember specifically.

24 I said: Well, let me see if I can refresh  
25 your recollection. There are two guys, Sterne and

1 Kindred, from Sparta?

2           You said: That's right.

3           I said: Was it one of those two guys?

4           Your answer was: Frankly, sitting here at  
5 this late hour, I can't remember how I knew which  
6 version was actually demonstrated. It may have simply  
7 been represented to me that that was a fact.

8           Do you see that?

9           A. Yes, I do.

10          Q. And I asked you: Represented to you by the  
11 lawyers?

12          You said: Well, they're not my lawyers, but  
13 yes.

14          And I clarified: By Microsoft's lawyers?

15          And you said: Yes, that's correct.

16          Do you see that?

17          A. Yes, I do.

18          Q. That testimony is still truthful, right? You  
19 were telling the truth at the time?

20          A. Yes. I didn't know then, and I'm not sure  
21 now.

22          Q. Now, Dr. Wicker, let's assume that you and  
23 Microsoft lawyers are correct, and you actually did  
24 identify the right version of code that was used at that  
25 March 1998 demonstration.

1 A. Yes.

2 Q. Without talking to Mr. Turchi, who actually  
3 wrote the code, okay, are you absolutely certain that  
4 this source code authoritatively describes what was  
5 shown at the demonstration?

6 A. I think that the evidence is clear as to what  
7 was shown at the demonstration and the source code --

8 Q. Dr. Wicker --

9 A. -- reflects what was at the demonstration.

10 Q. Dr. Wicker, that's not my question.

11 Are you certain, with authority, that that  
12 source code was the source code used for the  
13 demonstration?

14 A. As certain as I can be.

15 Q. See what Mr. Sterne said about that when he  
16 was asked a similar question.

17 MR. McLEROY: If we can go to -- I'm  
18 sorry -- Slide 23.

19 Sorry. It's Mr. Kindred's testimony.

20 Q. (By Mr. McLeroy) He said: And, again, in  
21 order to know exactly what was demonstrated in the  
22 spring of '98, you'd need to look at the source code.  
23 Spring of '98, he was referring to March of 1998; don't  
24 you think?

25 A. Yes, I think that's right.

1 Q. He said: To know exactly what was  
2 demonstrated, yes.

3 But then he caught himself. You see that?

4 He said: Let me qualify that. And then he  
5 said: That wouldn't be authoritative either, because  
6 the demonstration didn't show everything that was in the  
7 implementation.

8 Do you see that?

9 A. Yeah. Yes, I see that.

10 Q. We didn't get to ask Mr. Turchi that question,  
11 did we?

12 A. No, not as far as I know.

13 Q. Now, a few more questions about DVPN.

14 MR. McLEROY: Your Honor, do you mind if  
15 I approach the demonstration board again?

16 THE COURT: You may.

17 MR. McLEROY: I appreciate the help.

18 Q. (By Mr. McLeroy) Unfortunately, Dr. Wicker, it  
19 looks like your markers are fading.

20 A. Yes, I noticed that.

21 Q. Invisible ink makes it harder to  
22 cross-examine, huh?

23 Secure DNS request, that's what you wrote  
24 there, right?

25 A. That's right.

1 Q. That's probably hard for the jury to see now.

2 And you showed it going from the Red Cross  
3 client to Red Cross firewall; is that right?

4 A. That's correct.

5 Q. It was that request -- that was the first  
6 thing you drew on the board, right?

7 A. I believe it was, yes.

8 Q. So that's what triggered the setting up of the  
9 VPN; that right?

10 A. Well, there were a number of steps in between,  
11 but, yes, that was the first step to what eventually  
12 caused that VPN between the two firewalls to be created.

13 Q. Dr. Wicker, that was the first step, right?

14 A. Yeah.

15 Q. That was the trigger?

16 A. It was the first step.

17 Q. It was the trigger?

18 A. The trigger is the determination step that's  
19 caused when the Red Cross firewall goes to the coalition  
20 manager and finds that there's a secure association --

21 Q. So it's your testimony that trigger means  
22 determination? Yes or no, trigger means determination?

23 A. Well, that's what -- well, I should ask you  
24 what you meant by trigger, so I can give you a good  
25 answer to your question.

1           To me, I thought -- when you said trigger, I  
2 thought that you were referring to the step that caused  
3 the establishment of VPN.

4           Q.    A trigger means first step, okay?

5           A.    Okay.

6           Q.    You say it's the DNS request the triggers this  
7 process, right?

8           A.    Well, if that's the first step --

9           Q.    Take the definition we just agreed on.

10          A.    I'm sorry?

11          Q.    If you take the definition we just agreed on,  
12 the trigger being the first step, you agree that the DNS  
13 request triggers this process?

14          A.    The DNS request is the first step.

15          Q.    That's your testimony?

16                   MR. McLEROY:    Could you go Slide 24 now?

17          Q.    (By Mr. McLeroy) This is what Mr. Saydjari  
18 said in his deposition, and he was confronted with his  
19 testimony yesterday.

20                   Do you remember when he talked about that with  
21 Mr. Cawley?

22          A.    Yes, I do.    Or I should say I read the  
23 transcript.    I actually wasn't in court.    I saw it.

24          Q.    He said:    I would doubt that they would use  
25 the DNS call to trigger.

1 Do you remember that?

2 A. Yes.

3 Q. Now, Mr. Saydjari actually attended this  
4 meeting, didn't he?

5 A. Yes, that's correct.

6 Q. He was there; he has firsthand knowledge?

7 A. I believe that's what he said, yes.

8 Q. And he was paid by Microsoft to travel down to  
9 Tyler and participate in this lawsuit, right?

10 A. Yes, they paid for his time.

11 Q. And his testimony was that I doubt they would  
12 use the DNS call to trigger.

13 See that?

14 A. Yes.

15 Q. All right. Dr. Wicker, let's move on to  
16 Aventail. We're running out of time. I'll just cover a  
17 quick point with you.

18 MR. McLEROY: Your Honor, do you mind if  
19 I switch out to the Aventail board?

20 THE COURT: No. You may.

21 MR. McLEROY: Now I know why you were  
22 handling these over there.

23 Q. (By Mr. McLeroy) You identified the client  
24 computer and the Aventail system on this board as the  
25 computer on the very far left.



1 Do you see that?

2 A. Yes, that's correct.

3 Q. That's what you labeled it?

4 MR. McLEROY: Can we put up Slide 18 of  
5 Dr. Wicker's presentation? Of Dr. Wicker's  
6 presentation, do you have that?

7 Q. (By Mr. McLeroy) Here -- and you were talking  
8 about, I believe, the context of the '135 patent. This  
9 was the client here?

10 A. No. That is a client in some situations.

11 In this particular claim, in the '180, I  
12 showed how the Aventail SOCKS Server could act as a  
13 claim.

14 Q. Okay. So depending on which claim or which  
15 patent you're talking about, you changed the label of  
16 client computer, didn't you?

17 A. No. No, I don't think that's fair.

18 Q. Dr. Wicker, you labeled the client computer as  
19 the computer on the far left here; is that right?

20 A. Yes, I did.

21 Q. All right. And then if you look at the  
22 monitor, that corresponds to the computer on the far  
23 left in your slide, right?

24 A. That's right.

25 Q. And then you show two servers. They're

1 labeled Server 1 and Server 2 up on the big board, the  
2 big board up top; is that right?

3 A. Yes, that's right.

4 Q. And then you have the SOCKS server and the  
5 SOCKS server on the board that's here in the courtroom  
6 with us, right?

7 A. Yes, that's correct.

8 Q. Those correspond to each other; is that right?

9 A. Yes. Server 1 in this diagram for proxy  
10 chaining is the same as Aventail SOCKS Server on the  
11 left as we see on the board, that's right.

12 Q. All right.

13 MR. McLEROY: And if you can take that  
14 blowup down for a second.

15 Q. (By Mr. McLeroy) Then there's a destination  
16 server on the far right, and that corresponds to what  
17 you've labeled the secure website here in your drawing;  
18 is that right?

19 A. That's correct.

20 MR. McLEROY: If you could just keep it  
21 right there.

22 Q. (By Mr. McLeroy) Now, up on your slide you  
23 prepared with the highlighting, you said: Performed by  
24 a client computer; is that right?

25 A. That's correct.

1 Q. And you highlighted the server labeled Server  
2 1; is that right?

3 A. That's right.

4 Q. In this drawing, when you were asked what the  
5 client computer is, you labeled this computer here,  
6 right? You labeled this Aventail client, right?

7 A. That's labeled as a client. It is a client.

8 Q. And those aren't the same two computers, are  
9 they?

10 A. They're both acting as clients.

11 Q. And I think what you wanted to tell me earlier  
12 was that depending on the claim or depending on the  
13 patent you're talking about, you would identify  
14 different things as a client computer; is that right?

15 A. No. No. What I'm saying is that in some  
16 situations, one could act as a client, and at the same  
17 time, another could be acting as a client. It's all  
18 relative. Client server architecture --

19 Q. But --

20 A. -- are relationships.

21 Q. So in some situations, the computer on the  
22 left is the client. And in other situations, it's the  
23 second computer from the left that's the client  
24 computer.

25 Is that your analysis in this case?

1           A.    It's more accurate to say that both can act as  
2 clients.

3           Q.    Dr. Wicker, you identified different client  
4 computers in these two drawings; that's fair, right?

5           A.    That's correct.

6           Q.    And you did the same thing when you were  
7 talking about DVPN; isn't that right?

8                    You identified client computers -- different  
9 client computers at different times with different  
10 claims, right?

11          A.    That's right. DVPN in different computers  
12 could act as clients.

13          Q.    So you didn't consistently identify the same  
14 computer as a client computer all the way through this  
15 prior art, right?

16          A.    No, I wouldn't agree with that.

17          Q.    You wouldn't agree with that?

18          A.    I consistently showed where computers could  
19 act as clients throughout.

20          Q.    You consistently identified multiple computers  
21 as the client computer; is that right?

22          A.    Multiple computers can act as clients.

23          Q.    And you had multiple computers that you  
24 identified as client computers; is that right?

25          A.    That's correct.

1 Q. And you pointed to different client computers  
2 to meet the different elements of the claims; isn't that  
3 right?

4 A. That's true.

5 Q. All right. I want to talk briefly now about  
6 the '180 patent.

7 One really big issue on the '180 patent is  
8 whether the prior art contains secure domain names; is  
9 that right?

10 A. That's correct.

11 Q. The term that was defined by the Court; is  
12 that right?

13 A. Yes, that's right.

14 Q. And you never showed the claim construction of  
15 secure domain names in your testimony, did you?

16 A. I actually described it several times. I  
17 never actually put it on the screen.

18 Q. You didn't put it on the board, did you?

19 A. No, but I explained it to the jury.

20 Q. Now, secure domain names, that term shows up  
21 in every claim of the '180 patent, right?

22 A. Yes, that's correct.

23 Q. And so if the jury decides that the prior art  
24 does not teach any secure domain names, you'd agree that  
25 none of the claims of the '180 patent are anticipated;

1 is that right?

2 A. If the jury decides that the prior art I  
3 discussed does not reveal or disclose any secure domain  
4 names, then --

5 Q. Then the claims of the '180 patent would be  
6 anticipated; is that right?

7 A. If it shows -- it has to show the capability  
8 for secure domain names. If it doesn't show that, then  
9 yes.

10 Q. Okay. Now, you believe that standard domain  
11 names, domain names that have been in existence, I think  
12 since, you testified, in the mid-'80s, that those can be  
13 security domain names.

14 That's right, isn't it?

15 A. Well, 1982, but yes.

16 Q. And you agree with me, I believe, that the  
17 prior art in this -- at issue in this case, it only uses  
18 standard domain names; is that right?

19 A. There are domain names that have the standard,  
20 fully qualified domain name structure, if that's what  
21 you mean.

22 Q. Well, let's look at your deposition.

23 MR. McLEROY: Can you put up Page 64 to  
24 65 of his deposition? Page 64, starting at Line 23.

25 Q. (By Mr. McLeroy) I asked you there --

1 MR. McLEROY: Would you put up the next  
2 two lines of the next page?

3 That would be great.

4 Q. (By Mr. McLeroy) Now, are you aware --

5 MR. McLEROY: Yes, the first five lines.

6 Q. (By Mr. McLeroy) Question: Now, are you aware  
7 of any prior art references that you rely on that use  
8 non-standard domain names?

9 Did I read that right?

10 A. Yes.

11 Q. You said: I can't think of an example of a  
12 prior art reference on which I relied that uses domain  
13 names, other than those defined as standard in the RFCs.

14 Is that right?

15 A. That's correct.

16 Q. That's consistent with what you just said,  
17 right?

18 A. Right. I still can't.

19 Q. You just believe that these standard domain  
20 names can also be secure domain names; is that right?

21 That's your opinion?

22 A. That is correct.

23 Q. And so you believe that secure domain names of  
24 the VirnetX patents, that they can overlap with the  
25 standard domain names resolved by a conventional domain

1 name server; is that right?

2 A. I'm not sure what you mean by overlap. If you  
3 could show me the Court's claim construction, I could  
4 point out how a standard domain name could satisfy.

5 Q. I'd rather show you your deposition.

6 MR. McLEROY: Can we go to Page 88 of his  
7 deposition?

8 I'm sorry. I need to give you a line  
9 number. Line 22 and continue over to 89/1. So 88/22 to  
10 89/1.

11 Yeah, that's right. Lines 22 and then  
12 carrying over to the next page, question and answer.

13 Q. (By Mr. McLeroy) Question: So it's your  
14 opinion that the inventors considered, believed that a  
15 secure DNS could overlap with a standard DNS.

16 So you used the term overlap there, right?

17 A. Yes.

18 Q. And your answer was: Yes.

19 A. Yes.

20 Q. So you will agree with me that it's your  
21 opinion that secure domain names can overlap with  
22 conventional or standard domain names; is that right?

23 A. Well, they can occupy the same DNS server,  
24 yes.

25 Q. And a name can be a secure name at the same



1 time it can be a conventional name; is that right?

2 A. I don't think at the same time, but at  
3 different times, yes.

4 Q. Okay. There's no -- nothing that precludes a  
5 secure domain name just looking at it from also being a  
6 conventional domain name; is that right?

7 A. Well, again, if it requires authorization,  
8 according to the Court's claim construction, then it's  
9 secure. If it doesn't require authorization, then it's  
10 not secure.

11 The question of whether it requires  
12 authorization may have a different answer over the  
13 course of time. So a name over the course of time may  
14 be secure at one point and not secure at another, if  
15 that's what you're asking.

16 Q. It's your testimony that the prior art only  
17 teaches standard domain names, right?

18 A. As called for in the art of -- yes, the domain  
19 names are standard.

20 Q. And it's your opinion that something that is a  
21 standard domain name can't also at the same time be a  
22 secure domain name; is that right? They can't overlap?

23 A. No. No. That's not right.

24 Q. So they can overlap?

25 A. What I said was a name can be secure at one

1 point and not secure at another.

2 A standard domain name can be secure at one  
3 point and not secure at another point in time.

4 Q. Let me -- let me do this.

5 MR. McLEROY: Would you put up Slide 31,  
6 please?

7 Q. (By Mr. McLeroy) Sorry. The font is a little  
8 small. This is from the deposition of Dr. Johnson.

9 Do you see that?

10 A. Yes, I do.

11 Q. And he was asked a question, and he answered  
12 the question: Do you agree that secure domain names of  
13 the claims of the '180 patent do not overlap with  
14 standard domain names resolved by the conventional DNS?

15 Do you see that?

16 A. Yes, I do.

17 Q. He answered the question yes, right?

18 A. That's correct.

19 Q. Dr. Wicker, how do you answer that question?

20 A. I would have to know what the context of the  
21 question was. If the question is asking me whether a  
22 given domain name can be secure at one moment and not  
23 secure at another, the answer is yes.

24 If you're asking whether a secure domain name  
25 can reside in a DNS with unsecure names, the answer is

1 clearly yes.

2 Can you restate the question? I think I've  
3 answered it.

4 Q. Dr. Johnson was able to answer the question,  
5 wasn't he?

6 And I'll tell you, I honestly didn't  
7 understand your answer.

8 A. Okay. So let's --

9 Q. I mean, can you answer the question yes or no  
10 that Dr. Johnson answered yes or no to?

11 A. Okay. If he -- if the question, as he  
12 understood it, is whether the domain name can be both  
13 secure and unsecure at the same time, clearly, that  
14 doesn't make sense. That can't be the case.

15 Q. Dr. Wicker, let's -- I guess let's get to the  
16 real issue here.

17 You don't want to disagree with Dr. Johnson's  
18 testimony; isn't that right?

19 A. Dr. Johnson is a very impressive individual.  
20 I just don't know what's being meant -- I don't know the  
21 context.

22 Q. Dr. Wicker, you would agree it would look bad  
23 if Microsoft's -- well, how many experts does VirnetX  
24 have? It's just Dr. Jones, right?

25 A. I believe you have a damages expert. I don't

1 know how many other experts.

2 Q. Let me be clear. Professor Jones is going to  
3 testify. He's offered opinions on infringement and  
4 validity; is that right?

5 A. Yes, sir.

6 Q. Now, Microsoft, on the other hand, hired  
7 Dr. Johnson to opine on invalidity and hired you to  
8 testify about -- did I mix this up?

9 Johnson, infringement; Dr. Wicker, invalidity.  
10 Sorry about that.

11 A. Yes, sir.

12 Q. I mean, you think it's important that the two  
13 separate experts Microsoft hired, that they offer  
14 consistent opinions, don't you think?

15 A. Yes.

16 Q. It would test Microsoft's credibility if it  
17 had one expert that answered this question yes, and  
18 another expert that answered this question no.

19 Don't you agree?

20 A. Yes.

21 Q. Dr. Wicker, can you answer this question yes  
22 like Dr. Johnson did?

23 A. To the extent he's saying that a standard  
24 domain name cannot be a secure name under the Court's  
25 claim construction, I don't agree.

1 Q. You don't agree with Dr. Johnson. He gave his  
2 deposition after the Court's claim construction order  
3 came out, didn't he?

4 A. Yes. There may be other context to the  
5 question that I'm not seeing.

6 Q. Dr. Wicker, you and Dr. Johnson have taken  
7 inconsistent positions on this issue, haven't you?

8 A. I don't agree. I don't know the context of  
9 the question.

10 Q. You just answered the question no, right?

11 A. As I understand it, I would say no.

12 MR. McLEROY: Pass the witness.

13 THE COURT: All right. Redirect?

14 MR. BOBROW: Thank you, Your Honor.

15 REDIRECT EXAMINATION

16 BY MR. BOBROW:

17 Q. Professor Wicker, during the  
18 cross-examination, it began some time ago with some  
19 questions about the demonstration that Mr. Pall did here  
20 in Court.

21 Do you recall that testimony?

22 A. Yes, I do.

23 Q. And do you recall that Mr. McLeroy came over  
24 to this board and pointed to the determining step of  
25 Claim 1 of the '135 patent?

1 Do you recall that?

2 A. Yes, I do.

3 Q. Then he pointed to some testimony by Mr. Pall  
4 about whether or not that determining step was typically  
5 met by the demonstration that was conducted.

6 Do you remember that as well?

7 A. Yes, I do.

8 Q. And do you remember saying that you disagreed  
9 with the question that Mr. McLeroy was asking you, but  
10 then he interrupted you and wouldn't let you explain why  
11 you disagreed with the characterization he was making?

12 Do you remember that?

13 A. Yes, I do.

14 Can you please explain now the answer that you wanted  
15 to give then, but that Mr. McLeroy wouldn't let you?

16 A. Yes. I would be happy to.

17 In the first demonstration, the one that  
18 Mr. Pall did, initially he used -- and, again, I can't  
19 remember the name of the website, but it was something  
20 like trustedwebsite.com or securewebsite.com.

21 What happened in that situation was the  
22 computer went to a phone book, found securewebsite.com,  
23 and the phone book indicated that a VPN was to be  
24 created. It determined that the secure VPN connection  
25 was necessary. It satisfied the step.

1           The subsequent demonstrations did not  
2 demonstrate that step one way or another, because  
3 eBay.com -- and this is not a secure website dot-com --  
4 were not in the phone book. It was not a question of  
5 not determining. It simply wasn't in the phone book.  
6 And so what the system did then is it went on to try  
7 different ways to resolve those names. And at one  
8 point, it tried to contact the DNS through that VPN.

9           So it wasn't a matter -- the second two didn't  
10 show that that element was not satisfied. It simply  
11 showed that Microsoft indeed is very tenacious in trying  
12 to create a connection and to resolve those things.

13           Q. Now, in your testimony earlier, you had said  
14 that the NT 4 operating system had been released in 1996  
15 with PPTP and AutoDial.

16           Do you recall that?

17           A. Yes, I do.

18           Q. And do you recall that Mr. McLeroy pointed at  
19 some computers and some software and the like dated in  
20 the year 2000?

21           Do you recall that?

22           A. Yes.

23           Q. All right. Now, in your opinion, with your  
24 computer science background and the work you've done in  
25 this case, does that equipment and software from the

1 year 2000 impact at all the operation of the executable  
2 NT 4 operating system from 1996?

3 A. It does not affect it at all.

4 Q. Can you please explain why that is?

5 A. First off, Windows 2000, the sticker that you  
6 saw, that's a later operating system. But for  
7 Mr. Pall's demonstration, he wasn't using the Windows  
8 2000 operating system. He was using Windows NT 4, the  
9 earlier one from four years back.

10 Secondly, what he was demonstrating was the  
11 software. It's hard to find computers that are -- I'm  
12 getting hired; the math is harder -- but 16, 17 years  
13 old. So they found a computer that was close and  
14 installed the old software on it.

15 So he demonstrated how the software worked,  
16 and that software was from 1996. The fact that that  
17 computer once held an older -- excuse me -- a newer  
18 operating system is irrelevant.

19 Q. All right. Now, let me shift gears, and I  
20 want to ask you another question about the NT 4 system  
21 and AutoDial to follow up on a question that you were  
22 asked by Mr. McLeroy.

23 You may recall that you were asked several  
24 questions about AutoDial reconnecting.

25 Do you remember that?



1 A. Yes.

2 Q. And do you remember asking several questions  
3 of Mr. McLeroy and providing some answers about what  
4 reconnect meant in the context of NT 4 and AutoDial and  
5 PPTP VPNs?

6 Do you remember that?

7 A. Yes, sir.

8 Q. And you were asked a question and I believe  
9 that Mr. McLeroy again came over here to this board for  
10 the '135 patent, and what he pointed to was this phrase,  
11 automatically initiating the VPN.

12 Do you remember that line of questions, sir?

13 A. Yes, I do.

14 Q. And what you were asked, I believe, was about  
15 the very first time -- the very first time that a  
16 connection is made, and I think that you said that you  
17 didn't know in the demonstration that was done how the  
18 connection was made the very first time; is that right?

19 A. Yes, that's correct.

20 Q. All right. Now, from the demonstration that  
21 you saw and your knowledge of NT 4, do you know how the  
22 VPN was initiated the times thereafter?

23 A. Yes.

24 Q. Can you please tell us how the VPNs have been  
25 initiated for the second time and the third time and the

1 fourth time and every other time thereafter?

2 A. They were initiated automatically by AutoDial.

3 Q. All right. Shifting now from the NT 4 topic  
4 to DVPN, if I may, you were asked some questions about  
5 the DVPN source code.

6 Do you recall that?

7 A. Yes, I do.

8 Q. First of all, was the DVPN source code the  
9 only information that you considered about the DVPN  
10 demonstration that occurred in March of 1998?

11 A. No. No, I relied on a lot of other  
12 information.

13 Q. Can you tell us and remind us, please, what  
14 other information you considered about the DVPN  
15 demonstration from 1998, March, besides the source code?

16 A. Sure. One example was a description of -- a  
17 presentation that described the demo. I also had a  
18 number of e-mails that described it in detail. And I  
19 had deposition testimony.

20 Q. Now, did you believe -- after your review and  
21 study of that information, all the information you  
22 considered, did you believe that that information was  
23 sufficient to show clearly and convincingly what the  
24 demonstration showed in March of 1998 sufficient to show  
25 that it anticipated the claims at issue in this case?

1 A. Yes.

2 Q. Can you please explain why?

3 A. There was sufficient evidence. And as you  
4 will recall, clear and convincing evidence is the  
5 burden.

6 And when I studied that information, I found  
7 that that burden was met. All the information pointed  
8 to a demonstration that clearly met all of the asserted  
9 claims of the patents-in-suit.

10 Q. Now, I'd like to shift topics again and turn  
11 to the Aventail software.

12 MR. BOBROW: And, Chris, if I may ask you  
13 to put up Slide 18 from the PowerPoint.

14 Thank you.

15 Q. (By Mr. Bobrow) I believe that Mr. McLeroy  
16 showed you this -- I believe I took my notes down  
17 correctly. I believe it was this slide and asked you  
18 some questions about that.

19 Do you remember that line of questions and  
20 answers?

21 A. Yes, I do.

22 Q. And Mr. McLeroy was somehow suggesting that  
23 you were moving things around and changing up clients on  
24 us.

25 Do you remember that line of questioning?

1 A. Yes, I do.

2 Q. Now, if you take a look up on -- well, I won't  
3 ask you to strain your neck and look up there. You look  
4 at the monitor, but if the ladies of the jury look over  
5 here next to the words proxy chaining and above Server  
6 1, it says Server 1 appears as a user to Server 2.

7 Do you see that?

8 A. Yes.

9 Q. Can you please explain to us what that means  
10 and how that pertains to whether or not something can be  
11 a client at one time and a server at another?

12 A. Basically, what this says is that Server 1 is  
13 acting as a client to Server 2. It's acting as a user.

14 So, for example, this Aventail -- that didn't  
15 work; I wanted an arrow.

16 What's on the left is acting as a client to  
17 the outbound server, but the outbound server then acts  
18 as a client to this Server No. 2.

19 Q. And how can that be the case in computer  
20 science and in a client/server model? How is it  
21 something can be a client at one time with respect to  
22 one computer and a server at another time with respect  
23 to another computer? How does that work?

24 A. Well, client/server is a relationship. In  
25 fact, we can all see this in our lives.

1           Sometimes we're the clients, and sometimes  
2 we're the servers. And yet we're still just one person.  
3 It's a relationship between someone asking for  
4 information and someone providing it.

5           Q. All right. Thank you.

6           MR. BOBROW: Pass the witness.

7           THE COURT: Any recross?

8           MR. MCLEROY: No, Your Honor.

9           THE COURT: All right. Thank you. You  
10 may step down.

11           All right. Ladies of the Jury, that  
12 completes our week. I want to compliment y'all. You  
13 have been an extremely attentive jury. You've been  
14 taking notes and paying very close attention to some  
15 very tedious testimony. And I want to thank you for  
16 your efforts in that regard.

17           What we're going to do is we're going to  
18 recess here in a moment until Monday. I'll ask you to  
19 be back here at 9:00 o'clock on Monday morning.

20           We have about -- we have about three  
21 hours, three and a half more hours of the testimony --  
22 no, excuse me. We only have about a little less than  
23 three hours of testimony. So we should finish the  
24 testimony by 11:30, 12:00 o'clock on Monday.

25           We will then break for lunch, let you

1 have lunch, then come back after lunch. I will give you  
2 your final jury instructions. You will hear closing  
3 arguments. Then you can begin your deliberations Monday  
4 afternoon.

5                   So the end is in sight. That's good  
6 news. I want you to go home and have a relaxing  
7 weekend. Remember my instructions. Don't discuss the  
8 case among yourselves or with anyone else. Don't make  
9 any independent investigation. Just enjoy the weekend  
10 and don't think about this case.

11                   Come back with a clear head Monday  
12 morning, and we'll get this wrapped up on Monday for  
13 you.

14                   So with the Court's thanks, you're  
15 excused for the weekend.

16                   COURT SECURITY OFFICER: All rise for the  
17 jury.

18                   (Jury out.)

19                   THE COURT: Please be seated.

20                   Well, I am advised the jury would like to  
21 have a nice floral arrangement on the table. I'd like  
22 to know who would like to take care of that?

23                   All right. We'll allow both of you to  
24 get together and split the cost of the nice floral  
25 arrangement, but not anything too gaudy. Just something

1 nice for the spring, I think would be nice. They seem  
2 to be settling in and enjoying themselves.

3 All right. With regard to witnesses,  
4 what will we have on Monday?

5 MR. POWERS: On Monday, Your Honor, there  
6 will be some depositions and the final live witness will  
7 be Keith Ugone, our damages witness.

8 And subject to Your Honor -- I think it  
9 would be helpful for the parties to hear Your Honor's  
10 statement of how much time we have left, because I think  
11 we will probably need to be cutting down some of the  
12 deposition designations, and we will be doing that over  
13 the weekend and then that will close off Defendant's  
14 case.

15 THE COURT: All right. The Plaintiff has  
16 used 13 of their 14 hours, and the Defendant has used 12  
17 hours and 10 minutes of their 14 hours. So you have an  
18 hour and 50 minutes, and you have an hour.

19 MR. CAWLEY: Yes, Your Honor. We have  
20 one rebuttal witness. That will be Dr. Jones.

21 THE COURT: Okay. Very well. Anything  
22 further?

23 MR. POWERS: No, Your Honor.

24 THE COURT: All right. Y'all have a good  
25 weekend. We will see you on Monday.

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COURT SECURITY OFFICER: All rise.

(Court adjourned.)

\* \* \* \* \*

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/ \_\_\_\_\_  
SUSAN SIMMONS, CSR  
Official Court Reporter  
State of Texas No.: 267  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date

/s/ \_\_\_\_\_  
JUDITH WERLINGER, CSR  
Deputy Official Court Reporter  
State of Texas No.: 731  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date



EXHIBIT F11

1 IN THE UNITED STATES DISTRICT COURT  
 2 FOR THE EASTERN DISTRICT OF TEXAS  
 3 TYLER DIVISION

4 VIRNETX \* Civil Docket No.  
 5 \* 6:07-CV-80.  
 6 VS. \* Tyler, Texas  
 \*  
 \* March 15, 2010.  
 7 MICROSOFT CORPORATION \* 9:00 A.M

8 TRANSCRIPT OF JURY TRIAL  
 9 BEFORE THE HONORABLE JUDGE LEONARD DAVIS  
 10 UNITED STATES DISTRICT JUDGE

11 APPEARANCES:

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 14 MR. JASON D. CASSADY  
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24

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19 \* \* \* \* \*

21 P R O C E E D I N G S

08:04 22 (Jury out.)

08:04 23 COURT SECURITY OFFICER: All rise.

08:04 24 THE COURT: Please be seated.

08:04 25 All right. Do the parties have anything before we bring

08:04 1 the jury in?

08:04 2 MR. POWERS: A couple of matters, Your  
08:04 3 Honor.

08:04 4 One is an issue that came up at the  
08:04 5 pretrial conference, and it was VirnetX's motion in  
08:04 6 limine regarding our evidence that they had earlier  
08:04 7 accused of infringement, PPTP, which is now being  
08:04 8 asserted to be prior art.

08:04 9 And Your Honor granted that motion in  
08:04 10 limine. At Page 7, you said, I'll look at it closer  
08:04 11 between now and then. Bring it back up with me prior to  
08:04 12 trial. I think you're zeroing in on something that  
08:04 13 would probably be an admission. So if you want to use  
08:04 14 it to impeach their expert, to raise it now, and that's  
08:04 15 what we're doing now.

08:04 16 So the basic --

08:05 17 THE COURT: So you want to raise -- oh,  
08:05 18 yeah. Go ahead. Explain it to me a little further.

08:05 19 MR. POWERS: So the basic issue is this:  
08:05 20 As Your Honor knows, we're relying on PPTP to be a piece  
08:05 21 of prior art in the case. It's a Microsoft product that  
08:05 22 was done in 1996.

08:05 23 We believe that the fact that VirnetX's  
08:05 24 lawyers originally accused it of infringement and  
08:05 25 withdrew it only when they learned of the date is

08:05 1 evidence that should be allowed to be used in  
08:05 2 cross-examination of their validity expert on the  
08:05 3 question of whether PPTP does, in fact, come within the  
08:05 4 scope of the claims.

08:05 5 THE COURT: Response?

08:05 6 MR. McLEROY: Yes, Your Honor.

08:05 7 The short answer is, we never accused it  
08:05 8 of infringement. PPTP is not mentioned in our  
08:05 9 infringement contentions. I believe what Counsel is  
08:05 10 referring to is a letter that VirnetX's lawyers --  
08:05 11 former lawyers sent to Microsoft clarifying the  
08:05 12 definition of accused features in an interrogatory we  
08:06 13 propounded to Microsoft.

08:06 14 And as you can see from the context of the  
08:06 15 letter, as well as the interrogatories themselves, it's  
08:06 16 a broad definition of accused features that VirnetX used  
08:06 17 at the very beginning of the case, in November of 2007,  
08:06 18 to identify every possible infringing feature to do our  
08:06 19 analysis to see which infringed and which did not.

08:06 20 THE COURT: Okay. Is there a document or  
08:06 21 something that you would rely on, Mr. Powers?

08:06 22 MR. POWERS: There is, Your Honor. It's  
08:06 23 Exhibit 3252. I can hand up my copy, if you'd like.

08:06 24 THE COURT: All right. Bring up a copy of  
08:06 25 that.

08:06 1 And specifically --

08:06 2 MR. POWERS: The specific portion I  
08:06 3 believe is highlighted in that copy, Your Honor. And it  
08:06 4 is exactly as Counsel has characterized it. It's their  
08:06 5 lawyers saying, yes, the accused functionality includes  
08:07 6 PPTP and L2TP.

08:07 7 THE COURT: And let me see the  
08:07 8 interrogatory.

08:07 9 MR. McLEROY: May I approach?

08:07 10 THE COURT: Okay. When do you need to get  
08:07 11 into this with him?

08:07 12 MR. POWERS: It would be with their  
08:07 13 invalidity expert, who will be on this morning.

08:07 14 THE COURT: Next or --

08:07 15 MR. POWERS: No. It will be in their  
08:07 16 rebuttal case.

08:07 17 THE COURT: Right.

08:07 18 MR. POWERS: So we have -- it will be an  
08:07 19 hour and a half at least.

08:07 20 THE COURT: All right. Let me study on it  
08:07 21 a little bit.

08:07 22 What else?

08:07 23 MR. POWERS: Understood.

08:07 24 Your Honor, there were two offers of proof  
08:07 25 filed late last night on issues that have been

08:08 1 previously raised and subject of motions in limine, and  
08:08 2 we wanted to make those offers of proof and obtain  
08:08 3 indictment rulings from the Court on them.

08:08 4           The two issues are, I know, familiar to  
08:08 5 the Court from the motions in limine.

08:08 6           One is the question of the reexaminations.  
08:08 7 And that, of course, is relevant also to the witness  
08:08 8 coming up. It's relevant to various issues in the case  
08:08 9 and -- including, particularly, willfulness.

08:08 10           And so we wanted to obtain a definitive  
08:08 11 ruling from the Court on that issue.

08:08 12           THE COURT: It's overruled.

08:08 13           MR. POWERS: Understood.

08:08 14           THE COURT: Okay.

08:08 15           MR. POWERS: And the second one on which  
08:08 16 we wanted a definitive ruling is the question of  
08:08 17 Microsoft patents which are covering the accused  
08:08 18 functionality. On that one, Your Honor had earlier  
08:08 19 ruled as well. There is one change that has happened  
08:08 20 during the trial that does affect that issue.

08:08 21           The change is that their damages expert  
08:08 22 testified on direct examination that one of the reasons  
08:09 23 he believed some of the licenses he was relying upon  
08:09 24 were particularly relevant was that they included PNRP  
08:09 25 patents owned by Microsoft.

08:09 1                   So this is now a situation that is  
08:09 2 different from how it was presented to Your Honor in the  
08:09 3 motions in limine, because now VirnetX has made -- has  
08:09 4 affirmatively opened the door to the relevance and  
08:09 5 relied upon the relevance of Microsoft's patents on the  
08:09 6 accused functionality.

08:09 7                   And, therefore, we think that that opening  
08:09 8 of the door should allow Microsoft to introduce those  
08:09 9 patents into evidence.

08:09 10                  THE COURT: All right. Response?

08:09 11                  MR. CASSADY: Your Honor, I don't think  
08:09 12 it's actually a fair representation to say that we've  
08:09 13 done anything outside of what we've always intended for  
08:09 14 these licenses.

08:09 15                  When Mr. Sayles and I argued the  
08:10 16 admissibility of the MCPP and WSPP licenses, I  
08:10 17 specifically referred to the PNRP-related technologies  
08:10 18 that has to go into those licenses. That was Wednesday.  
08:10 19 Here we are Monday morning. That never got brought up  
08:10 20 for five days that somehow that opened the door to any  
08:10 21 issue related to these patents.

08:10 22                  Furthermore, Dr. Ugone --

08:10 23                  THE COURT: So what are you raising,  
08:10 24 untimeliness in their --

08:10 25                  MR. CASSADY: Well, that's one, Your



08:10 1 Honor, or this is just a hail Mary at the end, that they  
08:10 2 never thought it was relevant, and they're bringing it  
08:10 3 in now. That's one.

08:10 4 Number two, Your Honor, Dr. Ugone never  
08:10 5 talked about these patents in his report. He doesn't  
08:10 6 specifically refer to these patent numbers. He doesn't  
08:10 7 specifically refer to the Microsoft technology patents.

08:10 8 Three, Dr. Johnson, who he has to rely on  
08:10 9 for the technical knowledge of these patents, didn't  
08:10 10 refer to these patents either with regards to the  
08:10 11 technology in this case.

08:10 12 THE COURT: But Mr. Reed did.

08:10 13 MR. CASSADY: Mr. Reed said that these  
08:10 14 patents are related to technologies that Microsoft  
08:11 15 licenses out.

08:11 16 Now what the Defendant's trying to do is  
08:11 17 come in and say that these patents are for Microsoft  
08:11 18 Windows products. So if the Windows product is  
08:11 19 accused -- or is covered by one of our patents, then it  
08:11 20 can't possibly infringe this patent.

08:11 21 They're trying to bring in or backdoor in  
08:11 22 an inadmissible argument based on their own patents.

08:11 23 MR. POWERS: May I respond briefly, Your  
08:11 24 Honor?

08:11 25 THE COURT: Yes.

08:11 1 MR. POWERS: Mr. Reed went beyond merely  
08:11 2 saying these are patents that Microsoft licenses out.  
08:11 3 Mr. Reed attempted to increase the relevance of those  
08:11 4 licenses in the eyes of the jury by saying that these  
08:11 5 patents related to the accused functionality, and it was  
08:11 6 that link that clearly opened the door.

08:11 7 THE COURT: Okay. And for what purpose do  
08:11 8 you want to introduce these patents?

08:11 9 MR. POWERS: As evidence of Microsoft's  
08:11 10 patents on its own functionality.

08:11 11 If he's relying on them and introducing  
08:11 12 them and affirmatively relying on them, the patents  
08:11 13 themselves should be in evidence before the jury.

08:11 14 THE COURT: But are you -- are you wanting  
08:12 15 to use them to rebut his testimony regarding the damages  
08:12 16 issue?

08:12 17 MR. POWERS: In part, yes, but in part,  
08:12 18 they should be admissible now that he's opened the door.  
08:12 19 He's opened the door to the relevance of those patents.

08:12 20 THE COURT: But --

08:12 21 MR. POWERS: And one purpose would be to  
08:12 22 rebut his testimony. One purpose would be that  
08:12 23 Microsoft --

08:12 24 THE COURT: And what would you rebut about  
08:12 25 his testimony?

08:12 1 MR. POWERS: The relevance in relationship  
08:12 2 between those patents and the accused functionality, and  
08:12 3 to the extent they actually do cover the accused  
08:12 4 functionality, that's relevant to the jury as well.

08:12 5 MR. CASSADY: Your Honor, the only  
08:12 6 question that these go to is comparability of the  
08:12 7 licenses. Mr. Reed testified about the comparability of  
08:12 8 the MCPP and WSPP license programs.

08:12 9 And he said, one reason they're comparable  
08:12 10 is they include PNRP-related patents and other  
08:12 11 technologies. He specifically said that this is what  
08:12 12 Windows -- or this is what Microsoft uses to license  
08:12 13 that technology out.

08:12 14 He did not say they're related to Windows.  
08:12 15 He did not say they're related to server. He did not go  
08:12 16 into that detail.

08:12 17 Dr. Ugone can easily get on the stand and  
08:13 18 say that these licenses are not comparable without those  
08:13 19 patents in his hand, as evidenced by the fact that he  
08:13 20 never referred to those patents --

08:13 21 THE COURT: I'm not going to allow the  
08:13 22 patents to be introduced. I will allow Dr. Ugone to  
08:13 23 testify as to the damages aspect with regard to the  
08:13 24 patents.

08:13 25 MR. CASSADY: And, so, Your Honor, just so

08:13 1 we're clear, you mean he can get up and say that these  
08:13 2 cover the Windows products, and they cover the products  
08:13 3 in this case, those patents?

08:13 4 THE COURT: No. No.

08:13 5 MR. CASSADY: Okay. Thank you, Your  
08:13 6 Honor.

08:13 7 THE COURT: Okay.

08:13 8 MR. POWERS: One housekeeping matter, Your  
08:13 9 Honor. I think there's an agreement between the  
08:13 10 parties. In that large list of exhibits that we offered  
08:13 11 on the first day, Microsoft inadvertently included  
08:13 12 DX3455, which is a physical hard drive of the source  
08:13 13 code.

08:13 14 And so the parties have agreed that we'll  
08:13 15 have a placeholder for that where there will be a  
08:13 16 picture of the hard drive, and Microsoft will retain the  
08:13 17 physical hard drive in case it's needed for anything.

08:13 18 THE COURT: Yes. And that should be the  
08:13 19 practice with any physical objects. Substitute a  
08:13 20 photograph for it.

08:13 21 MR. POWERS: The last thing, Your Honor,  
08:13 22 on the housekeeping side, I thought Your Honor might  
08:14 23 want the times for the depositions that are going to be  
08:14 24 read today, so you'll have that in advance.

08:14 25 THE COURT: Okay.

08:14 1 MR. POWERS: I'll give you the sequence,  
08:14 2 if you like. There's going to be four depositions  
08:14 3 played before Mr. Ugone goes on. Those will be Becker,  
08:14 4 Hopen, Sterne, and then Kindred, and then Dr. Ugone will  
08:14 5 go on.

08:14 6 And then the final two witnesses will also  
08:14 7 be by deposition. That will be Victor Larson with an O  
08:14 8 and then Kindell Larsen with an E. And the times for  
08:14 9 all of those depositions are 50 minutes for Microsoft,  
08:14 10 5-0, and 17 and a half minutes for VirnetX.

08:14 11 THE COURT: Okay. Very good.

08:14 12 All right.

08:14 13 MR. POWERS: I understand that VirnetX's  
08:14 14 rebuttal case includes two depositions, which as I  
08:14 15 understand it, are about four and a half minutes.

08:14 16 So the total -- and I think almost none  
08:15 17 for Microsoft. So the totals for all the depositions  
08:15 18 will be 50 for Microsoft and about 22 for VirnetX.

08:15 19 THE COURT: Is that correct?

08:15 20 MR. CALDWELL: I think it actually is  
08:15 21 correct, with the exception of the part that VernetX  
08:15 22 will not play in its rebuttal case. I think we will  
08:15 23 play that by ear. So 50 and 17.

08:15 24 THE COURT: Okay. We'll go --

08:15 25 MR. CASSADY: 50 minutes and 17 and a

08:15 1 half.

08:15 2 THE COURT: Yeah. We'll do the 50 and the  
08:15 3 17 and a half, and you remind me if you put in those two  
08:15 4 later depositions.

08:15 5 MR. CALDWELL: Yes, Your Honor.

08:15 6 THE COURT: All right. Anything further?

08:15 7 MR. POWERS: Nothing further, Your Honor.

08:15 8 THE COURT: All right. Bring the jury in.  
08:16 9 (Jury in.)

08:16 10 THE COURT: Please be seated.

08:16 11 Good morning, Ladies of the Jury.

08:16 12 Did you like your flowers?

08:16 13 JUROR: Yes. Very good. Thank you.

08:16 14 THE COURT: Well, that's complement of  
08:16 15 both parties. I told them of your desire to have a --  
08:16 16 after such a pretty week, to be locked up in here with  
08:16 17 no windows all week, I think those flowers are very  
08:16 18 appropriate, and both Plaintiff and Defendant split the  
08:16 19 cost of those, and we hope that you like them.

08:16 20 JUROR: Thank you.

08:16 21 THE COURT: All right. Very good then.

08:16 22 Thank you for your jury service last week  
08:16 23 again. And today is, hopefully, our final day, if we --  
08:16 24 we're going to try to work very hard and move through  
08:16 25 the evidence.

08:16 1 We have about a little less than three  
08:16 2 hours of testimony to hear this morning, so we're going  
08:16 3 to get started.

08:16 4 With that, Mr. Powers, you may call your  
08:16 5 first witness.

08:16 6 MR. McLEROY: Your Honor, may we handle a  
08:17 7 couple of exhibits?

08:17 8 THE COURT: Certainly, uh-huh.

08:17 9 MR. McLEROY: There are two exhibits. We  
08:17 10 move to admit Plaintiff's Exhibits 985 and 1034. I do  
08:17 11 not believe there are any objections.

08:17 12 MR. POWERS: No objection, Your Honor.

08:17 13 THE COURT: Be admitted.

08:17 14 MR. McLEROY: And, Your Honor, may I also  
08:17 15 bring to the front a copy of our exhibits -- list of  
08:17 16 exhibits admitted Friday?

08:17 17 THE COURT: All right. You certainly may.  
08:17 18 That will be accepted without objection.

08:17 19 MR. POWERS: And similarly, Your Honor, we  
08:17 20 have a list of exhibits to be admitted today as to which  
08:17 21 there's no objection and a cumulative list of exhibits  
08:17 22 admitted through Friday, including the list to be  
08:17 23 admitted today.

08:17 24 THE COURT: Any objection to those to be  
08:17 25 admitted today?

08:17 1 MR. McLEROY: No, Your Honor.

08:17 2 THE COURT: All right. Be admitted, and  
08:17 3 the other list is accepted without objection.

08:17 4 All right. Who will be your first witness  
08:17 5 today?

08:17 6 MR. POWERS: Our first witness, Your  
08:17 7 Honor, will be Mr. Becker from SafeNet by video  
08:17 8 deposition.

08:17 9 THE COURT: Okay. Thank you.

08:18 10 I'll tell the ladies of the jury, we have  
08:18 11 four depositions, I'm advised, of four different  
08:18 12 witnesses coming up, and the runtime on them is going to  
08:18 13 be a little over an hour, about an hour and ten minutes.

08:18 14 So just sit back and enjoy.

08:18 15 (Video playing.)

08:18 16 QUESTION: Good morning, Mr. Becker. You  
08:18 17 are Mr. Bill Becker?

08:18 18 ANSWER: Yes.

08:18 19 QUESTION: Okay. Thank you very much.

08:18 20 Mr. Becker, where are you currently  
08:18 21 employed?

08:18 22 ANSWER: I work at SafeNet, Incorporated.

08:18 23 QUESTION: And what is SafeNet,  
08:18 24 Incorporated?

08:18 25 ANSWER: It's an information security



08:18 1 company located on -- headquartered in Belcamp,  
08:18 2 Maryland.

08:18 3 QUESTION: Okay. How long have you been  
08:18 4 an employee of SafeNet?

08:18 5 ANSWER: Since July 1996, 13 years.

08:18 6 QUESTION: Do you recall that at some  
08:18 7 period in time, you met with individuals from a company  
08:19 8 called SAIC?

08:19 9 ANSWER: Yes.

08:19 10 QUESTION: What -- what do you  
08:19 11 specifically recall about the technology that you were  
08:19 12 shown?

08:19 13 ANSWER: It was a -- it was a solution  
08:19 14 to -- they called it EasyVPN. It was a solution to have  
08:19 15 their software distribute policy to an IP SEC client and  
08:19 16 IP SEC gateway, and they were trying to make it easier  
08:19 17 and more intuitive for the end user.

08:19 18 QUESTION: Was SAIC trying to get you at  
08:19 19 SafeNet interested in their technology?

08:19 20 ANSWER: In some degree, yeah.

08:19 21 QUESTION: Do you recall -- I'm going to  
08:19 22 show you, in connection with that evaluation, a document  
08:19 23 bearing Bates No. SAFE-0006. I'm going to mark it as  
08:20 24 Exhibit 371.

08:20 25 And I'd like to know if this refreshes

08:20 1 your recollection of your conclusions about the EasyVPN  
08:20 2 technology.

08:20 3 ANSWER: It's an accurate summary.

08:20 4 QUESTION: Does this document, Mr. Becker,  
08:20 5 appear to be an accurate summary of SafeNet's evaluation  
08:20 6 of the EasyVPN technology that would have been created  
08:20 7 in the ordinary course of its business?

08:20 8 ANSWER: Yes.

08:20 9 QUESTION: And what was your conclusion as  
08:20 10 to whether the EasyVPN technology would actually  
08:20 11 accomplish the simplicity that it was trying to  
08:20 12 accomplish?

08:20 13 ANSWER: The concept of -- for the users,  
08:21 14 it might be simpler, but there was a lot of complexity  
08:21 15 in the software in actually implementing it, especially  
08:21 16 with trying to load stuff into a router.

08:21 17 QUESTION: So in your view, would the  
08:21 18 technology that SAIC had shown you actually accomplish,  
08:21 19 ultimately, any real simplicity?

08:21 20 ANSWER: No, not really.

08:21 21 QUESTION: Is it accurate, as this memo  
08:21 22 says, that it seemed that the -- that the complexity it  
08:21 23 was trying to eliminate had simply been moved from one  
08:21 24 place to another?

08:21 25 ANSWER: That's accurate, yes.

08:21 1 QUESTION: What exactly does it mean that  
08:21 2 the complexity that they were trying to eliminate had  
08:21 3 simply been moved from one place to another?

08:21 4 ANSWER: Their -- the complexity at the  
08:21 5 time of VPNs was configuring policy of who could talk to  
08:21 6 who, what different gateways and clients could talk to  
08:21 7 each other.

08:21 8 So they were trying to simplify it from  
08:21 9 the user's perspective in that they could just use .scom  
08:21 10 extensions, and if something was .scom, it would go  
08:21 11 secure there.

08:21 12 But the complexity would get moved from  
08:22 13 the user's interface now into their software, and from  
08:22 14 their software, it would be complex to get it -- to get  
08:22 15 the keys derived and load it into like a Cisco router or  
08:22 16 a VPN client.

08:22 17 So they were moving the complexity kind of  
08:22 18 from the user interface down further into the -- into  
08:22 19 the networking stack.

08:22 20 QUESTION: So would you call this solution  
08:22 21 that SAIC claimed to have, would you call it really just  
08:22 22 something that was, in reality, complex?

08:22 23 ANSWER: Yeah. The implementation was  
08:22 24 complex, yes.

08:22 25 QUESTION: And do you know whether

08:22 1 SafeNet, in fact, ultimately adopted this EasyVPN  
08:22 2 technology?

08:22 3 ANSWER: We did not.

08:22 4 QUESTION: Okay. Can you name some VPN  
08:22 5 companies that have failed?

08:22 6 ANSWER: There's a company called Open  
08:22 7 Reach that failed. I remember the -- there were -- I  
08:22 8 don't remember the names of them all. There are a  
08:22 9 number of them that have disappeared over the years.

08:23 10 QUESTION: Can you estimate how many VPN  
08:23 11 companies have failed in the market?

08:23 12 ANSWER: A guess is maybe ten.

08:23 13 QUESTION: Is setting up a VPN a hard  
08:23 14 problem?

08:23 15 ANSWER: It -- it can be.

08:23 16 QUESTION: How can setting up a VPN be a  
08:23 17 hard problem?

08:23 18 ANSWER: If -- if a user interface or the  
08:23 19 rules are -- are complex for a -- for a system, it could  
08:23 20 be hard to -- hard to set up and hard to get  
08:23 21 operational.

08:24 22 QUESTION: Did you think VirnetX's EasyVPN  
08:24 23 technology was a bad idea?

08:24 24 ANSWER: No. I didn't -- I didn't think  
08:24 25 it was a bad idea.

08:24 1 QUESTION: Just hard to implement?

08:24 2 ANSWER: It's hard to implement, yes.

08:24 3 QUESTION: And I think you said that  
08:24 4 moving the complexity from one place to another -- what  
08:24 5 did you mean by that?

08:24 6 ANSWER: I was referring to moving the --  
08:24 7 the complexity from -- from the user to the -- to the  
08:24 8 software that interfaces to load keys into the gateway  
08:24 9 and into the client.

08:25 10 QUESTION: So would you agree that EasyVPN  
08:25 11 technology, once implemented, would make it easier for a  
08:25 12 user to set up or create a VPN?

08:25 13 ANSWER: It might compared to certain  
08:25 14 products, and it might not compared to other products.

08:25 15 (End of video clip.)

08:25 16 MR. POWERS: Your Honor, the next witness  
08:25 17 will be Mr. Hopen from Aventail, and the total time will  
08:25 18 be 14 minutes.

08:25 19 THE COURT: All right. You've already  
08:25 20 given me the times, haven't you?

08:25 21 MR. POWERS: I've given you the cumulative  
08:25 22 times, yes.

08:25 23 THE COURT: All right.

08:25 24 (Video playing.)

08:25 25 QUESTION: Can you please introduce

08:25 1 yourself?

08:25 2 ANSWER: I'm Chris Hopen. I was a  
08:25 3 cofounder of Aventail Corporation back in 1996.

08:25 4 QUESTION: Okay. What were your job  
08:25 5 titles while at Aventail?

08:26 6 ANSWER: I ran engineering, so I was Vice  
08:26 7 President of engineering and Chief Technology Officer.

08:26 8 QUESTION: What was Aventail Connect  
08:26 9 Version 3.1?

08:26 10 ANSWER: Aventail connect 3.1 was a piece  
08:26 11 of software that would run on an end user's PC that  
08:26 12 would provide additional secure communications services  
08:26 13 to applications running on that PC. It would -- it was  
08:26 14 a client in a pair of a client/server solutions that we  
08:26 15 sold.

08:26 16 So it was one component of what we  
08:26 17 referred to as Aventail ExtraNet Center. And so  
08:26 18 Aventail Connect was the component that was the  
08:26 19 client-side software that would be distributed and run  
08:26 20 on individual users' systems.

08:26 21 QUESTION: What was the name of the other  
08:26 22 component of the -- of the Aventail ExtraNet Center?

08:26 23 ANSWER: Yeah. So, typically, ExtraNet  
08:26 24 Center was sort of the umbrella name, if you will, for  
08:27 25 the entire product. The -- I believe at that point in

08:27 1 time -- we had a number of different marketing names  
08:27 2 over the years, and I believe at that time, we would  
08:27 3 just call that the VPN server component, which was a  
08:27 4 SOCKS 5-based proxy server.

08:27 5 QUESTION: Can you tell me approximately  
08:27 6 when the development of Aventail Connect Version 3.1  
08:27 7 started?

08:27 8 ANSWER: Well, Aventail Connect 3.0 or  
08:27 9 3.X, the 3.X series began -- if you want to go all the  
08:27 10 way back, the purpose -- one of the main purposes for  
08:27 11 3.X was what was called a layered service provider  
08:27 12 architecture from Microsoft and part of the WinSock 2.0  
08:27 13 standard.

08:27 14 That development started, I would say, in  
08:28 15 late '97, probably -- probably that kind of timeframe,  
08:28 16 because at that time, Intel and the WinSock community of  
08:28 17 vendors were working together on a standard.

08:28 18 And so if you -- if you trace it back, you  
08:28 19 know, that was probably when we began the discussions  
08:28 20 and design discussions around what would become 3.X or  
08:28 21 3.1.

08:28 22 QUESTION: I'd like to mark our first  
08:28 23 exhibit. I guess we'll mark it Hopen Exhibit 1. It's  
08:28 24 labeled AVEN 1 through AVEN 124.

08:28 25 And I'd like to ask you, Mr. Hopen, to

08:28 1 take a look at Hopen Exhibit 1 and let me know if you  
08:29 2 recognize what that document is.

08:29 3 ANSWER: Yes. This is -- this is the  
08:29 4 Administrator's Guide that we shipped with the Aventail  
08:29 5 Connect and Aventail ExtraNet Center product.

08:29 6 QUESTION: How was the -- well, was the  
08:29 7 Aventail Connect Administrator's Guide distributed to  
08:29 8 anyone?

08:29 9 ANSWER: It was part of the product  
08:29 10 distribution that we would distribute to any prospect  
08:29 11 or -- or end customer.

08:29 12 QUESTION: Was the proxy chaining  
08:29 13 deployment ever actually done for a real corporation?

08:30 14 ANSWER: Yes.

08:30 15 QUESTION: And what -- what -- what  
08:30 16 customers did the proxy chaining deployment?

08:30 17 ANSWER: The two -- one -- you want me to  
08:30 18 name them or --

08:30 19 QUESTION: Please.

08:30 20 ANSWER: Okay. So one of the customers  
08:30 21 that -- that liked proxy chaining exclusively was a  
08:30 22 company called DuPont. They had -- as most people know,  
08:30 23 if you know DuPont, they have many, many subsidiaries in  
08:30 24 really sort of this -- it's a conglomerate of other  
08:30 25 companies and brands.



08:30 1           So they had an incredibly complex internal  
08:30 2 network, and so proxy chaining was one of the only  
08:30 3 solutions that they could find to solve some of their  
08:30 4 unique secure-access challenges.

08:30 5           QUESTION: Were there other clients of  
08:30 6 yours that deployed the proxy chaining?

08:30 7           ANSWER: There were. I mean, certainly, a  
08:31 8 lot of times, I would only know about it if they had  
08:31 9 specific questions or issues or challenges around it. A  
08:31 10 lot of times there -- you know, there was more  
08:31 11 involvement sort of at the field engineering team level.

08:31 12           I believe Kodak may have been another one  
08:31 13 that used it extensively. Exxon Mo -- or what were they  
08:31 14 called at the time? I guess it was just Exxon -- was  
08:31 15 another company that used it, so...

08:31 16           QUESTION: Okay. Did Aventail ever give  
08:31 17 betas of Aventail Connect 3.1 to the press for  
08:31 18 evaluation?

08:31 19           ANSWER: Yes. Yes.

08:31 20           QUESTION: Can you take a look, please, at  
08:31 21 Hopen Exhibit 2, and let me know what it is?

08:31 22           ANSWER: This looks like a Network  
08:31 23 Computing article that was written to outline  
08:31 24 features -- new features and benefits of the Aventail  
08:32 25 ExtraNet Center solution.

08:32 1 QUESTION: Can you go down to the fourth  
08:32 2 paragraph? Do you see the one that starts Network  
08:32 3 Computing?

08:32 4 ANSWER: Yes.

08:32 5 QUESTION: So going through that sentence,  
08:32 6 it says: Network computing conducted an exclusive test  
08:32 7 of AEC 3.1 --

08:32 8 ANSWER: Yes.

08:32 9 QUESTION: -- and Connect 3.1 betas --

08:32 10 ANSWER: Yes.

08:32 11 QUESTION: -- in our real-world labs (R)  
08:32 12 at Syracuse University.

08:32 13 ANSWER: Yes.

08:32 14 QUESTION: Do you see that?

08:32 15 ANSWER: Yes.

08:32 16 QUESTION: Was there ever a point in time  
08:32 17 that Aventail Connect 3.1 was demonstrated at either  
08:32 18 trade shows or conferences?

08:32 19 ANSWER: Yes. Yeah, that was commonplace.

08:32 20 QUESTION: Let me mark another document as  
08:32 21 Hopen Exhibit 3.

08:32 22 Mr. Hopen, if you will, please, take a  
08:32 23 look at Hopen Exhibit 3 and let me know if you recognize  
08:33 24 what it is.

08:33 25 ANSWER: This looks like a press release,

08:33 1 basically, that we would put out there saying ahead of  
08:33 2 time, prior to -- looks like this show was the  
08:33 3 Networld+Interop show. We would put that out prior so  
08:33 4 that people would see it, and if they were going to the  
08:33 5 show, that they would know that we were going to be  
08:33 6 there and stop by and see whatever the latest and  
08:33 7 greatest was.

08:33 8 QUESTION: Did you go to these Interop  
08:33 9 shows?

08:33 10 ANSWER: Yes. Yes.

08:33 11 QUESTION: Do you see underneath there it  
08:33 12 says: Live demonstrations at Aventail ExtraNet Center  
08:33 13 will be featured at NetWorld+Interop at the Las Vegas  
08:33 14 Convention Center from May 11 through 13th at the  
08:33 15 Aventail Booth No. 953 and at the Extranet hot spot  
08:33 16 Booth No. 8469?

08:33 17 ANSWER: Yes.

08:33 18 QUESTION: Do you -- do you recall  
08:33 19 whether, in fact, there was a live demonstration of  
08:33 20 Aventail ExtraNet Center?

08:33 21 ANSWER: Yeah. I believe I was at this  
08:33 22 actual event. We had this running both -- there was an  
08:34 23 Aventail booth, which is, you know, a traditional kind  
08:34 24 of corporate booth that you would see at any trade show.  
08:34 25 We would have workstations out front with

08:34 1 salespeople standing by those workstations. Typically,  
08:34 2 they would show the Connect client itself in operation,  
08:34 3 and then they would also show like the Aventail ExtraNet  
08:34 4 Center Management console and -- and, you know, the user  
08:34 5 interface and those kinds of things and talk with  
08:34 6 customers about how they would use it, how they would  
08:34 7 deploy it, pricing, I mean, you know, any question under  
08:34 8 the sun.

08:34 9                   The hot spot booth was more of a  
08:34 10 multi-vendor area where people who had different VPN,  
08:34 11 Extranet kind of solutions could come and customers  
08:34 12 could see them side by side and kind of compare and  
08:34 13 contrast them.

08:35 14                   QUESTION: And if you look at the second  
08:35 15 sentence there, you see where it says: Aventail  
08:35 16 ExtraNet Center 3.1 will be available in June, price  
08:35 17 starting the \$7,995?

08:35 18                   ANSWER: Yes.

08:35 19                   QUESTION: And to the best of your  
08:35 20 knowledge, that's when Aventail started to offer to sell  
08:35 21 Aventail ExtraNet Center 3.1?

08:35 22                   ANSWER: Yes.

08:35 23                   QUESTION: Okay. Was Aventail Connect  
08:35 24 Version 3.1 a successful product?

08:35 25                   ANSWER: Yes. Yeah, it was well received.

08:35 1 QUESTION: Can you give me examples of  
08:35 2 some of the customers that purchased Aventail Connect  
08:35 3 Version 3.1?

08:35 4 ANSWER: The Principal Financial Group,  
08:35 5 Mass Mutual, Morgan Stanley, Bear Stearns, DuPont,  
08:35 6 Kodak. I could -- if you give me enough time, I can go  
08:35 7 on and on and on.

08:35 8 QUESTION: That's --

08:35 9 ANSWER: So I don't know how many you  
08:35 10 want, but...

08:36 11 QUESTION: Mr. Hopen, are you being  
08:36 12 compensated today for your time?

08:36 13 ANSWER: Yes.

08:36 14 QUESTION: And you're being compensated by  
08:36 15 Microsoft for your time?

08:36 16 ANSWER: Yes.

08:36 17 QUESTION: Are you being compensated at  
08:36 18 your normal consulting rate?

08:36 19 ANSWER: Yes.

08:36 20 QUESTION: With all that in mind, is it  
08:36 21 your opinion that Aventail was a success as a company?

08:36 22 ANSWER: So I wore a number of different  
08:36 23 hats at Aventail, right? I was a founder. I was an  
08:36 24 employee, right? I was on the board, right? And so it  
08:36 25 depends on which hat you want me to put on to answer

08:36 1 that question.

08:36 2 QUESTION: Let's talk about it from a  
08:36 3 commercial shareholder perspective. In that sense, do  
08:36 4 you see Aventail as a commercial success?

08:36 5 ANSWER: I would say probably not. You  
08:36 6 know, given the same statement, you know, that  
08:36 7 Aventail -- or that Evan had detailed down here, you  
08:36 8 know, it was the best transaction for the investors.  
08:37 9 Would I call that a success? No.

08:37 10 QUESTION: Did Aventail apply for any  
08:37 11 patents on its 3.1 product?

08:37 12 ANSWER: I don't believe so.

08:37 13 QUESTION: Version 3.1 of Aventail Connect  
08:37 14 could set up secure encrypted connections, right?

08:37 15 ANSWER: Yes.

08:37 16 QUESTION: It could also be used to set up  
08:37 17 non-encrypted --

08:37 18 ANSWER: Correct.

08:37 19 QUESTION: -- connections?

08:37 20 And when the host name request is received  
08:37 21 by the Aventail Connect software, it makes a  
08:37 22 determination of whether or not redirection rules apply?

08:37 23 ANSWER: Correct.

08:37 24 QUESTION: But just because a redirection  
08:37 25 rule applies does not necessarily mean that it's going

08:37 1 to be ultimately an encrypted connection, right?

08:37 2 ANSWER: Correct.

08:37 3 QUESTION: All right. The redirection  
08:37 4 rule is applied, and at that point, Aventail Connect  
08:37 5 software returns an IP address to the application?

08:38 6 ANSWER: Yes.

08:38 7 QUESTION: At that point, it hasn't tried  
08:38 8 to contact the Aventail server?

08:38 9 ANSWER: For -- for that particular  
08:38 10 application, correct.

08:38 11 QUESTION: And then the application, after  
08:38 12 it receives the IP address, it may or may not send a  
08:38 13 connection request back to the Aventail Connect  
08:38 14 software, right?

08:38 15 ANSWER: Yes.

08:38 16 QUESTION: And --

08:38 17 ANSWER: It's part of the standard sockets  
08:38 18 API.

08:38 19 QUESTION: If it never sends a connection  
08:38 20 request, no connection, secure or otherwise, will be  
08:38 21 established, right?

08:38 22 ANSWER: Correct.

08:38 23 QUESTION: Would you agree that it's  
08:38 24 possible there are people out in the industry who don't  
08:38 25 think SOCKS is a VPN protocol?

08:38 1 ANSWER: Yeah.

08:38 2 QUESTION: And in 2000, do you think it's  
08:38 3 pretty likely that there are people out there who  
08:38 4 thought that SOCKS was not a VPN protocol?

08:39 5 ANSWER: Sure, yes.

08:39 6 QUESTION: In the Aventail 3.1 product,  
08:39 7 did you ever consider using -- let me back up.

08:39 8 Have you ever heard of IP SEC?

08:39 9 ANSWER: Sure.

08:39 10 QUESTION: You've heard of L2TP?

08:39 11 ANSWER: Yes.

08:39 12 QUESTION: Those are VPN protocols, right?

08:39 13 ANSWER: Yes.

08:39 14 QUESTION: Did Aventail ever consider  
08:39 15 using any of those protocols in place of SOCKS?

08:39 16 ANSWER: Not until -- in the early, I  
08:39 17 would say probably not until 2002 maybe, somewhere in  
08:39 18 that timeframe. But, yeah, not until later.

08:39 19 QUESTION: Not in conjunction with the 3.1  
08:39 20 release?

08:39 21 ANSWER: No.

08:39 22 QUESTION: Domain names that were used in  
08:39 23 Aventail 3.1 were all standard domain names, right?

08:39 24 ANSWER: Yes.

08:39 25 QUESTION: They could all be resolved by



08:39 1 standard DNS?

08:39 2 ANSWER: Yeah. We didn't manipulate  
08:39 3 domain names, I don't think, in any of the products. We  
08:39 4 would just passively inspect them.

08:40 5 (End of video clip.)

08:40 6 MR. POWERS: The next witness, Your Honor,  
08:40 7 is Mr. Sterne from Trust Information Systems and  
08:40 8 relating to the DMLP project.

08:40 9 THE COURT: Okay.

08:40 10 (Video playing.)

08:40 11 QUESTION: Good morning, Mr. Sterne.

08:40 12 Can you please introduce yourself?

08:40 13 ANSWER: My name is Dan Sterne. I'm an  
08:40 14 employee of Sparta, Incorporated.

08:40 15 QUESTION: Mr. Sterne, can you give me a  
08:40 16 brief description of your education starting with  
08:40 17 college?

08:40 18 ANSWER: Yes. I earned a bachelor's  
08:40 19 degree in mathematics at the University of Washington in  
08:40 20 1972 and a master's degree in computer science at the  
08:40 21 University of North Carolina at Chapel Hill in 1978.

08:40 22 QUESTION: I want to shift gears a little  
08:40 23 bit and focus on what I believe is a specific example of  
08:40 24 some work that you did for DARPA.

08:40 25 Have you ever heard of a project called

08:40 1 Dynamic Virtual Private Network or DVPN?

08:40 2 ANSWER: Yes.

08:40 3 QUESTION: Can -- was DVPN -- was the DVPN  
08:41 4 project a DARPA project?

08:41 5 ANSWER: It was funded by DARPA, yes.

08:41 6 QUESTION: Were you involved in the  
08:41 7 Dynamic VPN project?

08:41 8 ANSWER: Yes, I was.

08:41 9 QUESTION: Okay. And what was your role?

08:41 10 ANSWER: I was the team leader for the  
08:41 11 effort. I conceived, working with a couple of other  
08:41 12 people, of the idea and oversaw its prototype and  
08:41 13 development through its lifetime.

08:41 14 QUESTION: What was Dynamic VPN?

08:41 15 ANSWER: DVPN was an attempt to find a  
08:41 16 more flexible and scalable way of allowing separate  
08:41 17 networks to be unified in a way that the boundaries  
08:41 18 between them, even if they were separated geographically  
08:41 19 and so forth, would become very transparent so they  
08:41 20 would be -- have the effect of being part of one  
08:42 21 network.

08:42 22 QUESTION: The --

08:42 23 ANSWER: Can I add to that?

08:42 24 QUESTION: Sure. Of course.

08:42 25 ANSWER: And -- and what we sought to do

08:42 1 was make it much easier, much more automated, find a  
08:42 2 more automated -- sorry -- more automated way of doing  
08:42 3 that in a way that was very flexible and dynamic.

08:42 4 So the goals were basically to allow this  
08:42 5 kind of marrying of separate networks into a unified  
08:42 6 network to be done rapidly without a lot of advance  
08:42 7 planning and with minimal human intervention.

08:42 8 QUESTION: When did you start the DVPN  
08:42 9 project?

08:42 10 ANSWER: I would probably double-check my  
08:42 11 notes, but I think it was early in 1997.

08:42 12 QUESTION: Okay. I'd like to mark as  
08:43 13 Sterne Exhibit 2 a document labeled Sparta 1808 through  
08:43 14 1811.

08:43 15 Mr. Sterne, I'd like you to take a look at  
08:43 16 Sterne Exhibit 2 and let me know if you've ever seen it  
08:43 17 before.

08:43 18 ANSWER: I have.

08:43 19 QUESTION: Can you tell me what it is,  
08:43 20 please?

08:43 21 ANSWER: This is an e-mail exchange  
08:43 22 between Domenic Turchi and myself with other people  
08:43 23 being cc'd. This is an attempt to describe the  
08:43 24 highlight of the design of VPN and to talk about some of  
08:43 25 the technical details of how it would work.

08:43 1 QUESTION: And when was this document  
08:43 2 created?

08:43 3 ANSWER: October 28th, 1997.

08:43 4 QUESTION: And was it created by  
08:44 5 Mr. Turchi?

08:44 6 ANSWER: It -- it was in the sense that  
08:44 7 this particular document was created by him; however,  
08:44 8 this was probably the result of several iterations  
08:44 9 between myself and Domenic Turchi.

08:44 10 QUESTION: So does the firewall then make  
08:44 11 the decision as to whether to create a VPN?

08:44 12 ANSWER: Yes, it does.

08:44 13 QUESTION: And what actually creates the  
08:44 14 VPN? Is it -- I'm sorry. Is it the firewall that  
08:44 15 actually then creates the VPN after it makes a decision?

08:44 16 ANSWER: Yes.

08:44 17 QUESTION: Did TIS ever demonstrate  
08:44 18 Dynamic VPN at any IFDs or IFEs?

08:44 19 ANSWER: Yes. It was demonstrated at  
08:44 20 IFD -- I think it was 1.1. It was the first IFD. It  
08:44 21 was then -- that particular technology was then kind of  
08:45 22 put on hold for a while, and then I believe it was shown  
08:45 23 at one of the later IFEs. I believe it was 3.1, but I  
08:45 24 would need to double-check my records to be sure.

08:45 25 QUESTION: I want to mark some more

08:45 1 documents, if I may. Let me mark as Sterne Exhibit 7 a  
08:45 2 document -- a document labeled Sparta 1844 through 1854.

08:45 3 Mr. Sterne, if you could please take a  
08:45 4 look at Sterne Exhibit 7. I don't know if you've seen  
08:45 5 it before.

08:45 6 ANSWER: I have.

08:45 7 QUESTION: Can you tell me what Sterne  
08:45 8 Exhibit 7 is, please?

08:45 9 ANSWER: Yes. It is a description of the  
08:46 10 configuration of all the computer networking gear used  
08:46 11 in the IFD, IFD 1.1 with certain areas highlighted to  
08:46 12 show the components that were being used for some  
08:46 13 portion of the demonstrations.

08:46 14 QUESTION: To the best of your knowledge,  
08:46 15 does the first page of Sterne Exhibit 7 describe the  
08:46 16 Dynamic VPN demonstration that the TIS did at IFD 1.1?

08:46 17 ANSWER: I believe so.

08:46 18 QUESTION: Who was the individual, to the  
08:46 19 best of your recollection, who actually demonstrated  
08:46 20 Dynamic VPN at IFD 1.1?

08:46 21 ANSWER: It was probably Domenic Turchi.  
08:46 22 Again, Darrell Kindred would be the only other person,  
08:46 23 and I don't believe Darrell was involved at this point.

08:47 24 QUESTION: Now, the Dynamic VPN prototype  
08:47 25 appears to have evolved over time. Would you agree with

08:47 1 that?

08:47 2 ANSWER: Yes.

08:47 3 QUESTION: So when it comes to actually  
08:47 4 how it was implemented, that's something that is not  
08:47 5 within the scope of -- of your definitive authority?

08:47 6 ANSWER: Well, I would say, after 10 or 12  
08:47 7 years, I'm not sure I remember those details very well.  
08:47 8 Darrell Kindred, who did the programming, can tell you  
08:47 9 with greater accuracy. I can give you conceptually how  
08:47 10 I believe it works, but I may not be a hundred percent  
08:47 11 correct.

08:47 12 QUESTION: So the implementation details  
08:47 13 would have changed over time?

08:47 14 ANSWER: They -- implementation details  
08:47 15 would have changed over time, though not necessarily  
08:47 16 because the concept or the underlying ideas changed.  
08:47 17 It's just that the prototype is a partial implementation  
08:47 18 of the idea.

08:47 19 You kind of develop the things that you  
08:47 20 think are most interesting to a particular audience, and  
08:48 21 then it -- as time and money permits, you then backfill  
08:48 22 and, you know, create the other missing pieces. But  
08:48 23 that's the nature of prototyping, is you generally pick  
08:48 24 some things that you implement and some things that you  
08:48 25 don't, at least initially.

08:48 1 QUESTION: Do you think you're the best  
08:48 2 person to answer those questions, those implementation  
08:48 3 questions?

08:48 4 ANSWER: No.

08:48 5 QUESTION: And again, in order to know  
08:48 6 exactly what was demonstrated in the spring of '98,  
08:48 7 you'd need to look at the source code?

08:48 8 ANSWER: To know exactly what was  
08:48 9 demonstrated, yes.

08:48 10 QUESTION: Now --

08:48 11 ANSWER: Let me -- let me clarify that.

08:48 12 That would wouldn't be authoritative  
08:48 13 either because the demonstration didn't show everything  
08:48 14 that was in the implementation.

08:48 15 QUESTION: And turn again to this figure,  
08:49 16 Sparta 1513. It's Dynamic Security Perimeter -  
08:49 17 Establishing VPN.

08:49 18 ANSWER: Okay.

08:49 19 QUESTION: You see the domain names that  
08:49 20 are in that box in the bottom left?

08:49 21 ANSWER: Yes.

08:49 22 QUESTION: Are those standard top-level  
08:49 23 domain names?

08:49 24 ANSWER: I'm not sure I understand the  
08:49 25 question.

08:49 1 QUESTION: Do you know what a top-level  
08:49 2 domain name is?

08:49 3 ANSWER: Sure, like .com and .mil.

08:49 4 QUESTION: Right.

08:49 5 ANSWER: Sure. .mil is a top-level domain  
08:49 6 name.

08:49 7 QUESTION: Is it a standard top-level  
08:49 8 domain name that would be handled by an IETF-compliant  
08:49 9 domain name service?

08:49 10 ANSWER: I believe so.

08:49 11 QUESTION: And you understand what I mean  
08:49 12 by an IETF domain name service?

08:49 13 ANSWER: You're talking about conformance  
08:49 14 to a standard protocol.

08:49 15 QUESTION: Correct. So the domain names  
08:50 16 that are being referred to on this page of Exhibit 5 all  
08:50 17 possess standard top-level domain names, correct?

08:50 18 ANSWER: In this example, yes.

08:50 19 QUESTION: Was DVPN, Dynamic Virtual  
08:50 20 Private Network, as described in your paper, Exhibit 14,  
08:50 21 was that ever sold as a commercial product?

08:50 22 ANSWER: Not to my knowledge. Not -- not  
08:50 23 by my organization.

08:50 24 QUESTION: To your knowledge, was it ever  
08:50 25 sold by anyone?



08:50 1 ANSWER: Not to my knowledge.

08:50 2 QUESTION: Did -- did you ever seek or  
08:50 3 apply for any patent protection in connection with any  
08:50 4 of the ideas that were expressed in Exhibit 14 relating  
08:50 5 to Dynamic Virtual Private Networks?

08:51 6 ANSWER: No.

08:51 7 (End of video clip.)

08:51 8 MR. POWERS: The next witness, Your Honor,  
08:51 9 is Mr. Kindred, who worked with Mr. Sterne on the DVPN  
08:51 10 project.

08:51 11 (Video playing.)

08:51 12 QUESTION: Good afternoon, Mr. Kindred.

08:51 13 Can you please introduce yourself?

08:51 14 ANSWER: I am Darrell Kindred. I'm an  
08:51 15 employee currently here at Sparta, and I was in the --  
08:51 16 previous to my employment at Sparta, I was employed at  
08:51 17 McAfee, which was at times known as Network Associates,  
08:51 18 as a senior research scientist there.

08:51 19 QUESTION: What is your current job title  
08:51 20 at Sparta?

08:51 21 ANSWER: Senior research scientist.

08:51 22 QUESTION: Okay. When you joined Network  
08:51 23 Associates, was there a particular project that you were  
08:51 24 assigned to?

08:51 25 ANSWER: The first project that I was

08:51 1 assigned to after joining was the Dynamic VPN project.

08:52 2 QUESTION: Who -- when you joined, who was  
08:52 3 the -- the leader of the DVPN team?

08:52 4 ANSWER: Dan Sterne was the leader of  
08:52 5 the -- I mean, DVPN was one project under a general  
08:52 6 contract that Dan was -- was the project manager for, so  
08:52 7 he was directing the work.

08:52 8 QUESTION: And what was your role on the  
08:52 9 Dynamic VPN project?

08:52 10 ANSWER: I was the -- you know, at that  
08:52 11 point, I guess I was basically the lead developer, I  
08:52 12 would say, or the only -- the only developer, really, on  
08:52 13 the project at that time.

08:52 14 So Dan asked me to, you know, look into  
08:52 15 this code and -- and, you know, get it working on a --  
08:52 16 in a -- and -- you know, and prepare it for being  
08:52 17 demonstrated at other facilities.

08:52 18 QUESTION: And let me mark as Kindred  
08:53 19 Exhibit 1 a disk -- CD of -- a CD labeled Sparta 2236-1.

08:53 20 Is that code dated in Kindred Exhibit 1?

08:53 21 ANSWER: So there are a few ways that I  
08:53 22 can -- that I can say it's dated. The files in this  
08:53 23 directory have modification times that would be updated  
08:53 24 anytime that that file is modified.

08:53 25 And in most instances, these modification

08:53 1 times that I'm looking at in the DVPN D folder, for  
08:53 2 example, are February 1998, March 1998. There are a  
08:53 3 couple back in November of 1997.

08:53 4 You know, I could look at other files in  
08:53 5 here, but...

08:54 6 QUESTION: Now, can you describe for me  
08:54 7 the process of setting up a VPN, for example, from the  
08:54 8 Red Cross LAN to the FEMA LAN starting with a host on  
08:54 9 the Red Cross LAN who wants to communicate with a host  
08:54 10 who's located on the FEMA LAN?

08:54 11 ANSWER: Okay. And again, I'll be  
08:54 12 referring to the original implementation from '98 or  
08:54 13 thereabouts.

08:54 14 QUESTION: Please.

08:54 15 ANSWER: So a host in the Red Cross LAN  
08:54 16 wants to communicate with a host in the FEMA LAN. So  
08:54 17 I'll use it as an example that there might be a web  
08:54 18 server in the FEMA LAN that someone with a web browser  
08:54 19 in the Red Cross LAN may want to access.

08:54 20 They would type into their browser a URL  
08:54 21 that includes a host name for this host in the FEMA LAN.  
08:55 22 They would enter that into their browser. The browser  
08:55 23 or the operating system would then initiate a DNS  
08:55 24 request to find the IP address that corresponds to that  
08:55 25 host name.

08:55 1           That DNS request would go to the local Red  
08:55 2 Cross firewall first where the DVPN agent would  
08:55 3 intercept that DNS request. The DVPN agent would then  
08:55 4 forward the request to the domain name server.

08:55 5           I believe that was -- there was typically  
08:55 6 a standard domain name server on the firewall itself, so  
08:55 7 the DVPN agent would -- would basically proxy that DNS  
08:55 8 request and relay it to the local server, which would  
08:56 9 then send the request wherever it needed to be to -- to  
08:56 10 resolve the name so that that local DVP -- that local  
08:56 11 DNS server on the firewall might already have the  
08:56 12 information cached, it might already know what IP  
08:56 13 address corresponded to that name, or it might have to  
08:56 14 go to a server, say, at the FEMA LAN or elsewhere to  
08:56 15 resolve that name.

08:56 16           When the response to that request comes  
08:56 17 back, it, again, comes back from the local DNS server on  
08:56 18 the firewall to the DVPN agent. The DVPN agent inspects  
08:56 19 the response and looks -- because the response is going  
08:56 20 to have a -- the IP address of that remote server in it.

08:56 21           Okay. So that would be an IP address  
08:56 22 within the FEMA LAN. The DVPN agent will look at that  
08:56 23 IP address and -- and attempt to determine whether that  
08:57 24 address is inside a community member, coalition member  
08:57 25 enclave in this case.

08:57 1           In order to do that, the information on  
08:57 2 who the enclave members are is stored in DNS as well,  
08:57 3 but this is a different DNS zone that is maintained or  
08:57 4 for which the master for that DNS zone is the Community  
08:57 5 Manager.

08:57 6           It's going to retrieve information from --  
08:57 7 from -- either directly from the Community Manager or  
08:57 8 may already have it cached as to who are the members of  
08:57 9 the enclave. If any of those enclave members -- you  
08:57 10 know, each of -- each of those records for the enclave  
08:58 11 members will include a specification of what's the  
08:58 12 subnet, what's the IP address range that sits behind the  
08:58 13 firewall, so whatever is the range of firewall addresses  
08:58 14 within the FEMA LAN, for instance.

08:58 15           So the DVPN agent will notice that the  
08:58 16 response to the DNS request is an IP address from that  
08:58 17 LAN. It will notice that it has not already configured  
08:58 18 a VPN tunnel to that FEMA firewall. It will then  
08:58 19 rewrite configuration of the configuration file that  
08:58 20 is -- that is read by the VPN software that's part of  
08:58 21 the firewall.

08:58 22           It will write the new information in there  
08:58 23 that the firewall needs in order to establish the VPN  
08:58 24 tunnel with the FEMA firewall, and the -- and it will  
08:58 25 then signal the local firewall, the local fire -- the

08:59 1 local VPN process on the -- on the Red Cross firewall to  
08:59 2 reread its configuration, and upon rereading its  
08:59 3 configuration, it will initiate negotiation of a VPN  
08:59 4 tunnel with the FEMA firewall.

08:59 5 So that is the VPN agent in the -- I'm  
08:59 6 sorry -- the -- yeah -- the VPN component in the Red  
08:59 7 Cross firewall will initiate negotiation of a tunnel  
08:59 8 with the corresponding software on the FEMA.

08:59 9 Meanwhile, the VPN agent, which has  
08:59 10 received this -- this DNS response back, will relay that  
08:59 11 response back to the host that requested it inside the  
08:59 12 fire -- inside the Red Cross LAN.

08:59 13 The Red Cross LAN host will now have the  
08:59 14 IP address that it needs to send the actual request to  
09:00 15 the web server to ask for whatever web page it wanted.

09:00 16 That request will go out to the firewall  
09:00 17 and through the tunnel that has been established to the  
09:00 18 FEMA firewall where it will be -- come out of the tunnel  
09:00 19 at that end and be relayed on to the server in the FEMA  
09:00 20 network.

09:00 21 And at that point, the client in the Red  
09:00 22 Cross LAN and the server in the FEMA LAN are able to  
09:00 23 communicate securely through this VPN tunnel that's been  
09:00 24 established between their firewalls.

09:00 25 QUESTION: So the name itself for the --

09:00 1 the domain name that's associated with what you had  
09:00 2 referred to as the FEMA server, that domain name didn't  
09:00 3 trigger the VPN being initiated; it was a response to  
09:01 4 that domain name request; is that right?

09:01 5           ANSWER: The request -- the request and  
09:01 6 the response are both intercepted. The response is what  
09:01 7 contains the information necessary to determine whether,  
09:01 8 you know -- the DMLP agent uses information out of the  
09:01 9 response to determine whether -- as part of the  
09:01 10 information that needs to determine whether a new tunnel  
09:01 11 needs to be set up.

09:01 12           (End of video clip.)

09:01 13           MR. SAYLES: May it please the Court.

09:01 14           At this time, Microsoft calls Dr. Keith  
09:01 15 Ugone --

09:01 16           THE COURT: Okay.

09:01 17           MR. SAYLES: -- its damages expert, and he  
09:01 18 has not been sworn.

09:01 19           THE COURT: Dr. Ugone?

09:02 20           MR. SAYLES: May I approach and hand up  
09:02 21 the exhibits?

09:02 22           THE COURT: Yes, you may.

09:02 23           COURTROOM DEPUTY: Please raise your hand.

09:02 24           (Witness sworn.)

09:02 25           MR. SAYLES: May it please the Court.

09:02 1 THE COURT: Proceed.

09:02 2 KEITH UGONE, Ph.D., DEFENDANT'S WITNESS, SWORN

09:02 3 DIRECT EXAMINATION

09:02 4 BY MR. SAYLES:

09:02 5 Q. Dr. Ugone, everyone in the courtroom knows that  
09:02 6 we're under time constraints, so let's go to work right  
09:02 7 away, without diminishing the importance of your work,  
09:02 8 all right?

09:02 9 A. Okay.

09:02 10 Q. And let's work rapidly.

09:02 11 Tell us your name, please.

09:02 12 A. My name is Keith Raymond Ugone. Last name is  
09:02 13 spelled U-G-O-N-E.

09:02 14 Q. Where do you live?

09:02 15 A. I actually live in Grand Saline, Texas. If  
09:02 16 you've ever been to Trade Days on I-20 there in Canton,  
09:02 17 I live the next exit over.

09:02 18 Q. How long have you lived in Texas?

09:02 19 A. Lived in Texas since 1994, sir, about 16 years.

09:02 20 Q. Have children?

09:02 21 A. I've got two sons. Son No. 1, Kyle, is a  
09:03 22 captain in the United States Marine Corps, and Son No.  
09:03 23 2, Casey, lives with me and goes to Tyler Junior  
09:03 24 College.

09:03 25 Q. What do you do for a living, sir?



09:03 1           A.     I'm actually an economist.  Sometimes I'm  
09:03 2 referred to as a forensic economist, and I'm also a  
09:03 3 damage quantifier.

09:03 4           Q.     Would you tell the ladies of the jury what a  
09:03 5 forensic economist or a damage quantifier is.

09:03 6           A.     The easiest way to think about it is, is that  
09:03 7 companies like VirnetX and Microsoft sometimes get into  
09:03 8 commercial disputes, and one of them is claiming  
09:03 9 wrongful conduct and claiming they've been monetarily  
09:03 10 damaged.

09:03 11                         So someone has to evaluate the amount of  
09:03 12 the alleged monetary damage, and that's what I do as a  
09:03 13 damage quantifier.

09:03 14           Q.     And what was your assignment in this case?

09:03 15           A.     I really had two assignments.  One was to  
09:03 16 independently evaluate VirnetX's claim damages should  
09:03 17 the '135 patent and the '180 patent be found to have  
09:03 18 been infringed by Microsoft and also that those patents  
09:04 19 are found to be valid.

09:04 20                         So if those conditions hold, I have an  
09:04 21 opinion as to the monetary damages suffered by VirnetX,  
09:04 22 but I was also asked to evaluate the opinions that  
09:04 23 Mr. Reed presented in court as to what he felt VirnetX's  
09:04 24 damages were.

09:04 25           Q.     And before we get into the work you did on this

09:04 1 matter, tell us about your educational background.

09:04 2 A. I have the slide here. I've got my  
09:04 3 undergraduate degree in economics from the University of  
09:04 4 Notre Dame in 1977, and I have a master's degree from  
09:04 5 the University of Southern California, which I received  
09:04 6 in 1979. And I got my Ph.D. in economics from Arizona  
09:04 7 State University in 1983. So I went to college for 10  
09:04 8 straight years.

09:04 9 Q. Would you tell us a bit about your work  
09:04 10 experience after you got your Ph.D.?

09:04 11 A. Well, after I got my Ph.D. in 1983, I worked at  
09:04 12 one of the California State University systems schools,  
09:04 13 California State Northridge, for a couple of years.

09:04 14 But then in 1985, I joined  
09:05 15 PriceWaterhouse, which I'm sure you've just heard of  
09:05 16 them, the company that counts the Academy Awards  
09:05 17 ballots. But I worked for them for 18 years, from 1985  
09:05 18 all the way up to 2003.

09:05 19 At the very end of 2003, I joined Analysis  
09:05 20 Group, and I've been there ever since. So about six or  
09:05 21 seven years.

09:05 22 Q. Have you done this type of work in patent cases  
09:05 23 before?

09:05 24 A. Yes, I have.

09:05 25 Q. And have you testified in patent cases before?

09:05 1 A. Yes, I've testified in patent cases.

09:05 2 Q. Have you done this type of work for some  
09:05 3 companies that the jury might have heard of or be  
09:05 4 familiar with by name?

09:05 5 A. Yes. I've done this work in the past for  
09:05 6 Microsoft. I have done this work for Samsung. I have  
09:05 7 done this work for AOL, for Electronic Data Systems. I  
09:05 8 have done this work for TiVo. So a large number of  
09:05 9 companies that people have heard of.

09:05 10 Q. Let's get to your assignment. What did you do  
09:05 11 to prepare yourself to give the opinions that you hold  
09:05 12 in this case?

09:05 13 A. Well, we can see a slide here that shows a  
09:06 14 listing of the documentation I reviewed. Actually,  
09:06 15 there are many, many more documents than this. This is  
09:06 16 just an overview.

09:06 17 But you can see I looked at Microsoft  
09:06 18 documents, VirnetX -- VirnetX documents. I considered  
09:06 19 the trial testimony; I was reading deposition  
09:06 20 transcripts; I had interviews with Microsoft employees;  
09:06 21 I had interviews with Dr. Johnson. You can see  
09:06 22 everything that I reviewed. This is probably a good  
09:06 23 summary of that.

09:06 24 Q. Now, you heard Mr. Reed testify about the  
09:06 25 materials that he reviewed.

09:06 1                   Essentially, did you and Mr. Reed have  
09:06 2 access to the same materials?

09:06 3           A.     Yes. We would have had access to the same  
09:06 4 materials.

09:06 5           Q.     Now, as an initial matter, let me ask you this  
09:06 6 before we get started.

09:06 7                   From an economic perspective what happens  
09:06 8 if the jury finds that Microsoft does not infringe these  
09:06 9 patents?

09:06 10           A.     Well, if Microsoft is found not to infringe the  
09:06 11 patents in dispute here, then from an economic  
09:06 12 perspective, there's been no monetary harm to VirnetX,  
09:07 13 so there would be no damages.

09:07 14           Q.     And if the jury finds these patents invalid,  
09:07 15 from an economic standpoint, what does that mean?

09:07 16           A.     And so that would, again, lead to the situation  
09:07 17 where there's no monetary damages in that situation.

09:07 18           Q.     All right. Now let's go to your opinions.  
09:07 19 Before we get into the details, give the jury an  
09:07 20 overview of what your opinions are?

09:07 21           A.     Sure. I have a couple of opinions. First one  
09:07 22 is is that Mr. Reed, in his presentation, has  
09:07 23 significantly overstated VirnetX's claim damages.

09:07 24                   The opinions I hold is that the parties,  
09:07 25 if they had negotiated a license to the patents in

09:07 1 dispute here, would have negotiated a lump-sum payment  
09:07 2 structure and the payment would have ranged between \$9  
09:07 3 million and \$15 million for a license to the two patents  
09:07 4 in dispute here.

09:07 5 Q. Mr. Reed did a Georgia-Pacific analysis to  
09:07 6 determine the royalty payment that he testified about in  
09:08 7 his testimony, and you were here for that?

09:08 8 A. Yes.

09:08 9 Q. Essentially, did Mr. Reed describe the  
09:08 10 framework of a Georgia-Pacific analysis properly?

09:08 11 A. Yes, he did. There's 15 Georgia-Pacific  
09:08 12 factors, and I'm not going to dispute his presentation.  
09:08 13 I think those are generally accepted factors.

09:08 14 Q. All right. So we won't go into details about  
09:08 15 explaining those factors except as they relate in other  
09:08 16 ways to your opinions. But did you do a Georgia-Pacific  
09:08 17 analysis?

09:08 18 A. Yes.

09:08 19 Q. Now, Mr. Reed conducted what is known as a  
09:08 20 hypothetical negotiation analysis; is that right?

09:08 21 A. Yes.

09:08 22 Q. Did you also perform a hypothetical negotiation  
09:08 23 analysis?

09:08 24 A. Yes, I did.

09:08 25 Q. In doing that in the legal framework you are to

09:08 1 follow, are you required to make any assumptions?

09:08 2 A. I have and I have a slide on that, and you can  
09:08 3 see a negotiating table here. And it's a hypothetical  
09:08 4 negotiation because the parties did, in fact, not  
09:08 5 negotiate a license in the past, but I am required to  
09:09 6 make certain assumptions, which I have listed on the --  
09:09 7 the right side of the chart there.

09:09 8 Some of the assumptions I am required to  
09:09 9 make are that the patents are valid, enforceable and  
09:09 10 infringed. And that the parties, both VirnetX and  
09:09 11 Microsoft, would have a willingness to negotiate, that  
09:09 12 VirnetX would be willing to give a license to the  
09:09 13 patents we've been talking about and that Microsoft  
09:09 14 would be willing to acquire a license.

09:09 15 But what's important is in this  
09:09 16 hypothetical negotiation is that the parties go into the  
09:09 17 negotiation as prudent business people. They go in  
09:09 18 smart. They have knowledge as to the relevant economic  
09:09 19 factors to help them determine the appropriate royalty  
09:09 20 payment for the use of the patents, and they have  
09:09 21 reasonable expectations as to future events.

09:09 22 And then finally, I think as the jury has  
09:09 23 understood, nobody can kind of leave this room without  
09:09 24 having reached an agreement, so they must reach an  
09:10 25 agreement.

09:10 1                   But this is the general framework of the  
09:10 2 hypothetical negotiation.

09:10 3           Q.     In a hypothetical negotiation, can one side  
09:10 4 dictate to the other the outcome?

09:10 5           A.     Well, the best way to think about it is we're  
09:10 6 trying to determine a reasonable royalty payment, and so  
09:10 7 what that means is one side can't dictate the outcome.  
09:10 8 There has to be the inner play between the negotiations  
09:10 9 to determine this reasonable payment.

09:10 10          Q.     Now, in the context of a case like we have  
09:10 11 here, you are required to do this hypothetical  
09:10 12 negotiation framework because that's the legal method in  
09:10 13 which you do it; is that right?

09:10 14          A.     Yes.

09:10 15          Q.     But do the real world facts count?

09:10 16          A.     Yes, the real world facts count. As I said,  
09:10 17 these are business people going into the negotiations,  
09:10 18 and so there would have been relevant financial  
09:10 19 information and economic considerations at the time of  
09:10 20 the hypothetical negotiation. So even though it's a  
09:10 21 hypothetical negotiation, you're still using real world  
09:10 22 information and real world economic considerations.

09:11 23          Q.     And let's talk about the hypothetical  
09:11 24 negotiation. Remind the ladies of the jury when it  
09:11 25 would have taken place.

09:11 1 A. Well, it would have been in early 2003 or March  
09:11 2 2003. That's the time of the alleged first  
09:11 3 infringement, so that's the point when Microsoft would  
09:11 4 have required a license to the patents-in-suit, so  
09:11 5 that's when the negotiations would have taken place.

09:11 6 Q. Between which parties?

09:11 7 A. And at that time, SAIC owned the patents that  
09:11 8 have been discussed here, so it'd be between SAIC and  
09:11 9 Microsoft. So, hopefully, I'm not hitting this too  
09:11 10 much. I don't know if that's disturbing to people.

09:11 11 Q. Could you tell us what would have been  
09:11 12 discussed at the negotiation, what topics?

09:11 13 A. Well, what I'm really here to present is the  
09:11 14 economic questions that would be answered at the  
09:11 15 hypothetical negotiation, and I've kind of hinted at  
09:11 16 these.

09:11 17 But there's really two primary ones. The  
09:11 18 first one is what's the payment structure for a license  
09:11 19 to the patents-in-suit, and the second one is what's the  
09:11 20 payment amount. So how much is going to be paid and  
09:12 21 what are the -- what's the structure of those payments.  
09:12 22 Those are two important economic questions to be  
09:12 23 addressed.

09:12 24 Q. And what types of payment structure are there?

09:12 25 A. Well, I've got a slide that shows two of them.



09:12 1 There's actually various combinations, but it's easiest  
09:12 2 to think about these two. The first is called a  
09:12 3 lump-sum payment structure, and a lump-sum payment  
09:12 4 structure, as the slide says, is just sort of an upfront  
09:12 5 paid-in-full royalty payment.

09:12 6 So the parties negotiate. They determine  
09:12 7 the amount of the payment as paid upfront and then you  
09:12 8 have a license and a freedom to operate using the  
09:12 9 patents that have been licensed, so it's one-time  
09:12 10 payment.

09:12 11 The second type is called a running  
09:12 12 royalty, and the easiest way to think about that is that  
09:12 13 that's one that's -- could be based on volume. So if  
09:12 14 the volumes go up, there's higher payments; if the  
09:12 15 volumes go down, there's lower payments. So there can  
09:12 16 either be a lump-sum upfront payment or there can be a  
09:13 17 running royalty payment.

09:13 18 Q. Now in this case --

09:13 19 THE COURT: Excuse me, Dr. Ugone. You may  
09:13 20 want to lean back a little bit or move that. You can  
09:13 21 move that microphone out a little bit. It's sort of  
09:13 22 bent around there. You're popping a little bit.

09:13 23 THE WITNESS: Okay.

09:13 24 Q. (By Mr. Sayles) Now, in this case you know Mr.  
09:13 25 Reed is contending for a running royalty, right?

09:13 1 A. Yes.

09:13 2 Q. And your opinion is that there would have been  
09:13 3 an upfront paid-in-full royalty?

09:13 4 A. That's correct.

09:13 5 Q. And are there advantages and disadvantages to  
09:13 6 either structure?

09:13 7 A. Sure. Yes, there's -- depending on sort of the  
09:13 8 facts and circumstances and -- and the economic  
09:13 9 circumstances surrounding the businesses and the  
09:13 10 license, that dictates which of these makes sense. So  
09:13 11 yes, there are advantages and disadvantages to both.

09:13 12 Q. All right. Now let's talk about the  
09:13 13 hypothetical negotiation. And could you tell the jury  
09:13 14 what economic factors would have been important in a  
09:13 15 hypothetical negotiation between SAIC on the one hand  
09:14 16 and Microsoft on the other?

09:14 17 A. Well, I'm going to go through six topics of  
09:14 18 discussion. I'm going to briefly touch on the thousands  
09:14 19 of features and functionalities contained in the accused  
09:14 20 software products; I'm going to talk about the usage of  
09:14 21 the accused functionalities; I'm going to talk about  
09:14 22 Microsoft's patent licensing practices; I'm going to  
09:14 23 talk about SAIC's failure to commercialize the SAIC  
09:14 24 technology.

09:14 25 And I think we've -- the jury has heard of

09:14 1 this. We're only going to talk about the SAIC licenses  
09:14 2 with SafeNet and VirnetX, and I'm also going to talk  
09:14 3 about certain value indicators that existed over time.

09:14 4 Now, some of these things you've already  
09:14 5 heard of, but what I'm going to try to do is take these  
09:14 6 and put them in the context of the hypothetical  
09:14 7 negotiation so you can see how these would be used in  
09:14 8 the negotiating process to determine a reasonable  
09:14 9 royalty payment.

09:14 10 Q. All right. Let's start with the first one.

09:14 11 Can you explain the economic significance  
09:14 12 of the fact that there were thousands of features and  
09:15 13 functionalities in the products that are accused here?

09:15 14 A. Well, this -- from just listening to trial  
09:15 15 throughout the past week seems to be undisputed,  
09:15 16 especially when you talk about Windows XP and Windows  
09:15 17 Vista, that there's many, many basic, but important  
09:15 18 features and functionalities in those operating systems.

09:15 19 And I think you've seen some of the  
09:15 20 witnesses use a computer. Well, the operating system  
09:15 21 helps the computer recognize the keyboard or the  
09:15 22 operating system, allows the text and the graphics to be  
09:15 23 displayed on a monitor. The operating system helps the  
09:15 24 computer recognize a printer so you can print documents.  
09:15 25 Those are all important features and some of the

09:15 1 thousands of features that are included in the operating  
09:15 2 systems in XP and Vista that we've been talking about  
09:15 3 up. And I think as we've also heard that there's many,  
09:15 4 many hundreds, if not thousands, of APIs as well.

09:16 5 Q. And from an economic standpoint, what is the  
09:16 6 significance of that?

09:16 7 A. Well, the significance of that is if you look  
09:16 8 at the complexity of the product, that with XP and  
09:16 9 Vista, for example, there's these thousands of  
09:16 10 functionalities, and what the parties are negotiating  
09:16 11 over are just some limited features or functionalities  
09:16 12 within this much larger software product in a sense.

09:16 13 Q. The next economic consideration you mentioned  
09:16 14 that you would discuss is the usage of these accused  
09:16 15 functionalities. Would you explain that, please?

09:16 16 A. Yes. And this would be important to the  
09:16 17 negotiators at the -- at the hypothetical negotiation.  
09:16 18 And I have a slide on this one as well.

09:16 19 But when I'm talking about usage, what I'm  
09:16 20 really looking at, first of all, is sort of the usage of  
09:16 21 the accused functionalities relative to the usage of  
09:16 22 just the XP and Vista operating systems in general. And  
09:16 23 relatively speaking, obviously, these accused  
09:16 24 functionalities are used in a much more limited sense  
09:17 25 than the entire operating systems.

09:17 1 But in this example here, I just tried to  
09:17 2 give a little bit of an idea of that, that over -- if  
09:17 3 you look from 2003 to 2008, there were roughly 280  
09:17 4 million copies of XP and Vista in the United States.  
09:17 5 But at the same time people that had client access  
09:17 6 licenses that allowed LCS and OCS to be used with XP and  
09:17 7 Vista, so those were licenses that would allow, in a  
09:17 8 sense, a combination of these software products, were  
09:17 9 only about 15 million dollars -- 15 million copies. If  
09:17 10 we roundly look at those numbers, 14.8 million.

09:17 11 The point is that's much less than the 280  
09:17 12 million, and that would be important to the negotiators  
09:17 13 at that negotiating table.

09:17 14 Q. Dr. Ugone, I'm going to point out above your  
09:17 15 head here the right-hand corner where there's a DX  
09:17 16 number there.

09:18 17 Are there exhibit references on the  
09:18 18 graphics that you've prepared to explain your testimony?

09:18 19 A. Yes.

09:18 20 Q. And so this data comes from information that  
09:18 21 was available to you and Mr. Reed?

09:18 22 A. That's correct.

09:18 23 Q. Now Mr. Reed concluded that had Microsoft would  
09:18 24 agree to pay royalties relating to the '135 patent for  
09:18 25 each and every copy of Windows XP and Vista?

09:18 1 A. That's correct. So he's -- he is calculating  
09:18 2 royalties on the big blue bar, even though it's -- it  
09:18 3 would be the -- my understanding -- for the alleged  
09:18 4 infringement, that there would have to be this  
09:18 5 combination of -- for the '135 patent XP and Vista with  
09:18 6 LCS and OCS.

09:18 7 Q. Do you agree with Mr. Reed's conclusion?

09:18 8 A. No, I do not.

09:18 9 Q. Why not?

09:18 10 A. Well, if you think about it, if you are a  
09:18 11 business person at the negotiating table, while you're  
09:18 12 negotiating a license to the '135 and the '180 patent,  
09:18 13 you know that there's an awful lot of copies of XP and  
09:18 14 Vista that are not going to be used in an alleged  
09:18 15 infringing way, and so that's going to be an important  
09:19 16 economic consideration at the hypothetical negotiation.

09:19 17 Q. For the '135 patent, if one must use LCS or OCS  
09:19 18 with XP or Vista in order to use the functionality  
09:19 19 that's accused, have you done the math to see what that  
09:19 20 usage is?

09:19 21 A. Well, you would -- if you do a division here,  
09:19 22 you get about 5.3 percent.

09:19 23 Q. And what is it that Mr. Reed did in this  
09:19 24 regard?

09:19 25 A. Well, he was applying a royalty rate to all the

09:19 1 copies of XP and Vista, the revenues associated with  
09:19 2 them.

09:19 3 Now, I have to be a little careful. He  
09:19 4 did some adjustments. If you recall, I think he had  
09:19 5 40 -- 44 to 48 billion dollars of sales. He adjusted  
09:19 6 that down ultimately to 30 billion, but it's still a  
09:19 7 substantial number of the XP and Vista copies.

09:19 8 Q. So let me see if I understand this correctly.  
09:19 9 Is it your opinion that Mr. Reed thinks Microsoft would  
09:19 10 have, at the table, agreed to pay a royalty on over 250  
09:20 11 million copies of XP and Vista even though both parties  
09:20 12 would know those copies wouldn't infringe the '135  
09:20 13 patent?

09:20 14 A. Well, he -- yes, he essentially is -- is giving  
09:20 15 that opinion.

09:20 16 Q. And do you agree with that analysis?

09:20 17 A. No, I do not.

09:20 18 Q. And from the standpoint of the hypothetical  
09:20 19 negotiation, tell us briefly why not.

09:20 20 A. Well, again, think about what a -- what prudent  
09:20 21 business people would do. And this is from an economic  
09:20 22 perspective. And from an economic perspective, you'd be  
09:20 23 looking at the limited usage of the features that the  
09:20 24 license would be required to have Microsoft provide to  
09:20 25 its customers, and those are much more limited than all

09:20 1 the copies of XP and Vista.

09:20 2           So a prudent business person would not  
09:20 3 agree to paying royalties on all the copies of XP and  
09:20 4 Vista even with some adjustments; and frankly, SAIC on  
09:20 5 the other side of the negotiating table, if you think  
09:20 6 about it, would have reasonable expectations as to the  
09:21 7 royalty base as well. So they would be taking that into  
09:21 8 account as well.

09:21 9           Q. I want to shift your attention now to the  
09:21 10 claims of the '180 patent and the feature of PNRP Plus  
09:21 11 Grouping. Regarding this usage idea, do you have a  
09:21 12 similar opinion?

09:21 13           A. Yes. And -- and we've heard some of this  
09:21 14 testimony, that there are no applications using the  
09:21 15 PeerNet APIs for Windows XP. We've heard testimony that  
09:21 16 there was only one application, Windows Meeting Space,  
09:21 17 that used the PeerNet APIs and -- in Windows Vista. And  
09:21 18 if we get a little bit more technical about it, there  
09:21 19 was some discussion about a PNRP Plus Grouping  
09:21 20 functionality in a sense, but that was rarely, if ever,  
09:21 21 used in conjunction with Windows Meeting Space.

09:21 22           So, again, the point is, like I was saying  
09:21 23 before, but now we're looking at the PeerNet APIs that,  
09:21 24 again, there's limited usage and the parties  
09:22 25 realistically would not expect to have a huge royalty



09:22 1 base or payments on a huge royalty base when there's  
09:22 2 much more limited usage of those functionalities.

09:22 3 Q. And the parties would know that at the  
09:22 4 negotiating table?

09:22 5 A. Yes.

09:22 6 Q. Now let me shift your attention to the other  
09:22 7 area, the third area that you said you would address and  
09:22 8 that's patent licensing practices.

09:22 9 Could you describe what you did in this  
09:22 10 regard, please?

09:22 11 A. Yes. So I looked at 20 Microsoft what's called  
09:22 12 inbound patent license agreements. And I have to  
09:22 13 explain that a little bit. But we're -- we're trying to  
09:22 14 understand what are the licensing practices of the  
09:22 15 parties at the hypothetical negotiation. So, in a  
09:22 16 sense, you know, what are their positions going in and  
09:22 17 how do they like to run their business with respect to  
09:22 18 licenses to intellectual property.

09:22 19 And we can show a slide here. Perhaps.  
09:22 20 There we go.

09:22 21 Q. First of all, before you go into that, tell us  
09:22 22 what inbound means in this context.

09:23 23 A. Right. So we have Microsoft inbound patent  
09:23 24 license agreements. And think about it as inbound  
09:23 25 versus outbound. On the inbound ones, it's Microsoft

09:23 1 paying the money out to get a license coming in to use  
09:23 2 those -- whatever patents are involved in the license  
09:23 3 agreement.

09:23 4           So the inbound patent license agreements  
09:23 5 I'm going to talk about is where Microsoft was the one  
09:23 6 acquiring the patent. In other words, they were -- not  
09:23 7 acquiring the patent, acquiring a license to use the  
09:23 8 teachings of the patent. That's what we're talking  
09:23 9 about.

09:23 10         Q. All right. I interrupted you. I'd like you  
09:23 11 to, using the slide as an aid, describe for the jury the  
09:23 12 significance of the inbound licenses.

09:23 13         A. Well, what I'm going to do is just give you an  
09:23 14 overview. There were 20 inbound patent license  
09:23 15 agreements that Microsoft had entered into. And if you  
09:23 16 look at those, virtually all of them were non-exclusive.  
09:23 17 They were software patent license agreements.  
09:23 18 Generally, they had 10 or fewer patents associated with  
09:24 19 them. They took place over the 1997 to 2007 time  
09:24 20 period.

09:24 21           So what we're trying to do here is look at  
09:24 22 patent license agreements inbound that Microsoft had  
09:24 23 entered into, really, kind of from an economic  
09:24 24 perspective to see in those patent license agreements  
09:24 25 what did they do. And all 20 of those were lump-sum

09:24 1 payments that Microsoft made for the use of the  
09:24 2 teachings of the patent.

09:24 3 Q. And so what is the economic significance of  
09:24 4 that at a hypothetical negotiation?

09:24 5 A. Well, Microsoft, from an economic perspective,  
09:24 6 would go into the negotiations and that would be the  
09:24 7 type of payment structure that they would want for a  
09:24 8 license to the '135 patent and the '180 patent.

09:24 9 Q. Now let's shift to the failure to commercialize  
09:24 10 the technology in the '135 patent.

09:24 11 Would you explain what you mean when you  
09:24 12 say there was a failure to commercialize the technology?

09:24 13 A. Right. And what we're doing here is looking in  
09:25 14 some of the economic forces or pressures that would have  
09:25 15 been present at the hypothetical negotiation. And as  
09:25 16 we've entitled this chart, there was sort of what we  
09:25 17 call a market rejection of the technology. And we saw  
09:25 18 that -- and I think the jury has heard this over the  
09:25 19 past week -- that In-Q-Tel did not want to do any  
09:25 20 additional funding into this technology; that various  
09:25 21 government agencies did not want to pay any money to use  
09:25 22 the technology; that investors and venture capitalists  
09:25 23 from a market perspective and from an economic  
09:25 24 perspective were not willing to invest in the  
09:25 25 technology; that businesses did not want to use the

09:25 1 technology. And we've even heard about SafeNet entering  
09:25 2 into a license agreement with SAIC, but after evaluating  
09:25 3 the technology for six months, terminated that license  
09:25 4 agreement.

09:25 5                   So what we have here are a series of  
09:25 6 indicators of the unwillingness of the market to invest  
09:26 7 in the technology, and that would have been very  
09:26 8 important.

09:26 9           Q.     And what are the economic implications of these  
09:26 10 failed attempts by SAIC to commercialize?

09:26 11           A.     Well, so what you would have is SAIC going into  
09:26 12 the hypothetical negotiation, in a sense, on the heels  
09:26 13 of others out in the marketplace unwilling to invest in  
09:26 14 the technology to provide funding. So that would have  
09:26 15 been top of the mind to them, and that would have  
09:26 16 tempered or lowered some of their expectations of the  
09:26 17 type of payment that they could get for a license to  
09:26 18 the -- to the use of the technologies we've been talking  
09:26 19 about here.

09:26 20                   And, in fact, the SafeNet rejection of the  
09:26 21 license agreements I believe occurred in December of  
09:26 22 2002, which would have been only months before the  
09:26 23 hypothetical negotiation in early 2003.

09:26 24                   So, from SAIC's mindset, there's sort of a  
09:27 25 difficult economic situation where no one is willing

09:27 1 to -- to invest. And they're going to know from an  
09:27 2 economic perspective that riskiness associated with this  
09:27 3 technology. And not only would that temper what their  
09:27 4 expectations would be, but it would -- also could lead  
09:27 5 them to the willingness to accept a lump-sum amount.

09:27 6 Now from the other perspective, you have  
09:27 7 Microsoft that would know these same things, and that  
09:27 8 would place downward pressure on the amount that they  
09:27 9 were willing to pay. Because there's been market  
09:27 10 indicators no one's willing to invest in the technology.

09:27 11 Q. All right. Let's -- let's talk about the  
09:27 12 license to the patents-in-suit. You heard Mr. Reed  
09:27 13 identify two licenses to the patents, specifically the  
09:27 14 SAIC SafeNet license and the SAIC VirnetX license.

09:27 15 What is your opinion regarding those  
09:27 16 licenses?

09:27 17 A. Well, we have to be very careful with these  
09:27 18 licenses. There's the SAIC/SafeNet license that  
09:27 19 Mr. Reed used as a -- as a key benchmark and he talked  
09:28 20 about the 20 percent. Well, the first thing we have to  
09:28 21 realize is that was sort of a beginning point that  
09:28 22 Mr. Reed made adjustments to.

09:28 23 But the point is with the SafeNet license  
09:28 24 agreement of 20 percent, the safe -- or I'm sorry -- the  
09:28 25 SAIC/SafeNet license agreement of 20 percent, the

09:28 1 SAIC/VirnetX agreement 15 percent, I think the important  
09:28 2 takeaway is while those were stated rates in the  
09:28 3 agreements, there's been no payments. SAIC has not --  
09:28 4 did not receive any payments from SafeNet. And, in  
09:28 5 fact, what SafeNet did was terminate the agreement and  
09:28 6 did not make any payments.

09:28 7           And I want to be a little careful on the  
09:28 8 VirnetX license agreement. There were some \$50,000  
09:28 9 fixed payments that had to be made each year, so I think  
09:28 10 they might have paid close to \$200,000 up to this point,  
09:28 11 but they have not made any royalty payments related to  
09:28 12 products. So that's what I mean when I say there's no  
09:28 13 payments.

09:28 14           But the key is that these were key  
09:28 15 benchmarks being used by Mr. Reed. But in the sense of  
09:29 16 a product where royalties have to be made from sales of  
09:29 17 the product, that has not occurred.

09:29 18           Q. All right. Next, let's talk about the various  
09:29 19 value indicators that you said you would discuss.

09:29 20           A. Right.

09:29 21           Q. Can you tell us what you mean by this, please?

09:29 22           A. And what I'm looking at here is that if you  
09:29 23 look at the documentation and if you look at what was  
09:29 24 happening, and I'm going to say contemporaneously, what  
09:29 25 were the businesses looking at, how were they valuing

09:29 1 things, you can see this sort of timeline across the  
09:29 2 bottom. And I will just go through it quickly. That  
09:29 3 SAIC internally around February of 2001, in that time  
09:29 4 period, was looking at valuating a company that had the  
09:29 5 SAIC -- SAIC technology at about \$15 million.

09:29 6 In-Q-Tel, in their discussions with SAIC,  
09:29 7 said no that the value's really this point currently.  
09:29 8 That's what we're talking about, at that moment in time,  
09:30 9 the value is \$10 million.

09:30 10 The venture capitalists were saying back  
09:30 11 to SAIC at this moment in time, it's worth \$12 million.  
09:30 12 And there's even a document that shows that SAIC was  
09:30 13 valuing the technology, not a company including the  
09:30 14 technology, but the technology itself, at that moment in  
09:30 15 time at \$2.7 million.

09:30 16 Q. Let me stop you right there for a moment.

09:30 17 A. Okay.

09:30 18 Q. Now we have on the graph that the ladies are  
09:30 19 seeing a DX number under each one of these. Are these  
09:30 20 the documents that support what you're saying here and  
09:30 21 where these numbers can be found?

09:30 22 A. Yes.

09:30 23 Q. I notice that there are two green bars on the  
09:30 24 graph. Could you explain what those mean, please?

09:30 25 A. Yes, sir. Two green lines, now a box is above

09:30 1 them. But the first of the two tells us in the timeline  
09:30 2 when the '135 patent issued and that was December of  
09:30 3 2002, and then the second green bar to the right of the  
09:30 4 first one tells us or shows us diagrammatically where  
09:31 5 the hypothetical negotiation would have been on this  
09:31 6 timeline. So that's March of 2003.

09:31 7 Q. All right. Now, before we move on, this \$2.7  
09:31 8 million amount that was put on the value of the  
09:31 9 technology just before the hypothetical negotiation, is  
09:31 10 that an SAIC internal document?

09:31 11 A. Yes, it is.

09:31 12 Q. I see a \$15.4 million number on the bar in the  
09:31 13 chart that has Larsen 4/3 below it. What is that?

09:31 14 A. So that was in April 2003. They were  
09:31 15 discussing a potential spinoff of the technology in the  
09:31 16 company. And currently at that point in time they were  
09:31 17 trying to raise some funding, but they put a value at  
09:31 18 15.4 million on -- on the company with the technology at  
09:31 19 this point.

09:31 20 Q. All right. Now, I want to get a little deeper  
09:31 21 into this one. But first of all, Mr. Larsen is  
09:32 22 Mr. Kendall Larsen who is currently the Chief Executive  
09:32 23 Officer and Chairman of the Board of VirnetX, the  
09:32 24 Plaintiff in this case?

09:32 25 A. That's correct.



09:32 1 Q. But at the time of this document, what that  
09:32 2 before the formation of the company VirnetX?

09:32 3 A. Yes.

09:32 4 Q. And so is what we have Mr. Larsen negotiating  
09:32 5 with SAIC?

09:32 6 A. Yes.

09:32 7 Q. Let's take a look at Exhibit 3193 that is shown  
09:32 8 there. And first, tell us the date of this.

09:32 9 A. That's April 25th, 2003.

09:32 10 Q. And on the second page there is a reference to  
09:32 11 Kendall Larsen. Do you see that?

09:32 12 A. Yes. It's highlighted in yellow and there's an  
09:32 13 attachment there, yes.

09:32 14 Q. It says Larsen's cap table indicates our  
09:32 15 proposed ownership position post funding.

09:32 16 And then is there an attachment that has  
09:32 17 Mr. Larsen's table?

09:32 18 A. Yes.

09:32 19 Q. Let's look at that.

09:32 20 But on this table in the document there's  
09:32 21 a figure of 15,384,614. Tell us what that is, please.

09:33 22 A. Well, at the current time that they were  
09:33 23 negotiating this spinoff company, that was the value  
09:33 24 they were placing on the company and the technology at  
09:33 25 that moment in time.

09:33 1 Q. All right. Now, let's go back to your value  
09:33 2 indicators. I see there is an \$18 million value at the  
09:33 3 end there. Can you tell us what that is?

09:33 4 A. That's in October 2006 and that was  
09:33 5 negotiations between SAIC and VirnetX, and the concept  
09:33 6 there was that VirnetX was trying to get SAIC to provide  
09:33 7 some additional funding for VirnetX, and so they were  
09:33 8 discussing then what a perceived current value of the --  
09:33 9 what the company was at that moment in time.

09:33 10 Q. So, here again, private discussions between  
09:33 11 SAIC on the one hand and VirnetX on the other?

09:33 12 A. Yes.

09:33 13 Q. Let's take a look at Exhibit 3165 that's  
09:33 14 referenced there. And can you tell us first what this  
09:34 15 is?

09:34 16 A. Yes. Again, here's an e-mail October 9th,  
09:34 17 2006, and you can see it was from Mr. Larsen.

09:34 18 Q. Kendall Larsen, CEO and co-founder of VirnetX?

09:34 19 A. Yes.

09:34 20 Q. And at this time, does this document show what  
09:34 21 the perceived value of the company was?

09:34 22 A. Yes, I think if we --

09:34 23 Q. Let's go to the next page.

09:34 24 A. Right. So --

09:34 25 Q. From the document, tell the jury what we're

09:34 1 seeing here.

09:34 2 A. Well, you can see a little bit of a difference  
09:34 3 of opinion, but it ranged from \$12 million to VirnetX's  
09:34 4 proposal of \$18 million. But that was the range they  
09:34 5 were discussing.

09:34 6 Q. And is this at a time when they even knew they  
09:34 7 might have legal claims against Microsoft?

09:34 8 A. Yeah. There appears to be a reference to that.  
09:34 9 VirnetX leads legal claims for M-Co, which my  
09:34 10 understanding is Microsoft.

09:34 11 Q. Have you seen the depositions that explain  
09:34 12 that?

09:34 13 A. Yes.

09:34 14 Q. And even though they knew they may have legal  
09:34 15 claims against Microsoft at the time, the numbers being  
09:34 16 mentioned were between 12 million and 18 million between  
09:35 17 the two parties?

09:35 18 A. That's correct.

09:35 19 Q. You have heard Mr. Reed's damages conclusion  
09:35 20 earlier this week, and let's go back to your value  
09:35 21 indicators.

09:35 22 And I -- I see on the right-hand side the  
09:35 23 number that Mr. Reed presented to the jury. Do you  
09:35 24 recall that?

09:35 25 A. Yes, I do.

09:35 1 Q. Is Mr. Reed's damage conclusion consistent with  
09:35 2 these facts that we've just discussed?

09:35 3 A. No. What's going on here is, again, we've  
09:35 4 looked at all the economic indicators and economic  
09:35 5 considerations that would have been discussed at the  
09:35 6 hypothetical negotiation. And here we have the value  
09:35 7 indicators and we see them over time that they're stable  
09:35 8 in this range of, when you look at a company that is  
09:35 9 incorporating the technology, of around \$15 million.

09:35 10 Now we have to be a little bit careful in  
09:35 11 our comparisons, but what Mr. Reed is saying is around  
09:35 12 the time of the hypothetical negotiation in 2003, March  
09:36 13 2003, he's saying the outcome of the hypothetical  
09:36 14 negotiation would be that SAIC and Microsoft would have  
09:36 15 agreed to a running royalty payment structure that would  
09:36 16 ultimately lead to \$242 million in royalty payments from  
09:36 17 that point to basically the end of 2009 I think it is.

09:36 18 But that is in stark contrast to what the  
09:36 19 contemporaneous documents are telling us or the  
09:36 20 documents at the moment in time from 2001 to even 2006.  
09:36 21 So that's a stark contrast.

09:36 22 Q. You told us earlier that you did your own  
09:36 23 Georgia-Pacific analysis, and let's take -- here are the  
09:36 24 15 factors on the board that I told -- told the jury  
09:36 25 earlier we wouldn't go into detail into all of those,

09:36 1 but these are the same factors that Mr. Reed put up?

09:36 2 A. That's correct.

09:36 3 Q. And did you incorporate all of these factors  
09:37 4 and more into your testimony today?

09:37 5 A. Yes. I did a substantial analysis, and I  
09:37 6 looked at all of these factors and then I summarized my  
09:37 7 opinions today.

09:37 8 Q. And everything that you've discuss today, would  
09:37 9 both SAIC and Microsoft have known all of these  
09:37 10 considerations at the time of the hypothetical  
09:37 11 negotiation?

09:37 12 A. Yes. In fact, remember what I said at the  
09:37 13 beginning. You have a hypothetical negotiation, you  
09:37 14 have the willingness to negotiate, and you have the  
09:37 15 reasonable knowledge and expectation such that the  
09:37 16 parties can go in smart. They're prudent business  
09:37 17 people. They're prudent negotiators. They would know  
09:37 18 all of these things in the hypothetical negotiation.

09:37 19 Q. Dr. Ugone, what did you conclude based on your  
09:37 20 analysis of the Georgia-Pacific factors and everything  
09:37 21 you've discussed today and everything you studied in  
09:37 22 preparation for your testimony?

09:37 23 A. Well, I have reached the conclusion that  
09:37 24 Mr. Reed has substantially overstated claim damages, and  
09:37 25 for the reasons that I've provided today, the parties

09:37 1 would have entered into a license agreement at the  
09:38 2 hypothetical negotiation but it would have had a  
09:38 3 lump-sum payment structure, and the amount of the  
09:38 4 payment would have been between \$9 million and \$15  
09:38 5 million.

09:38 6 Q. One final thing. Now, if the '135 patent is  
09:38 7 found not to be infringed or is found to be invalid but  
09:38 8 the '180 patent is found to be infringed and valid, what  
09:38 9 would happen?

09:38 10 A. Well, I've just -- a couple of things would  
09:38 11 change. So this is if the '135 is not valid or is not  
09:38 12 infringed but the '180 is found to be valid and  
09:38 13 infringed, what changes is the date of the hypothetical  
09:38 14 negotiation moves to March 2007. The parties change.  
09:38 15 It's now going to be VirnetX and Microsoft. But many of  
09:38 16 the underlying economic considerations would still be  
09:38 17 the same.

09:38 18 So even though the date moves forward a  
09:38 19 little bit and even though it's now VirnetX and  
09:38 20 Microsoft instead of SAIC and Microsoft, I have reached  
09:39 21 the conclusion, because of the underlying economic  
09:39 22 considerations, that the answer would still be between  
09:39 23 \$9 million and \$15 million in a lump-sum payment  
09:39 24 structure.

09:39 25 MR. SAYLES: Pass the witness.

09:39 1 THE COURT: All right. Thank you.  
09:39 2 All right, ladies of the jury, I think we'll take our  
09:39 3 morning break at this time. So we're going to be in  
09:39 4 recess until 5 minutes until 11:00, and I note that our  
09:39 5 clock has not been moved forward so we -- we are on  
09:39 6 daylight savings time, and it will be about a 15-minute  
09:39 7 break. Be in recess.

09:39 8 COURT SECURITY OFFICER: All rise.

09:39 9 (Jury out.)

09:40 10 THE COURT: Please be seated.

09:40 11 All right. Mr. Powers, the Court has  
09:40 12 taken a look at your reurging of wanting to  
09:40 13 cross-examine their rebuttal -- Plaintiff's rebuttal  
09:40 14 witness with the December 17th, 2007 letter from  
09:40 15 VirnetX's counsel to Microsoft's counsel regarding the  
09:40 16 point-to-point tunneling protocol and the layer 2  
09:40 17 tunneling protocol, and I'm not going -- I am going to  
09:40 18 stand by my ruling and exclude the letter for  
09:40 19 cross-examination purposes for the reason that the  
09:40 20 paragraph that you're referring to is a response to  
09:40 21 VirnetX's interrogatories.  
09:40 22 And in paragraph 19 of their first set of  
09:40 23 interrogatories, VirnetX identified the accused features  
09:41 24 and then lists A through S of the accused features. And  
09:41 25 apparently in response to a meet and confer with

09:41 1 Microsoft's counsel, VirnetX responded back as follows:  
09:41 2 Without prejudice in an effort to assist you in  
09:41 3 responding to these interrogatories, the features found  
09:41 4 in the accused products are as follows. And it lists  
09:41 5 some more specific features than the accused features in  
09:41 6 the interrogatory.

09:41 7           But I don't think that that -- if it had  
09:41 8 have been in their infringement contentions or in a  
09:41 9 pleading, I would allow you to cross-examine, but I  
09:41 10 don't think where attorneys are trying to give guidance  
09:41 11 on discovery would be such an admission and are contrary  
09:41 12 to our patent rules desire to have meet and confers.  
09:41 13 And so that will be my ruling on that.

09:41 14           With regard to the Court's charge, we have  
09:42 15 a draft ready that Ms. Li will be passing out to you,  
09:42 16 and after we conclude the evidence, I'll hear any  
09:42 17 objections to the Court's charge.

09:42 18           Be in recess.

09:42 19           MR. CAWLEY: Your Honor, could I raise a  
09:42 20 quick matter of procedure --

09:42 21           THE COURT: Yes. Uh-huh.

09:42 22           MR. CAWLEY: -- to maybe save some time?

09:42 23           I understand that the Defendant has two  
09:42 24 depositions to play and that they then intend to rest.  
09:42 25 We'll have a motion for JMOL that we'd like to make at



09:42 1 that time unless the Court would prefer that we all  
09:42 2 agree to defer that until, I guess, sometime over the  
09:42 3 lunch hour or -- in order to avoid breaking up the  
09:42 4 testimony and we're trying to get finished.

09:42 5 THE COURT: If that's agreeable to the  
09:42 6 parties, we will do that immediately after the  
09:42 7 conclusion of all the evidence as well.

09:42 8 MR. BOBROW: Yes, Your Honor that will be  
09:42 9 fine.

09:42 10 MR. CAWLEY: Thank you, Your Honor.

09:42 11 THE COURT: All right.

09:42 12 COURT SECURITY OFFICER: All rise.

09:59 13 COURT SECURITY OFFICER: All rise.

09:59 14 (Jury in.)

09:59 15 THE COURT: Please be seated.

09:59 16 All right, Counsel. You may proceed.

09:59 17 MR. CASSADY: May it please the Court.

09:59 18 CROSS-EXAMINATION

09:59 19 BY MR. CASSADY:

09:59 20 Q. Dr. Ugone -- good morning, Dr. Ugone. My name  
10:00 21 is Jason Cassady. I think we have met more than a  
10:00 22 couple of times before, correct?

10:00 23 A. We have, yes. Good to see you.

10:00 24 Q. And as Mr. Sayles said earlier, we're all under  
10:00 25 time constraints here, and I'm going to ask you to

10:00 1 please answer just the question that I ask and to give  
10:00 2 Mr. Sayles a chance on redirect to come back and clarify  
10:00 3 anything that he thinks was unfair. Is that fair?

10:00 4 A. I will agree with that, yes.

10:00 5 Q. Okay. Okay. Now, Dr. Ugone, you filed an  
10:00 6 expert report in this case, correct?

10:00 7 A. Yes.

10:00 8 Q. And I take it we can rely on your expert report  
10:00 9 to accurately -- accurately portray your opinions in the  
10:00 10 case?

10:00 11 A. Yes.

10:00 12 Q. And I think you've already actually mentioned  
10:00 13 it, but your report included an opinion as to damages  
10:00 14 just for the '180 patent, correct?

10:00 15 A. Yes.

10:00 16 Q. Okay. And then you also said it included an  
10:00 17 opinion for the '135 and the '180, correct?

10:00 18 A. Yes.

10:00 19 Q. But it was -- it said 9 to \$15 million for both  
10:00 20 of those opinions, correct?

10:00 21 A. Yes.

10:01 22 Q. Okay. So, no matter how many patents are in  
10:01 23 this case, the answer -- your answer is 9 to \$15  
10:01 24 million, correct?

10:01 25 A. Yes.

10:01 1 Q. Okay. Now, Dr. Ugone, this isn't your first  
10:01 2 case that you've worked for Microsoft, is it?

10:01 3 A. That's correct.

10:01 4 Q. Okay. And in this case you're testifying to a  
10:01 5 lump-sum agreement, correct?

10:01 6 A. Yes.

10:01 7 Q. Well, with that in mind --

10:01 8 MR. CASSADY: Let's go ahead and pull up  
10:01 9 slide number 2, please.

10:01 10 Q. (By Mr. Cassady) I would like to ask you this  
10:01 11 question: How many times, including this case, have you  
10:01 12 testified to a lump-sum on behalf of Microsoft? Would  
10:01 13 it be once, twice, or three or more times?

10:01 14 A. Actually, I'll take off the four or more times  
10:01 15 and then it would be accurate to say three times.

10:01 16 Q. Okay. So at least three times then; that's  
10:01 17 fair?

10:01 18 A. Let me -- if I could ask a clarification. In  
10:01 19 fact, here, I will help you with the answer: I can  
10:01 20 remember being retained four times for Microsoft, three  
10:01 21 times I testified at trial, and in those three times, I  
10:01 22 gave a lump-sum opinion.

10:02 23 So, it's not at least three times  
10:02 24 testified, it's three times.

10:02 25 Q. Okay. Fair enough.

10:02 1 Now, sir, you've also testified in cases  
10:02 2 for the Plaintiff or the patent owner, correct?

10:02 3 A. Yes.

10:02 4 Q. Okay. The patent owner like VirnetX in this  
10:02 5 case, correct?

10:02 6 A. You took it a little bit farther, but I'm  
10:02 7 willing to say yes, I've -- I've been retained by a  
10:02 8 patent holder to evaluate their damages, yes.

10:02 9 Q. Okay. And so -- so isn't it true, Dr. Ugone,  
10:02 10 that when you've been hired by people that own the  
10:02 11 patent, which is -- which is seeking a royalty in those  
10:02 12 cases, a reasonable royalty in those cases, you have  
10:02 13 never testified that a lump sum was appropriate?

10:02 14 A. Again, I just need a clarification. At trial  
10:02 15 I've testified as to running royalty rates. I have  
10:02 16 given opinions in the report where it's a lump-sum  
10:02 17 amount on the Plaintiff's side as well.

10:02 18 Q. Well, at trial you've never stood under oath  
10:02 19 and testified for a Plaintiff, a patent owner, that a  
10:02 20 lump sum was appropriate, correct?

10:03 21 A. That's correct. The facts and circumstances  
10:03 22 weren't the same.

10:03 23 Q. Okay. Now, sir --

10:03 24 MR. CASSADY: Could we put up slide --  
10:03 25 well, actually, I apologize.

10:03 1 Can we put up slide 22, Mr. Moreno?

10:03 2 Q. (By Mr. Cassady) Dr. Ugone, you put this slide  
10:03 3 up just a few minutes ago and said that this included  
10:03 4 all the indicators of the valuations of VirnetX or the  
10:03 5 SAIC technology, correct?

10:03 6 A. I think you've misquoted me. I said they were  
10:03 7 value indicators. There's obviously additional ones in  
10:03 8 my report. I was trying to give a representative sample  
10:03 9 across time, but if that was what you were meaning to  
10:03 10 say, then I'll agree with that. If you're trying to say  
10:03 11 that this was all of them, I would say no.

10:03 12 Q. Right. Well, fair enough.

10:03 13 The point is these are the ones you chose  
10:03 14 to show the jury, correct?

10:03 15 A. Yes.

10:03 16 Q. Okay. And this is not all of the valuations  
10:03 17 that were done on the VirnetX and SAIC technology,  
10:03 18 correct?

10:03 19 A. There are some additional ones, yes.

10:03 20 Q. Okay. Well, let's talk about some of those  
10:03 21 additional ones.

10:04 22 MR. CASSADY: Can you bring up slide 19,  
10:04 23 Mr. Moreno?

10:04 24 Q. (By Mr. Cassady) Now, Dr. Ugone, can you see  
10:04 25 here this is a Cambridge Strategic Management Group?

10:04 1 Now, you read the reports by the Cambridge Strategic  
10:04 2 Management Group, correct?

10:04 3 A. Yes, I did.

10:04 4 Q. Okay. And do you see this bullet point  
10:04 5 highlighted, it says: Business case analysis indicates  
10:04 6 a total net eraser, net present value of \$190 million.

10:04 7 Do you see that, sir?

10:04 8 A. It says 190 million. I'm aware of this  
10:04 9 document, and I think there's a lot more going on than  
10:04 10 what we're showing the jury, but I don't disagree that  
10:04 11 that's what it says. But also this was not believed by  
10:04 12 anyone.

10:04 13 Q. Okay. Well, let me just ask you this: You  
10:04 14 agree that NetEraser is a reference to the technology in  
10:04 15 this case, correct?

10:04 16 A. Yes.

10:04 17 Q. Okay.

10:04 18 A. Yes.

10:04 19 Q. So, that might as well say business case  
10:04 20 analysis indicates a total VirnetX net present value of  
10:04 21 \$190 million, correct?

10:04 22 A. I'm sorry. Could you say that again?

10:04 23 Q. You would agree with me that we can replace the  
10:04 24 word NetEraser in this quote with VirnetX, the VirnetX  
10:05 25 technology, and that would be accurate still? It's just

10:05 1 a synonym, correct?

10:05 2 A. Yes. If you wanted to do that, you could do  
10:05 3 that. But, obviously, there's a lengthier document that  
10:05 4 has some underlying assumptions that were not accurate  
10:05 5 and that's why this number was not accurate.

10:05 6 Q. Well, I understand that you feel that way,  
10:05 7 Dr. Ugone, but you didn't show this \$190 million  
10:05 8 valuation to the jury in your analysis and tell them why  
10:05 9 it's inaccurate, did you?

10:05 10 A. No, but I'd be willing to do that now if you  
10:05 11 would like.

10:05 12 Q. Well, maybe Mr. Sayles will ask you that.

10:05 13 MR. CASSADY: The next one, Mr. Moreno, is  
10:05 14 slide 20, please.

10:05 15 Q. (Mr. Cassady) Here's another one by CSMG. And  
10:05 16 let's just get some backup information on this,  
10:05 17 Dr. Ugone. CSMG is not SAIC, correct?

10:05 18 A. That's correct.

10:05 19 Q. It's a third-party company that went out and  
10:05 20 did this valuation, correct?

10:05 21 A. They were doing valuations, yes.

10:05 22 Q. Okay. So CSMG in this one here, they said the  
10:05 23 net present value was \$264 million, correct?

10:05 24 A. I don't disagree with what it says. There I  
10:05 25 have my same comments about the invalidity of this

10:05 1 number.

10:05 2 Q. Okay. And then --

10:06 3 MR. CASSADY: So let's just -- let's just  
10:06 4 go ahead and go back to slide 22, Mr. Moreno. 22. I  
10:06 5 apologize.

10:06 6 Q. (By Mr. Cassidy) Now, you were showing this to  
10:06 7 the jury at least for one reason, to show that it wasn't  
10:06 8 fair to Microsoft that these valuations were this low,  
10:06 9 and at the end, \$242 million was being requested, right?

10:06 10 A. I don't think I ever said fair. I'm saying  
10:06 11 what are the economic value indicators, and I'm showing  
10:06 12 those value indicators contemporaneously across time  
10:06 13 before the patent was issued, after the patent was  
10:06 14 issued, before the hypothetical negotiation, after the  
10:06 15 hypothetical negotiation. And so I'm trying to talk  
10:06 16 about the forces of pressures that would have been  
10:06 17 present at the hypothetical negotiation, then I compared  
10:06 18 that to Mr. Reed's opinion. That's what this chart is  
10:06 19 showing.

10:06 20 Q. Well, I mean, your opinion, Dr. Ugone, is that  
10:06 21 \$242 million is an unreasonable royalty, correct?

10:06 22 A. I will agree with that statement.

10:06 23 Q. So here you're using this to show at least one  
10:06 24 reason that the \$242 million is unreasonable, correct?

10:07 25 A. That's correct.



10:07 1 Q. Okay. Now, you'll agree with me that the time  
10:07 2 span in this chart is about nine years, correct?

10:07 3 A. Absolutely. We show that at the bottom, from  
10:07 4 2001 all the way up to 2006, if that's what you're  
10:07 5 asking.

10:07 6 Q. Yes. And then the current time period, \$242  
10:07 7 million is today and that's 2010, correct? That would  
10:07 8 be nine years, 2001 to 2010?

10:07 9 A. I may not understand your question, but I'll  
10:07 10 agree with that statement, yes.

10:07 11 Q. Now, let's talk about -- well, let me just ask  
10:07 12 you this: Is -- is it out of the ordinary for a company  
10:07 13 to go up in value that kind of multiplier, I guess it's  
10:07 14 about maybe 20 times or 10 times? Is it -- is it out of  
10:07 15 the ordinary for a company to go up in value in nine  
10:07 16 years that much?

10:07 17 A. Well, it's not nine years because you have  
10:07 18 October 2006 and this data goes through the end of 2009.  
10:07 19 So what you're asking is is it out of the ordinary to go  
10:07 20 up this value in three years, and I would say yes,  
10:08 21 that's extraordinary to do that. That's not a common  
10:08 22 appearance that you see in the marketplace.

10:08 23 Q. Okay. Well, let's talk about -- let's talk  
10:08 24 about a couple of years in the life of another company.  
10:08 25 Let's talk about Microsoft.

10:08 1 A. Sure.

10:08 2 Q. Do you remember when Mr. -- Mr. Pall joined  
10:08 3 Microsoft, do you remember what he testified to?

10:08 4 A. On the date? I'm not sure I remember. It was  
10:08 5 about 20 years ago.

10:08 6 Q. He joined in 1990 I believe is what his  
10:08 7 testimony said. And so Mr. Pall joined in 1990.

10:08 8 Do you know what the stock price was of  
10:08 9 Microsoft stock in 1990?

10:08 10 A. I don't know that I could give you an estimate  
10:08 11 of that.

10:08 12 Q. Okay. Well, I looked it up last night. I  
10:08 13 actually -- I went to Google and I looked it up and got  
10:08 14 a little chart. It's really kind of nifty what you can  
10:08 15 get on the Internet.

10:08 16 A. Sure.

10:08 17 Q. And I got this chart and in 1990, the stock  
10:08 18 price was \$1.09. Do you have any reason to disagree  
10:08 19 with that?

10:08 20 A. No. I will accept your representation.

10:08 21 Q. Okay. And generally it appears that in 1995  
10:08 22 and 1996, it was maybe 4 or \$5. Do you have any reason  
10:09 23 to disagree with that?

10:09 24 A. No.

10:09 25 Q. Okay. Now, would you be surprised to hear what

10:09 1 it is in 1990, sir? 1999. I apologize.

10:09 2 A. 1999. No. And I -- and I know it's going to  
10:09 3 be substantially higher.

10:09 4 Q. Yeah, it's \$50 or \$49.27.

10:09 5 MR. CASSADY: Could you go ahead and put  
10:09 6 the next slide up, Mr. Moreno?

10:09 7 Q. (By Mr. Cassady) So in 1990, Microsoft stock  
10:09 8 was valued at \$1.09, but in 1999 it was valued at \$50.

10:09 9 A. Yeah. They have to have a functioning product,  
10:09 10 and they're selling operating systems and they're  
10:09 11 innovative. And the market is accepting their products,  
10:09 12 so that's why we see that.

10:09 13 Q. Okay. So -- so you're saying that it was fair  
10:09 14 for Microsoft's valuation to go up that much but it's  
10:09 15 not fair for VirnetX; is that true?

10:09 16 A. Again, you keep using this term fair, and I  
10:09 17 like to look at things from an economic perspective.  
10:09 18 And yes, you have economic indicators where they come  
10:09 19 out with innovative products. The market's accepted XP,  
10:09 20 the market's accepted later products. They've come out  
10:09 21 with Word; they've come out with Excel; they've come out  
10:09 22 with PowerPoint. Those are all hugely successive  
10:10 23 products, and the market rewards a company that puts out  
10:10 24 hugely successive products and that's why you see this.

10:10 25 Q. And that's not really the question I asked,

10:10 1 Dr. Ugone. What I'm asking you is -- I guess I'll use  
10:10 2 your term -- is it unreasonable for a company's  
10:10 3 valuation to go from \$1 to \$50 in less than nine years?

10:10 4 A. I didn't say it was unreasonable. I said it  
10:10 5 was extraordinary. It's not a common occurrence.  
10:10 6 That's what my testimony was.

10:10 7 Q. Okay.

10:10 8 MR. CASSADY: That's all I have.

10:10 9 Thank you, Your Honor.

10:10 10 THE COURT: Thank you. Redirect?

10:10 11 MR. SAYLES: May it please the Court.

10:10 12 REDIRECT EXAMINATION

10:10 13 BY MR. SAYLES:

10:10 14 Q. A few moments ago you said that you thought the  
10:10 15 valuations that you were shown, including CSMG, were not  
10:10 16 applicable in this case. Would you explain to the  
10:10 17 ladies why that is so?

10:10 18 A. There's different ways of doing valuations.  
10:11 19 There's all the ones that I showed you and those all  
10:11 20 have a consistent methodology and were roughly in the  
10:11 21 \$15 million range.

10:11 22 Another way to do it is say, well, let me  
10:11 23 make a projection as to what my sales are going to be.

10:11 24 Now remember, SAIC with its technology and  
10:11 25 VirnetX have never had a product that they've been able

10:11 1 to sell out in the marketplace. But if you say let me  
10:11 2 forget about that and just project sales and look at  
10:11 3 those profits and then look at the value of that, that's  
10:11 4 another way to do the methodology. But that's also a  
10:11 5 very risky -- a risky analysis because there is no  
10:11 6 product yet.

10:11 7           But underlying those numbers that I was  
10:11 8 being shown on cross-examination where huge projections  
10:11 9 of sales that when you do -- this is fancy term -- net  
10:11 10 present value, that's looking at the value today versus  
10:11 11 over time. But they have these huge sales projections  
10:11 12 of hundreds of millions of dollars in just a matter of  
10:11 13 two or three or four years.

10:11 14           And SAIC quickly realized that that wasn't  
10:12 15 going to take place, and they've retracted from those  
10:12 16 values and they started agreeing with what all these  
10:12 17 other third parties were telling them, the venture  
10:12 18 capitalists and everybody else.

10:12 19           Q. And you were asked some questions about the  
10:12 20 rise in the Microsoft stock price and asked in some way  
10:12 21 to compare that to VirnetX. Is that a reasonable and  
10:12 22 fair comparison from an economic standpoint?

10:12 23           A. And I was attempting to say no there. I was  
10:12 24 trying to give the jury some indication of Microsoft's  
10:12 25 success in terms of the market acceptance of their

10:12 1 products. And as we know in the stock market, the stock  
10:12 2 market rewards successful companies. Microsoft has had  
10:12 3 very good products over time: Excel, Word, the  
10:12 4 operating systems.

10:12 5 VirnetX, there hasn't been any market  
10:12 6 reward because they haven't even developed a product.  
10:12 7 They finally had a beta version after the nine years.  
10:12 8 My understanding is they've achieved no revenues from  
10:12 9 any sales or licensing of that product.

10:13 10 MR. SAYLES: Pass the witness.

10:13 11 THE COURT: Recross.

10:13 12 MR. CASSADY: No further questions, Your  
10:13 13 Honor.

10:13 14 THE COURT: All right. Thank you. You  
10:13 15 may step down.

10:13 16 All right. Who will be your next witness?

10:13 17 MR. POWERS: We will have two final video  
10:13 18 depositions, Your Honor. The next one is Dr. Victor  
10:13 19 Larson who's from VirnetX.

10:13 20 THE COURT: Okay. And do I have the times  
10:13 21 on that one?

10:13 22 MR. POWERS: They are included in the  
10:13 23 cumulative times that I gave you before. If you want  
10:13 24 the exact time for these, I can give you that as well.

10:13 25 THE COURT: They were included in the

10:13 1 other four?

10:13 2 MR. POWERS: Yes.

10:13 3 THE COURT: All right. Very good.

10:13 4 (Video playing.)

10:13 5 QUESTION: Good morning, Dr. Larson.

10:13 6 ANSWER: Good morning.

10:13 7 QUESTION: What is your full name?

10:13 8 ANSWER: Victor J. Larson.

10:13 9 QUESTION: And what is your current job  
10:13 10 title?

10:13 11 ANSWER: I believe it's the Director of  
10:13 12 Research and Development.

10:13 13 QUESTION: And you're employed by VirnetX?

10:13 14 ANSWER: Yes, I am.

10:13 15 QUESTION: And you believed at the time  
10:14 16 that a NetEraser client solution would provide many  
10:14 17 functional advantages over browsers communicating  
10:14 18 through https?

10:14 19 ANSWER: I believe that the NetEraser  
10:14 20 product would provide additional benefits to the end  
10:14 21 user, yes.

10:14 22 QUESTION: Dr. Larson, do you have Exhibit  
10:14 23 231 in front of you?

10:14 24 ANSWER: Yes, I do.

10:14 25 QUESTION: And you see this is an e-mail

10:14 1 from you to Bob Short on November 8th, 2005?

10:14 2 ANSWER: Yes, I see that that's what it  
10:14 3 is.

10:14 4 QUESTION: And you see in the e-mail you  
10:14 5 write to Dr. Short and say, I did not come away from the  
10:14 6 Thursday/Friday meetings with a strong feeling that our  
10:14 7 patent provided any amount of protection against  
10:14 8 reasonably secure approaches for SIP (i.e. TLS)?

10:14 9 Do you see that?

10:14 10 ANSWER: Yes, I see that.

10:15 11 QUESTION: You see in the second paragraph  
10:15 12 you say, It seems like if LCS is doing secure SIP  
10:15 13 between servers, we have nothing to add.

10:15 14 Do you see that line?

10:15 15 ANSWER: Yes, I do.

10:15 16 QUESTION: LCS refers to Live  
10:15 17 Communication Server; is that right?

10:15 18 ANSWER: I believe that's what it refers  
10:15 19 to, yes.

10:15 20 QUESTION: And Exhibit 231 reflects your  
10:15 21 thoughts after the meeting, that if LCS was doing Secure  
10:15 22 SIP, that VirnetX had nothing to add in terms of  
10:15 23 security technology; is that right?

10:15 24 ANSWER: Again, this was a -- this was a  
10:15 25 reaction without looking at Secure SIP in detail or



10:15 1 looking at LCS in detail or looking at our patents in  
10:15 2 detail.

10:15 3 QUESTION: So then Exhibit 231 reflects  
10:15 4 your reaction without having looked at your patents yet?

10:16 5 ANSWER: Yes.

10:16 6 QUESTION: Exhibit 231 reflects your  
10:16 7 reaction to the long meetings with Kendall Larsen, Gif  
10:16 8 Munger, and other persons, that your patents, as you  
10:16 9 remembered them, didn't provide any protection against  
10:16 10 SIP using TLS?

10:16 11 ANSWER: Well, again, I was -- I was  
10:16 12 representing a feeling without going in and reviewing  
10:16 13 the -- the -- the patents and -- and secure SIP.

10:16 14 QUESTION: I just asked, based on what  
10:16 15 you've reviewed on Secure SIP on your patents, have you  
10:16 16 changed your mind about the strong feeling you had that  
10:16 17 your patent provided no amount of protection against  
10:16 18 Secure SIP using TLS as reflected in Exhibit 231?

10:17 19 ANSWER: I -- no. No, I haven't changed  
10:17 20 my mind.

10:17 21 QUESTION: Have you done any investigation  
10:17 22 as to whether the VirnetX prototype would infringe any  
10:17 23 other company's intellectual property?

10:17 24 ANSWER: No, I haven't done that  
10:17 25 investigation.

10:17 1 QUESTION: Why haven't you done an  
10:17 2 analysis of whether the Gabriel prototype infringes  
10:17 3 every patent cited against yours?

10:17 4 ANSWER: I haven't been directed to do  
10:17 5 that.

10:17 6 QUESTION: It didn't make sense for you to  
10:17 7 do that on your own without direction?

10:17 8 ANSWER: No. I -- it didn't make sense to  
10:17 9 me.

10:17 10 QUESTION: You've been handed what is  
10:17 11 marked as Exhibit 240. It's an e-mail from you to  
10:17 12 Gordon Warren and others with Bates Number VNET00247657.

10:18 13 Do you recognize this e-mail?

10:18 14 ANSWER: This would have been consistent  
10:18 15 with something I sent at the time.

10:18 16 QUESTION: Who is Gordon Warren?

10:18 17 ANSWER: He's a developer on the R&D team.

10:18 18 QUESTION: In this e-mail, Exhibit 240,  
10:18 19 the Subject is Fileshare Registry Change.

10:18 20 Do you see that?

10:18 21 ANSWER: Yes.

10:18 22 QUESTION: What is Fileshare?

10:19 23 ANSWER: Gordon was developing an  
10:19 24 application to enable sharing files as part of the  
10:19 25 Gabriel prototype.

10:19 1 QUESTION: In the e-mail Gordon is telling  
10:19 2 you, group shmoop. It's all vapor ware.

10:19 3 Do you see that?

10:19 4 ANSWER: Yes.

10:19 5 QUESTION: Why is Gordon Warren telling  
10:19 6 you that it's all vapor ware?

10:19 7 ANSWER: I'm sure Gordon was attempting at  
10:19 8 some humor here. My guess is he was also expressing  
10:20 9 that he didn't want to wait to solve this problem until  
10:20 10 Bob had the group concept flushed out and implemented.

10:20 11 QUESTION: And with humor is Gordon  
10:20 12 telling you that he believed that Bob Short's group idea  
10:20 13 was vapor ware?

10:20 14 ANSWER: I think he was just saying that  
10:20 15 he didn't want to wait for Bob to implement.

10:20 16 QUESTION: What is vapor ware, in your  
10:20 17 understanding?

10:20 18 ANSWER: It's software that doesn't exist  
10:20 19 yet.

10:20 20 QUESTION: It's also software that's not  
10:20 21 likely to exist?

10:20 22 ANSWER: No, I don't -- I don't -- I don't  
10:20 23 use the term that way. You'd have to ask Gordon if he  
10:20 24 was using the term that way.

10:20 25 QUESTION: So the log-in box that's on the

10:20 1 page ending in Bates No. 509 was the special log-in for  
10:21 2 VirnetX users who you were authorizing to access the  
10:21 3 registry; is that right?

10:21 4 ANSWER: Who were -- this is the log-in to  
10:21 5 get to the website that contained the registry code, and  
10:21 6 we -- we put that log-in just so that only users that we  
10:21 7 had provided the user name and password to would --  
10:21 8 would be able to do that.

10:21 9 QUESTION: What users did you provide the  
10:21 10 user name and password to? Who? Who was provided the  
10:21 11 user name and password?

10:21 12 ANSWER: Well, all the members of the R&D  
10:21 13 team and Gif Munger, and I believe it was provided to --  
10:21 14 to Kendall Larsen and -- and Sameer.

10:22 15 QUESTION: Do you know whether any of  
10:22 16 those users ever logged in through this log-in screen?

10:22 17 ANSWER: The -- the members of the R&D  
10:22 18 team would have logged in multiple times as part of  
10:22 19 testing and developing the software, and Gif Munger  
10:22 20 would have logged in multiple times. I -- I don't have  
10:22 21 knowledge of whether or how often Sameer and Kendall  
10:22 22 would have logged in.

10:22 23 QUESTION: You can see that the user  
10:22 24 name -- who chose the user name for this log-in screen,  
10:22 25 VirnetX?

10:22 1 ANSWER: It was likely me, but I am not  
10:22 2 for sure.

10:22 3 QUESTION: Did you also choose the  
10:22 4 password, MS4\$2009, question mark?

10:23 5 ANSWER: I may have chosen that, yes.

10:23 6 QUESTION: Is it your recollection that  
10:23 7 you chose that password?

10:23 8 ANSWER: It -- it is my recollection that  
10:23 9 I chose that password, yes.

10:23 10 QUESTION: Does your password stand for  
10:23 11 Microsoft four money 2009?

10:23 12 ANSWER: Yes, that's my recollection.

10:23 13 QUESTION: Why do you have a password  
10:23 14 that's a question, Microsoft four money 2009?

10:23 15 ANSWER: At that time that was my  
10:23 16 perception of when the -- based on what people had -- at  
10:23 17 that time that was my perception of when a -- a trial  
10:23 18 might occur?

10:23 19 QUESTION: Why did you make that the  
10:23 20 log-in and password for the VirnetX prototype?

10:24 21 ANSWER: I -- I think I thought it was a  
10:24 22 interesting password, and I probably copied the password  
10:24 23 from one place to another place. And so I don't think  
10:24 24 the -- using it in this context was a -- was a  
10:24 25 purposeful decision.

10:24 1 QUESTION: Where else have you used the  
10:24 2 password Microsoft four money 2009?

10:24 3 ANSWER: I have several passwords that I  
10:24 4 use. I believe I used this password when setting up  
10:24 5 some log-in accounts for a couple of other developers  
10:24 6 and then communicated it with them, and then in most  
10:25 7 cases, they likely changed it to their own password.

10:25 8 (End of video clip.)

10:25 9 MR. POWERS: Our final witness, Your  
10:25 10 Honor, will be Mr. Kendall Larsen, the President and CEO  
10:25 11 and Chairman of VirnetX.

10:25 12 THE COURT: All right. Mr. Kendall  
10:25 13 Larsen.

10:25 14 (Video playing.)

10:25 15 QUESTION: All right. If I understand  
10:25 16 this, you are the Chief Executive Officer of VirnetX; is  
10:25 17 that right?

10:25 18 ANSWER: That is right.

10:25 19 QUESTION: Do you hold any other titles  
10:25 20 with VirnetX?

10:25 21 ANSWER: Yes, I do.

10:25 22 QUESTION: What are they?

10:25 23 ANSWER: Chairman of the Board and  
10:25 24 President.

10:25 25 QUESTION: When was VirnetX founded?

10:25 1 ANSWER: VirnetX was founded in September  
10:25 2 of 2004.

10:25 3 QUESTION: How many shares do you hold in  
10:26 4 VirnetX?

10:26 5 ANSWER: Approximately 8.2 million shares.

10:26 6 QUESTION: Are you the single largest  
10:26 7 shareholder of VirnetX stock?

10:26 8 ANSWER: Yes, I am.

10:26 9 QUESTION: What's your percentage  
10:26 10 holdings?

10:26 11 ANSWER: My individual holdings represent  
10:26 12 about 20 percent of the company's outstanding common  
10:26 13 stock.

10:26 14 QUESTION: Let's take a look at Exhibit  
10:26 15 147. Do you recognize Exhibit 147 as Work Order Number  
10:26 16 1 as executed between VirnetX on the one hand and  
10:26 17 Magenic Technologies on the other?

10:27 18 ANSWER: Yes, I do.

10:27 19 QUESTION: And did you execute this on or  
10:27 20 around February 27, 2006?

10:27 21 ANSWER: Yes, I did.

10:27 22 QUESTION: Now, following the entry by  
10:27 23 Magenic and Kendall Larsen, yourself, on behalf of  
10:27 24 VirnetX in this agreement, did Magenic begin work to  
10:28 25 implement the project goal and the deliverables that are

10:28 1 outlined on page 2 of this work order?

10:28 2 ANSWER: Yes.

10:28 3 QUESTION: So as of February 23rd, 2006,  
10:28 4 your understanding was that the Live Communications  
10:28 5 Server, Office Communicator, did not include RFC 3263 as  
10:28 6 a means for securing communications?

10:28 7 ANSWER: That's correct. We wouldn't have  
10:28 8 put it in the work order to build products functionally  
10:28 9 similar to that had we believed it already to be there.

10:28 10 QUESTION: And in connection with the  
10:28 11 Magenic work on the project, I take it that Magenic  
10:28 12 reviewed the '135 patent; is that right?

10:28 13 ANSWER: They were given direction by Gif  
10:28 14 Munger and Sameer Mathur as to implementing those  
10:29 15 functions that are described in the '135 patent. This  
10:29 16 is product development.

10:29 17 QUESTION: And was one of the objectives  
10:29 18 of the work that was being done here was to take the  
10:29 19 Live Communications Server 2005 and embed in it or  
10:29 20 develop into it the technologies that are -- among  
10:29 21 others, that are found in the '135 patents?

10:29 22 ANSWER: In part, yes.

10:29 23 QUESTION: Now, in connection with the  
10:29 24 work that Magenic was doing on this project to embed the  
10:29 25 '135 patented technology into the Live Communication



10:29 1 Server, Microsoft product, how long did Magenic work on  
10:29 2 that?

10:29 3 ANSWER: I would say roughly six months.

10:30 4 QUESTION: Let me show you Exhibit 111.  
10:30 5 This appears to be a letter from Microsoft to SAIC on  
10:30 6 the subject of the '135 patent. Have you seen this  
10:30 7 letter before?

10:31 8 ANSWER: Yes, I have.

10:31 9 QUESTION: And did you see this letter in  
10:31 10 or around the September 2006 time frame?

10:31 11 ANSWER: Yes, I did.

10:31 12 QUESTION: You'll note in the second to  
10:31 13 last paragraph Microsoft says that they agree that a  
10:31 14 meeting might be appropriate. Do you see that?

10:31 15 ANSWER: Yes, I do.

10:31 16 QUESTION: I'm asking, between September  
10:31 17 of 2006 and February of 2007, did you make any effort to  
10:31 18 set up a meeting with Microsoft to discuss the subject  
10:31 19 matter of this letter?

10:31 20 ANSWER: No.

10:31 21 QUESTION: Do you know one way or the  
10:31 22 other whether Ms. Bumann undertook some efforts?

10:31 23 ANSWER: I can't speak for Ms. Bumann.

10:31 24 QUESTION: Now, in Exhibit 111, Microsoft  
10:32 25 asked Ms. Bumann for a claim chart to support the

10:32 1 allegations that the implementations of RFC 3263  
10:32 2 infringe the '135 patent. Do you see that?

10:32 3 ANSWER: I see that, yes.

10:32 4 QUESTION: To your knowledge, did  
10:33 5 Ms. Bumann send such a claim chart to Microsoft?

10:33 6 ANSWER: Sorry. I'm not aware.

10:33 7 QUESTION: Did VirnetX send such claim  
10:33 8 charts to Microsoft?

10:33 9 ANSWER: No, we did not.

10:33 10 QUESTION: And in light of that, was one  
10:33 11 of the goals of the Gabriel technology to embody the  
10:33 12 patent methods to support litigation?

10:33 13 ANSWER: Yes, it was.

10:33 14 QUESTION: Did you perform an analysis of  
10:33 15 whether most implementations under RFC 3263 would  
10:33 16 practice the VirnetX patents?

10:33 17 ANSWER: No.

10:33 18 QUESTION: Is it your belief that any  
10:33 19 product that has the general functions and benefits of  
10:33 20 what's described in RFC 3263 necessarily comes under the  
10:33 21 VirnetX patents?

10:33 22 ANSWER: No.

10:33 23 QUESTION: How long after December of 2005  
10:33 24 did VirnetX continue to work with Microsoft software to  
10:34 25 attempt to introduce instant secure connect, or Gabriel

10:34 1 technology?

10:34 2 ANSWER: We continued all the way through  
10:34 3 2006. So we continued working. We let SAIC know that  
10:34 4 they needed to contact Microsoft per the contract.

10:34 5 And, you know, I'm talking a month or two  
10:34 6 here. It could have been November where we had that  
10:34 7 conversation and the notice came in December, but it was  
10:34 8 in the fourth quarter of the architectural design  
10:34 9 document when that took place.

10:34 10 We were not stopped by that process, and  
10:34 11 we said we're going to continue because we think that  
10:34 12 there's a way to work this out, work together. And we  
10:34 13 said the best way to work that out would be hire  
10:34 14 Magenic, which was their top developer. And if there  
10:34 15 was anyone who could help us integrate our invention  
10:34 16 with Microsoft platforms, it would be Magenic. So it  
10:34 17 was really a well-intended effort.

10:35 18 QUESTION: One of Magenic's -- Magenic's  
10:35 19 objectives in attempting to modify Microsoft's products  
10:35 20 was the goal of utilizing VirnetX's patented technology  
10:35 21 in Microsoft's products, right?

10:35 22 ANSWER: That's correct.

10:35 23 QUESTION: And so VirnetX spent the lion's  
10:35 24 share of its Series A financing in this effort in 2006  
10:35 25 to modify Microsoft's products to practice the claims of

10:35 1 the patents, right?

10:35 2 ANSWER: To build a product that we felt  
10:35 3 completely would practice a full implementation of  
10:35 4 our -- of our patents, yes. And we believed that  
10:35 5 Microsoft implemented a portion of that along the way,  
10:35 6 and it was an increasing portion throughout the  
10:35 7 development process.

10:35 8 QUESTION: Isn't it true that you figured  
10:35 9 out what Microsoft was doing in terms of implementing  
10:35 10 SIP in the summer of 2006?

10:36 11 ANSWER: Yes.

10:36 12 QUESTION: It's your belief, and was in  
10:36 13 the summer of 2006, that Microsoft was not actually  
10:36 14 practicing RFC 3263, right?

10:36 15 ANSWER: Yes.

10:36 16 QUESTION: And when SAIC gave notice to  
10:36 17 Microsoft that Microsoft was potentially infringing the  
10:36 18 VirnetX's intellectual property, Microsoft was told that  
10:36 19 if it were practicing RFC 3263, it was potentially  
10:36 20 infringing, right?

10:36 21 ANSWER: It was a misstatement. Yes, I do  
10:36 22 remember that. And it was a notice from Pam Bumann. It  
10:36 23 was a general indicator that they were practicing 3263  
10:36 24 and if they were -- and Microsoft said: We're not.

10:36 25 QUESTION: To your knowledge, SAIC never

10:36 1 sent Microsoft a claim chart, charting any  
10:36 2 implementation of RFC 3263 against the '135 patent,  
10:36 3 right?

10:36 4 ANSWER: My answer is no.

10:37 5 QUESTION: Who, if anyone, at SAIC or  
10:37 6 VirnetX contacted Microsoft to set up a meeting after  
10:37 7 SAIC received this letter?

10:37 8 ANSWER: Pam Bumann.

10:37 9 QUESTION: When did Pam Bumann contact  
10:37 10 Microsoft to set up a meeting?

10:37 11 ANSWER: After September 12, 2006.

10:37 12 QUESTION: When?

10:37 13 ANSWER: You'd have to ask her  
10:37 14 specifically. But it was a -- a -- an action that we  
10:37 15 were trying to wait for a response, wait for a meeting  
10:37 16 date. I was ready to go, and there was never a response  
10:37 17 from Microsoft to set the meeting up.

10:37 18 QUESTION: A response to an inquiry made  
10:37 19 by Pam Bumann?

10:37 20 ANSWER: Yes. In other words, this  
10:37 21 meeting request was in theory. In practice, they never  
10:37 22 returned the calls.

10:38 23 QUESTION: But in your discussions with  
10:38 24 Pam Bumann, she never told you that she'd actually sent  
10:38 25 Microsoft a claim chart or any other evidence to

10:38 1 substantiate SAIC's claim that an implementation of RFC  
10:38 2 3263 could infringe the '135 patent?

10:38 3 ANSWER: That's correct. The answer is  
10:38 4 yes.

10:38 5 QUESTION: To your knowledge, did SAIC  
10:38 6 ever provide Microsoft with claim charts or other  
10:38 7 evidence that any Microsoft product infringed claims of  
10:38 8 the VirnetX patents?

10:38 9 ANSWER: To my knowledge, no.

10:38 10 QUESTION: Does VirnetX have a view, one  
10:38 11 way or the other, on which would be more valuable to a  
10:38 12 potential licensee? Licensing the specific technology  
10:38 13 in an SDK versus licensing patent rights to practice it  
10:38 14 a different way?

10:39 15 ANSWER: We believe them equally balanced  
10:39 16 as far as their value to the end user, whether they  
10:39 17 wanted to implement it in our object code or whether  
10:39 18 they wanted to write their own object code.

10:39 19 QUESTION: You believe the two types of  
10:39 20 licenses would carry similar values to the potential  
10:39 21 licensee?

10:39 22 ANSWER: Yes.

10:39 23 QUESTION: Would you agree that as a  
10:39 24 general matter, a company with significant resources,  
10:39 25 like a Google or a Microsoft, would be able to develop

10:39 1 the technology contained in the software development  
10:39 2 kits on its own and apart from VirnetX for around \$5  
10:39 3 million?

10:39 4 ANSWER: I would say that our development  
10:40 5 of Gabriel was in that range, and so I think that a  
10:40 6 company of Microsoft or Google's stature could develop  
10:40 7 the technology for that, yes.

10:40 8 (End of video clip.)

10:40 9 MR. POWERS: Your Honor, that completes  
10:40 10 the witnesses in Microsoft's case.

10:40 11 And we'd like to hand up a list of the  
10:40 12 illustrative exhibits that have been admitted throughout  
10:40 13 the course of the trial similar to the substantive  
10:40 14 exhibits.

10:40 15 THE COURT: All right. Very well.

10:40 16 Any objection to the illustrative  
10:40 17 exhibits?

10:40 18 MR. McLEROY: No, Your Honor.

10:40 19 THE COURT: Okay. Be admitted.

10:40 20 Does Microsoft rest?

10:40 21 MR. POWERS: Yes, Your Honor.

10:40 22 THE COURT: All right. Rebuttal.

10:40 23 MR. McLEROY: Yes, Your Honor. VirnetX  
10:40 24 calls Professor Mark Jones back to the witness stand.

10:40 25 THE COURT: Professor Jones.

10:40 1 MR. McLEROY: Your Honor, may I approach?

10:40 2 THE COURT: Yes.

10:40 3 MARK JONES, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

10:40 4 DIRECT EXAMINATION

10:40 5 BY MR. McLEROY:

10:41 6 Q. Good morning, Professor Jones.

10:41 7 A. Good morning, sir.

10:41 8 Q. Now, last week Mr. Caldwell asked you questions  
10:41 9 about the infringement of the VirnetX patents. You  
10:41 10 understand that I am now going to cover the validity of  
10:41 11 the VirnetX patents with you?

10:41 12 A. Yes, sir.

10:41 13 Q. All right. Now the '135 patent was granted in  
10:41 14 I think in 2003 and the '180 patent was granted in 2007.  
10:41 15 What is the effect of granting a U.S. patent?

10:41 16 A. Well, as Judge Davis has told us, when the  
10:41 17 United States Patent and Trade Office grants a patent,  
10:41 18 that we are to presume that it is valid.

10:41 19 Q. And let me ask you right off the bat. Do you  
10:41 20 agree or disagree with Dr. Wicker's opinions that the  
10:41 21 '135 patent and '180 patents are invalid?

10:42 22 A. I disagree with that. None of the references  
10:42 23 Aventail DVPN or Windows NT anticipate or render obvious  
10:42 24 the VirnetX patents.

10:42 25 Q. Now, last time -- last week when you were on



10:42 1 the witness stand, I think your testimony lasted for  
10:42 2 more than three hours. Are you going to be here that  
10:42 3 long again today?

10:42 4 A. No, sir. Today I'm going to be testifying --  
10:42 5 testifying about the validity of the patents, and to  
10:42 6 show a patent is valid, I need to show that at least one  
10:42 7 element is missing from the prior art that is in the  
10:42 8 patents.

10:42 9 Q. Can you give me example of what you mean?

10:42 10 A. Well, let's say that patents had elements A, B,  
10:42 11 and C in a claim and the prior art had just elements A  
10:42 12 and B but not C, then the patent would be valid.

10:42 13 Q. So let's see if we can get an example from this  
10:42 14 case. Is what you're saying, Professor Jones, that if  
10:42 15 the jury finds that -- that just one thing is missing  
10:42 16 from, say, Windows NT 4, that then Windows NT 4 would  
10:43 17 not anticipate the VirnetX patents?

10:43 18 A. That's correct. I mean, it makes sense if --  
10:43 19 if you have an invention, all right, and if the prior  
10:43 20 art is missing part of that invention, then they don't  
10:43 21 have an invention.

10:43 22 Q. Well, Professor Jones, I know you'd probably  
10:43 23 like to discuss your entire validity case today, but  
10:43 24 because all that's required is to show that one element  
10:43 25 is missing, I'm going to ask you just to focus on one

10:43 1 element with respect to the prior art. Is that okay?

10:43 2 A. Yes, sir.

10:43 3 Q. Start with Windows NT 4. Is Windows NT 4 the  
10:43 4 same as the VirnetX patents?

10:43 5 A. No, sir, it's not.

10:43 6 Q. Well, what is the biggest difference between  
10:43 7 Windows NT 4 and the VirnetX patents?

10:43 8 A. Well, I think to -- to illustrate that I would  
10:43 9 like to put up Claim 1 of the '135 patent.

10:43 10 MR. McLEROY: Your Honor, may I approach  
10:43 11 the easel?

10:43 12 THE COURT: Yes, you may.

10:44 13 Q. (By Mr. McLeroy) Can you see that, Dr. Jones?

10:44 14 A. Yes, sir.

10:44 15 Q. Which part of this claim should we focus on?

10:44 16 A. I'd like to focus on for this important  
10:44 17 difference on the second step of that, and it's my  
10:44 18 opinion that Microsoft Windows NT does not determine  
10:44 19 whether the DNS request transmitted in step 1 is  
10:44 20 requesting access to a secure website.

10:44 21 Q. And, Professor Jones, what evidence confirms  
10:44 22 for you that Windows NT 4 does not meet that second step  
10:44 23 of this claim?

10:44 24 A. The evidence I reviewed in the case included  
10:44 25 source code, but I think it would be helpful to show

10:44 1 Mr. Pall's testimony from -- from last week on that  
10:44 2 topic.

10:44 3 MR. McLEROY: Can we set up the first  
10:44 4 slide?

10:44 5 Q. (By Mr. McLeroy) Is this the testimony you're  
10:44 6 referring to?

10:44 7 A. Yes, sir, it is. So -- so Mr. Pall was asked:  
10:44 8 So isn't it true, don't you agree, Mr. Pall, that the  
10:44 9 system you're demonstrating is not determining whether  
10:45 10 the VPN DNS request transmitted is requesting access to  
10:45 11 a secure website?

10:45 12 Q. And his answer was: The system is not  
10:45 13 determining that specifically, sir.

10:45 14 Is that right?

10:45 15 A. Yes, sir.

10:45 16 Q. Now, was Mr. Pall's testimony correct on this  
10:45 17 question?

10:45 18 A. Yes, sir. And I think we all saw the  
10:45 19 demonstration of Windows NT with the three computers up  
10:45 20 here on a table and -- and one computer beneath the  
10:45 21 desk.

10:45 22 In that demonstration, we saw that the VPN  
10:45 23 was connected and set up regardless of whether it was  
10:45 24 typed in `www.securewebsite.com` or whether it was  
10:45 25 `www.eBay.com`. There wasn't a determining, there was

10:45 1 just a setting up.

10:45 2 Q. One other topic related to Windows NT 4 --

10:45 3 MR. McLERoy: And, Your Honor, may I  
10:45 4 approach the easel again?

10:45 5 THE COURT: Yes, you may.

10:45 6 Q. (By Mr. McLeroy) This is the illustration that  
10:46 7 Dr. Wicker gave of the Windows NT 4 system, is that  
10:46 8 right, Professor Jones?

10:46 9 A. Yes, sir.

10:46 10 Q. Did Windows NT 4 operate in the manner that  
10:46 11 Dr. Wicker described here?

10:46 12 A. No, sir, it did not.

10:46 13 Q. Let me ask you a more basic question. Does  
10:46 14 this diagram appear anywhere in any of the evidence that  
10:46 15 you have seen in this case describing Windows NT 4?

10:46 16 A. No, sir, it does not.

10:46 17 Q. Okay. Did you find anything even close to this  
10:46 18 diagram in the evidence?

10:46 19 A. No, I didn't find anything close, but I did  
10:46 20 find a diagram in his report that -- or -- sorry -- in  
10:46 21 Microsoft evidence that was similar to part of this  
10:47 22 diagram.

10:47 23 MR. McLERoy: Could you put up Defendant's  
10:47 24 Exhibit 3064?

10:47 25 Q. (By Mr. McLeroy) All right. Professor Jones,

10:47 1 you have it there on your screen, don't you?

10:47 2 A. Yes, sir.

10:47 3 Q. What is Defendant's Exhibit 3064?

10:47 4 A. This is a document that Microsoft wrote to  
10:47 5 describe the VPN technology in Windows NT.

10:47 6 MR. McLEROY: Could we turn to page 22?

10:47 7 And please blow up the diagram and the text underneath  
10:47 8 the diagram at the top of the page.

10:47 9 Q. (By Mr. McLeroy) Professor Jones, is this the  
10:47 10 diagram that you're referring to?

10:47 11 A. Yes, it is.

10:47 12 Q. Are their differences between the actual  
10:47 13 Microsoft diagram and then the illustration that  
10:47 14 Dr. Wicker gave here in court?

10:47 15 A. Yes, there are. For example, when we're  
10:47 16 looking at the diagram up here on the board, it shows a  
10:47 17 secure DNS request going from the client to the tunnel  
10:48 18 client.

10:48 19 Q. Let me stop you there. This is where  
10:48 20 Dr. Wicker wrote secure DNS request and then he shows an  
10:48 21 arrow from the first computer to the second computer.  
10:48 22 Is that what you're referring to?

10:48 23 A. Yes, sir.

10:48 24 Q. Now, what did the actual Microsoft document  
10:48 25 show happens between those two computers?

10:48 1 A. The Microsoft document shows that there's a  
10:48 2 phone call going from the dial-up client to the tunnel  
10:48 3 client in this case.

10:48 4 Q. So the first computer makes a phone call to the  
10:48 5 second computer; is that right?

10:48 6 A. Yes, sir. It uses what's called -- a piece of  
10:48 7 hardware called a modem to make that call.

10:48 8 Q. How do you know it's a phone call that goes  
10:48 9 from the first computer to the second computer?

10:48 10 A. Well, a couple of things in this diagram as  
10:48 11 well as the rest of the document. First, I see that the  
10:48 12 client in the far left is called the dial-up client.

10:48 13 Q. Okay. So in the actual Microsoft document,  
10:48 14 it's called the dial-up client, right?

10:48 15 A. Yes, sir.

10:48 16 Q. Now, is that referring to what Dr. Wicker just  
10:48 17 called a client?

10:48 18 A. I believe it is.

10:48 19 Q. So he left off the words dial-up?

10:49 20 A. Yes, sir.

10:49 21 Q. Okay. You said a couple of things. Was there  
10:49 22 something else you wanted to point to?

10:49 23 A. Well, when we look at the highlighted text  
10:49 24 below the figure, note that it says, The client computer  
10:49 25 places a dial-up call.

10:49 1                   That's an indication that a phone call  
10:49 2 using a modem is being made.

10:49 3           Q.     Professor Jones, is it possible that there's  
10:49 4 some confusion here, that a telephone call is the same  
10:49 5 thing as a secure DNS request?

10:49 6           A.     No, sir. There's -- a secure DNS request is  
10:49 7 not a phone call.

10:49 8           Q.     And, Professor Jones, is there any evidence  
10:49 9 that the Windows NT 4 system is able to make a  
10:49 10 determination based on a secure DNS request, as we see  
10:49 11 in Dr. Wicker's illustration?

10:49 12           A.     No, sir.

10:49 13           Q.     Let's talk about DVPN now. Is DVPN the same as  
10:49 14 the VirnetX patents?

10:49 15           A.     No, sir, it's not. I found several  
10:49 16 differences. And further, this DVPN was developed, as  
10:49 17 we've heard in testimony, to solve a different problem.

10:49 18           Q.     Well, what was the single most important  
10:50 19 difference between DVPN and the VirnetX patents?

10:50 20           A.     Well, I think the most important difference was  
10:50 21 like Windows NT, DVPN was not doing a determination  
10:50 22 based on a DNS request to go on and then initiate a VPN.

10:50 23           Q.     Didn't Dr. Wicker testify that DVPN did make a  
10:50 24 determination based on a DNS request?

10:50 25           A.     Yes, sir, he did.

10:50 1 Q. Well, when the jury has to figure out if  
10:50 2 DVPN -- DVPN did or did not make that determination,  
10:50 3 what evidence should they rely on? What evidence should  
10:50 4 they look at?

10:50 5 A. I think, for example, we've heard testimony  
10:50 6 last week from Mr. Saydjari indicating that he's the  
10:50 7 person who funded DVPN, that he doubted that DVPN had --  
10:50 8 was DNS-triggered. But I think the best place to look  
10:50 9 is in the source code for DVPN.

10:50 10 MR. McLEROY: Could you pull up  
10:50 11 Plaintiff's Exhibit 985, and turn to the eighth page  
10:50 12 when you have it? And actually there's a section at the  
10:51 13 bottom I'd like you to highlight so we can all see it.

10:51 14 Q. (By Mr. McLeroy) Is this the source code that  
10:51 15 you're referring to, Professor Jones?

10:51 16 A. Yes, sir. This is the source code that  
10:51 17 Dr. Wicker cites to support his contention that there is  
10:51 18 a determination in DVPN based on DNS request.

10:51 19 Q. What does this source code indicate to you?

10:51 20 A. This source code is discussing and looking at  
10:51 21 IP addresses. So if we see in this example IP  
10:51 22 underscore ADDR, remember, IP addresses are like what we  
10:51 23 see on the far right of the screen. If I can -- like  
10:51 24 127.0.0.1 is an example of an IP address as opposed to a  
10:51 25 domain name which might be something like www.Yahoo.com.



10:51 1 Q. Now, to be real clear, does this source code  
10:51 2 that we're looking at on the screen, does it reference a  
10:51 3 DNS request at all?

10:51 4 A. No, sir, it's not.

10:51 5 Q. Finally let's turn to Aventail. Is Aventail  
10:52 6 the same as the VirnetX patents?

10:52 7 A. No, sir.

10:52 8 Q. Well, what is the biggest difference between  
10:52 9 Aventail and the VirnetX patents?

10:52 10 A. The biggest difference is that Aventail does  
10:52 11 not use or create a VPN.

10:52 12 Q. Well, Professor Jones, I know in the Aventail  
10:52 13 manual that Dr. Wicker showed us last week it used the  
10:52 14 term VPN. Is that enough? Does that -- does that  
10:52 15 satisfy a VPN element of the claim?

10:52 16 A. No, sir, it's not just enough to use the words  
10:52 17 VPN. That's why Judge Davis has given us a construction  
10:52 18 to use, and we are to compare that construction for VPN  
10:52 19 to what's actually going on in the products, not just  
10:52 20 look at words.

10:52 21 MR. McLEROY: Would you put the next slide  
10:52 22 up for presentation?

10:52 23 Q. (By Mr. McLeroy) Is this that definition that  
10:52 24 you're referring to?

10:52 25 A. Yes, sir. It states that a virtual private

10:52 1 network is a network of computers which privately  
10:52 2 communicate with each other by encrypting traffic on  
10:52 3 insecure communication paths between the computers.

10:53 4 Q. What about this definition indicates to you  
10:53 5 that Aventail does not form a VPN?

10:53 6 A. I would -- I would focus in this case on the  
10:53 7 second word, network. Aventail forms a point-to-point  
10:53 8 connection, a SOCKS connection. It doesn't create a  
10:53 9 network or a VPN.

10:53 10 Q. Well, what's the difference between a  
10:53 11 point-to-point connection and a network or virtual  
10:53 12 private network?

10:53 13 A. Well, sir, a point-to-point connection is -- is  
10:53 14 a connection that you put something -- it's like a  
10:53 15 garden hose, you put something in one side of that  
10:53 16 garden hose and it will come out the other. Unlike a  
10:53 17 network where I can typically address packets or  
10:53 18 messages and have them delivered to different computers.  
10:53 19 One mechanism for doing that is routing.

10:53 20 Q. All right. Let me ask you a first question  
10:53 21 about this. Do you know if Dr. Wicker agrees or  
10:53 22 disagrees with you that a -- that Aventail creates a  
10:53 23 point-to-point connection?

10:53 24 A. Dr. Wicker agrees that Aventail creates a  
10:54 25 point-to-point connection. I see this when I look at

10:54 1 Dr. Wicker's testimony. He discusses Aventail using a  
10:54 2 SOCKS -- SOCKS connections. Further in his deposition  
10:54 3 he indicates that he believes that SOCKS creates  
10:54 4 point-to-point connections.

10:54 5 MR. McLEROY: Can we go to the next slide?

10:54 6 Q. (By Mr. Cassidy) Is this that deposition  
10:54 7 testimony of Dr. Wicker that you're referring to?

10:54 8 A. Yes, sir. And he's being asked about whether  
10:54 9 SOCKS is a point-to-point connection, and going to the  
10:54 10 bottom indicates that he's pretty sure it has to be  
10:54 11 point-to-point.

10:54 12 Q. Now I guess that doesn't quite take us all the  
10:54 13 way there. Have we heard any testimony so far in this  
10:54 14 case about whether a point-to-point connection is or is  
10:54 15 not a VPN?

10:54 16 A. Yes, sir. For example, the testimony of  
10:54 17 Mr. Pall last week.

10:54 18 Q. All right.

10:54 19 MR. McLEROY: Could you go to the next  
10:54 20 slide?

10:54 21 Q. (By Mr. McLeroy) What was Mr. Pall's testimony?

10:54 22 A. Here he was asked: And you agree that,  
10:54 23 therefore, a VPN is more than just a point-to-point  
10:54 24 connection?

10:55 25 And he answers: Yes, sir.

10:55 1 Q. Do you agree with Mr. Pall on this issue?

10:55 2 A. Yes, sir, I do.

10:55 3 Q. Well, that covers the '135 patent. Let's talk  
10:55 4 about the '180 patent.

10:55 5 What is the biggest difference between the  
10:55 6 '180 patent and all of the prior art that Microsoft has  
10:55 7 discussed in this case?

10:55 8 A. It's the -- it's the -- the patents have the  
10:55 9 secure domain name elements and the secure domain name  
10:55 10 service elements that aren't there in the prior art.

10:55 11 Q. Well, if the prior art doesn't use secure  
10:55 12 domain names or secure domain name services, what do  
10:55 13 they use?

10:55 14 A. The use conventional domain names and  
10:55 15 conventional domain name services. And these things  
10:55 16 have been around for years.

10:55 17 MR. McLEROY: Would you go to the next  
10:55 18 slide, please?

10:55 19 Q. (By Mr. McLeroy) Here is Judge Davis's  
10:55 20 construction of secure domain name.

10:55 21 Do conventional domain names satisfy the  
10:55 22 judge's definition?

10:55 23 A. No, sir, they don't. Because they don't  
10:56 24 correspond to a secure computer network address as  
10:56 25 required in this claim construction.

10:56 1 Q. A few wrap-up questions, Professor Jones.

10:56 2 What is the role of hindsight in an  
10:56 3 obviousness analysis?

10:56 4 A. Hindsight should not play a part in obviousness  
10:56 5 analysis. Hindsight would be something like using the  
10:56 6 patent as a recipe of things to do and then go looking  
10:56 7 at prior art references for pieces and parts and words,  
10:56 8 assembling them altogether and then saying that that  
10:56 9 renders obvious or -- or the -- the patents. That would  
10:56 10 be the incorrect path to take.

10:56 11 Q. Well, if hindsight is the wrong way to do it,  
10:56 12 what is the right way to do an obviousness analysis?

10:56 13 A. The right way to do it is to put yourself in  
10:56 14 the shoes of one of ordinary skill in the art at the  
10:56 15 time of the invention, in this case late '99, early  
10:57 16 2000. Look at the information before you, including  
10:57 17 these prior art references, and ask whether or not it  
10:57 18 would have been obvious to create the invention using  
10:57 19 those references.

10:57 20 Q. Well, let me ask you that exact question. Were  
10:57 21 the '135 patent and '180 patents obvious in the year  
10:57 22 2000 when the patent applications were filed?

10:57 23 A. No, sir, they were not.

10:57 24 Q. Professor Jones, to wrap up once and for all,  
10:57 25 can you tell the jury what your opinion is on the

10:57 1 validity of the '135 and '180 patents?

10:57 2 A. Yes, sir. None of the three prior art  
10:57 3 references -- Aventail, DVPN or Windows NT 4 --  
10:57 4 anticipate or render obvious the VirnetX patents. The  
10:57 5 '135 and '180 patents are valid.

10:57 6 Q. Thank you.

10:57 7 MR. McCLEROY: I pass the witness, Your  
10:57 8 Honor.

10:57 9 THE COURT: Cross-examination.

10:58 10 MR. POWERS: May I approach, Your Honor?

10:58 11 THE COURT: Yes, you may.

10:58 12 MR. POWERS: May I proceed, Your Honor?

10:58 13 THE COURT: Yes, you may.

10:58 14 CROSS-EXAMINATION

10:58 15 BY MR. POWERS:

10:58 16 Q. Good morning still, Dr. Jones.

10:58 17 A. Good morning, sir.

10:59 18 Q. You began your discussion with the presumption  
10:59 19 of validity. Do you recall that on direct examination?

10:59 20 A. Yes, sir, I do.

10:59 21 Q. Now, the presumption of validity doesn't mean  
10:59 22 that the jury can't find the patents invalid, does it?

10:59 23 A. It does not mean that, that's correct, sir.

10:59 24 Q. In fact, juries do that all the time, don't  
10:59 25 they?

10:59 1 A. I believe they can, yes, sir.

10:59 2 Q. So in this case, the Patent Office did not  
10:59 3 actually consider any of the three pieces of prior art  
10:59 4 we discussed: Aventail, DVPN, or PPTP NT 4.

10:59 5 A. Yes, sir. They were not explicitly on that  
10:59 6 list.

10:59 7 Q. So there's no presumption that the Patent  
10:59 8 Office looked at those pieces of prior art and decided  
10:59 9 that VirnetX's patents were valid over those prior art,  
10:59 10 is there? They just -- they didn't even look at it at  
10:59 11 all.

10:59 12 A. That would be what -- the record indicates they  
10:59 13 did not, so we aren't to presume that they did.

10:59 14 Q. This jury would be the first opportunity to  
10:59 15 decide whether the VirnetX patents are valid over those  
10:59 16 pieces of prior art, true?

10:59 17 A. I believe that's correct, sir.

10:59 18 Q. Now, the Patent Office also didn't have the  
11:00 19 VirnetX source code or technical documentation, did it?

11:00 20 A. Not that I'm aware of, sir.

11:00 21 Q. And, in fact, the Patent Office doesn't make a  
11:00 22 technical evaluation of whether their source code or  
11:00 23 product is any good, does it? That's not the Patent  
11:00 24 Office's job.

11:00 25 A. That's correct, sir.

11:00 1 Q. Now, let's turn first to your discussion of the  
11:00 2 Windows prior art, which is PPTP and AutoDial.

11:00 3 Do you recall that?

11:00 4 A. Yes.

11:00 5 Q. You did not dispute in your testimony that PPTP  
11:00 6 is an easy and automatic way of setting up a VPN, did  
11:00 7 you?

11:00 8 A. I didn't say anything about that, sir.

11:00 9 Q. And the argument that you did make on direct is  
11:00 10 that you believe that the determining step in the '135  
11:00 11 patent was not satisfied by the PPTP/AutoDial prior art,  
11:00 12 right?

11:01 13 A. Yes, sir.

11:01 14 Q. Now, you cited, for example, the testimony of  
11:01 15 Mr. Pall when he was being cross-examined by VirnetX's  
11:01 16 lawyer, right?

11:01 17 A. Yes, sir.

11:01 18 Q. And that testimony came up in the context of  
11:01 19 Mr. Pall's carrying out the demonstration that VirnetX's  
11:01 20 lawyer asked him to carry out, right?

11:01 21 A. Yes, sir.

11:01 22 Q. And what VirnetX's lawyer asked him to do was  
11:01 23 to type in a fake, bogus name, right?

11:01 24 A. I believe in one case, it was eBay, and in  
11:01 25 another case, it was a made-up name, yes, sir.



11:01 1 Q. It was thisisnotasecurewebsite.com, right?

11:01 2 A. Something like that, yes, sir.

11:01 3 Q. That's not a real website, is it?

11:01 4 A. Not that I'm aware of.

11:01 5 Q. Okay. And in that context, that was the  
11:01 6 context in which Mr. Pall said there was no determining  
11:01 7 being done with the fake, bogus name, right?

11:01 8 A. I believe he was asked about the system, sir.  
11:01 9 I'm not sure what was in his head.

11:01 10 Q. But it was after the discussion of that fake,  
11:01 11 bogus demonstration, right?

11:01 12 A. Yes, sir.

11:01 13 Q. All right. Now, on the demonstration that  
11:01 14 Mr. Pall gave with a real domain name, it did determine  
11:02 15 a name, didn't it?

11:02 16 A. No, sir.

11:02 17 Q. In fact, what happened in that demonstration is  
11:02 18 Mr. Pall typed in a genuine address, and it went to the  
11:02 19 AutoDial address book, right? That's how it works.

11:02 20 A. I would not describe it that way, sir, no, sir.

11:02 21 Q. Well, it -- you did see the AutoDial address  
11:02 22 book pop up on the screen.

11:02 23 A. I don't recall if I saw it pop up on the  
11:02 24 screen, but I'm familiar with how it works.

11:02 25 Q. You were here during the testimony?

11:02 1 A. Yes, sir.

11:02 2 Q. Okay. And you don't dispute that the AutoDial  
11:02 3 address book came up on the screen.

11:02 4 A. I believe he had it up on the screen. I don't  
11:02 5 remember if it came up during that process or not.

11:02 6 Q. You had an opportunity to inspect that system  
11:02 7 for two full hours before it was shown to the jury,  
11:02 8 didn't you?

11:02 9 A. Yes, sir.

11:02 10 Q. So you know that the AutoDial address book  
11:02 11 contains addresses of websites that have been visited.

11:02 12 A. By addresses, you mean like IP address, sir,  
11:02 13 or --

11:02 14 Q. No. The path by which it was going to reach  
11:02 15 that -- or create that VPN.

11:02 16 A. I believe it contains the IP address and an  
11:03 17 indication of whether it's going to use PPTP, yes, sir.

11:03 18 Q. Exactly. The AutoDial address book says it's  
11:03 19 going to use PPTP for a particular secure connection,  
11:03 20 doesn't it?

11:03 21 A. That's the phone book, sir.

11:03 22 Q. Yes or no, does AutoDial do that? You just  
11:03 23 said it did.

11:03 24 A. No, sir, I didn't. Could you repeat the  
11:03 25 question, please.

11:03 1 Q. You just said that it contains an indication  
11:03 2 that it will use PPTP to make the connection.

11:03 3 A. The phone book --

11:03 4 Q. That's true, isn't it?

11:03 5 A. The phone book does, yes, sir.

11:03 6 Q. Okay. Now, let's turn then to -- well, let's  
11:03 7 stay with that demonstration for a moment.

11:03 8 You were here when VirnetX's lawyer  
11:03 9 cross-examined Mr. Pall and made him get down on his  
11:03 10 hands and knees and look at a Windows 2000 sticker that  
11:03 11 was on the bottom of the box?

11:03 12 A. Yes, sir.

11:03 13 Q. And he made the point that the Windows 2000  
11:03 14 software came out in 2000.

11:03 15 Do you recall that?

11:03 16 A. Yes, sir.

11:03 17 Q. Now, you know that the software running on that  
11:03 18 machine that was demonstrated was not Windows 2000  
11:04 19 software. You know that it was a 1996 NT software,  
11:04 20 don't you?

11:04 21 A. On that machine, sir? Yes, sir. That was  
11:04 22 Windows NT 4, I believe, yes, sir.

11:04 23 Q. Which is 1996.

11:04 24 A. That is my recollection, yes, sir.

11:04 25 Q. And that showed up actually on the screen when

11:04 1 you went to go inspect the demonstration, didn't it?

11:04 2 A. It may have, but I would agree that that was  
11:04 3 Windows NT 4 software from that timeframe, yes, sir.

11:04 4 Q. And that timeframe was 1996.

11:04 5 A. I believe so, yes, sir.

11:04 6 Q. So we didn't need to get down on our hands and  
11:04 7 knees and look at an old sticker to find out what  
11:04 8 software was running; it's right on the screen, and it  
11:04 9 says '96, didn't it?

11:04 10 A. On that computer, yes, sir.

11:04 11 Q. All right. Now, you haven't here offered an  
11:04 12 opinion as to whether any later versions of the BIOS  
11:04 13 would affect the operation of that 1996 software, did  
11:04 14 you?

11:04 15 A. I have not offered an opinion on that, sir.

11:04 16 Q. Let's turn to the DVPN software for a moment.

11:04 17 Do you recall testifying that in that one,  
11:05 18 there was no determining step as well?

11:05 19 A. No determination made an element as for the  
11:05 20 '135 patent, yes, sir.

11:05 21 Q. All right. And you based that conclusion on  
11:05 22 this source code analysis that Dr. Wicker is relieving  
11:05 23 on. Do you recall that?

11:05 24 A. No. I pointed out an example. My conclusion,  
11:05 25 though, is based on an analysis of all the source

11:05 1 code -- or the source code in its entirety, as well as  
11:05 2 the other documents.

11:05 3 Q. Now, let's go to the source code that you  
11:05 4 showed the jury, and that was in PX985. You asked the  
11:05 5 jury to look at the bottom of Page 8.

11:05 6 MR. POWERS: So let's bring that up,  
11:05 7 please, Chris.

11:05 8 Can we dim the lights, please?

11:05 9 Q. (By Mr. Powers) So this is the portion that you  
11:05 10 showed the jury, and you said what it's looking at is IP  
11:05 11 addresses, not DNS requests, right?

11:05 12 A. Well, this is the portion that Dr. Wicker  
11:05 13 showed, and this is what I'm referring to.

11:05 14 Q. All right. And this is what you showed the  
11:05 15 jury?

11:05 16 A. Yes, sir.

11:05 17 Q. Now, if you go forward two pages in the  
11:06 18 software --

11:06 19 MR. POWERS: Let's bring up the two pages  
11:06 20 of Page 10, Chris. And let's highlight DNS, lookup  
11:06 21 right there towards the top of the page. And then  
11:06 22 parse\_secure about -- oh, almost about five or six lines  
11:06 23 from the bottom.

11:06 24 Q. (By Mr. Powers) Do you see that?

11:06 25 A. Yes, sir, I do.

11:06 1 Q. Now, this is a section of the code that is  
11:06 2 talking about DNS lookups, not IP addresses, right?

11:06 3 A. That's correct, sir.

11:06 4 Q. And you didn't show the jury this portion.

11:06 5 A. No, sir, I didn't.

11:06 6 Q. And parse\_secure is where a determination step  
11:06 7 is occurring, isn't it?

11:06 8 A. I don't believe that parse\_secure is doing a  
11:06 9 determination whether to set up a VPN or not. No, sir,  
11:06 10 it does not do that.

11:06 11 Q. It's your testimony that a VPN is not set up  
11:06 12 after this parse\_secure step?

11:06 13 A. It will -- it's not set up as a result of the  
11:06 14 parse\_secure step, no, sir.

11:06 15 MR. POWERS: Let's go to the very next  
11:06 16 page, Page 11, of the source code. And, Chris, could  
11:06 17 you bring up, oh, the first half.

11:06 18 Q. (By Mr. Powers) You didn't show this portion to  
11:07 19 the jury either, did you?

11:07 20 A. No, sir, I didn't.

11:07 21 Q. And you see about, oh, halfway down where it  
11:07 22 says count = dns\_lookup, that's another DNS lookup in  
11:07 23 the DVPN code?

11:07 24 A. Yes, sir.

11:07 25 Q. And the parse\_secure is right below that as

11:07 1 well?

11:07 2 A. Yes, sir.

11:07 3 Q. And the very next step --

11:07 4 MR. POWERS: Chris, could you scroll down?

11:07 5 Q. (By Mr. Powers) -- is vpn\_cache. That's when  
11:07 6 the VPN is formed, isn't it?

11:07 7 A. I -- I see that. That is not when the VPN is  
11:07 8 formed, no, sir, it's not.

11:07 9 Q. That is discussing the formation of a VPN,  
11:07 10 though, isn't it, Dr. Jones?

11:07 11 A. No, sir, that's not what it's doing.

11:07 12 Q. That's your testimony?

11:07 13 A. Yes, sir.

11:07 14 Q. You didn't provide that testimony to the jury  
11:07 15 on direct, did you, sir?

11:07 16 A. No, sir.

11:07 17 Q. And in fact, this is the portion that  
11:07 18 Dr. Wicker relied on, isn't it?

11:07 19 A. No, sir. Dr. Wicker pointed to a different  
11:07 20 portion, the portion I showed.

11:07 21 MR. POWERS: Chris, could you put up  
11:07 22 PX875, just Page 27, and bring up the middle where it's  
11:08 23 about Pages 3 -- where it's Steps 3 through 5 -- look at  
11:08 24 even 3 through 8.

11:08 25 Q. (By Mr. Powers) This is a portion of

11:08 1 Dr. Wicker's report that you read it, right?

11:08 2 A. Yes, sir, I did.

11:08 3 Q. And it's specifically referring to the DVPN  
11:08 4 source code, right?

11:08 5 A. Yes, sir.

11:08 6 Q. And it's specifically referring to DVPN source  
11:08 7 code relating to DNS lookups, not IP address, right?

11:08 8 A. It does have DNS lookups, yes, sir.

11:08 9 Q. And you didn't show the jury that or even talk  
11:08 10 about it, did you?

11:08 11 A. His report? No, sir, I didn't.

11:08 12 Q. All right. Let's turn next to Aventail.

11:08 13 With regard to Aventail, as I heard your  
11:08 14 position, it's that Aventail is not a VPN because it's a  
11:08 15 point-to-point network. That was the argument you made?

11:08 16 A. Point-to-point connection, sir, yes, sir.

11:08 17 Q. Point-to-point connection.

11:08 18 Now, the -- let's go to the Court's  
11:09 19 construction. You put it up. And the Court's  
11:09 20 construction doesn't say it can't be a point-to-point  
11:09 21 connection, does it?

11:09 22 A. No. It says it has to be a network, so that  
11:09 23 precludes a point-to-point connection, sir.

11:09 24 Q. Yours is that a network precludes  
11:09 25 point-to-point because it has to -- why? Because there



11:09 1 have to be more than two computers?

11:09 2 A. No, sir.

11:09 3 Q. Nothing in Judge Davis' construction says  
11:09 4 anything about whether there's a point-to-point  
11:09 5 connection, does it? You'll agree with that?

11:09 6 A. It doesn't mention those words explicitly.  
11:09 7 That's what a network is, sir.

11:09 8 Q. But it's not in Judge Davis' construction,  
11:09 9 which is what the jury has to follow, right?

11:09 10 A. I would say it is because of the word network,  
11:09 11 sir.

11:09 12 Q. Now, in fact, Judge Davis' construction  
11:09 13 requires that for a VPN to exist, it has to be both data  
11:09 14 security encryption and anonymity. We talked about that  
11:09 15 a couple of days ago.

11:09 16 Do you recall that?

11:09 17 A. Yes, sir.

11:09 18 MR. POWERS: Chris, could we bring up the  
11:09 19 testimony that -- the slide that Dr. Jones used quoting  
11:10 20 Mr. Pall's trial testimony?

11:10 21 Nope. Mr. Pall's trial testimony, the one  
11:10 22 from his slide.

11:10 23 Q. (By Mr. Powers) Well, let me just ask you,  
11:10 24 because I wrote it down.

11:10 25 Mr. Pall testified that a VPN has to be

11:10 1 more than just a point-to-point. That was the testimony  
11:10 2 you quoted, right?

11:10 3 A. Yes, sir.

11:10 4 Q. And that's exactly what Judge Davis'  
11:10 5 construction says. It has to be more, because it has to  
11:10 6 be both anonymous and encrypted, right?

11:10 7 A. I would say that those are two things it has to  
11:10 8 be, but that is not sufficient.

11:10 9 Q. So Mr. Pall is right in his testimony in saying  
11:10 10 a point-to-point by itself isn't enough to be a VPN.  
11:10 11 There has to be more. That's all he said, and that's  
11:10 12 true, isn't it?

11:10 13 A. I would agree with that.

11:10 14 Q. And two things we know that it has to be under  
11:10 15 Judge Davis' construction is secure data and anonymous.

11:11 16 A. Data security and anonymity, yes, sir.

11:11 17 Q. All right. Now, you've testified that a  
11:11 18 point-to-point connection can be a VPN, haven't you?

11:11 19 A. That one could construct such a system, yes,  
11:11 20 sir.

11:11 21 Q. So a point-to-point connection can be a  
11:11 22 network.

11:11 23 A. Not when it's simply a point-to-point  
11:11 24 connection, no, sir. You could use a point-to-point  
11:11 25 connection to create a network. I would agree with

11:11 1 that.

11:11 2 Q. And --

11:11 3 MR. POWERS: Chris, could we bring up  
11:11 4 Dr. Jones' deposition from December 19, 2008, at Pages  
11:11 5 62, Line 15, through 63, 7?

11:12 6 Q. (By Mr. Powers) This was --

11:12 7 MR. POWERS: Let's go back up to --  
11:12 8 there's the question.

11:12 9 Q. (By Mr. Powers) This is your testimony in  
11:12 10 December of 2008, wasn't it, Dr. Jones?

11:12 11 A. Yes, sir.

11:12 12 Q. Question: If you met all the other  
11:12 13 requirements, we're taking about with an ability to  
11:12 14 communicate between them and some aspect of addressing  
11:12 15 or identifying to whom it is destined, then a point --

11:12 16 Answer: I guess by point-to-point, what  
11:12 17 are you -- I'm not sure what you're saying there.

11:12 18 MR. POWERS: Then let's go to the next  
11:12 19 question, please, Chris.

11:12 20 Q. (By Mr. Powers) By point-to-point, I am  
11:12 21 referring to, for example, this network that's on  
11:12 22 Page 24 of Exhibit 3, where you have a point being the  
11:12 23 PC on the left and another point being the PC on the  
11:12 24 right.

11:12 25 And your answer was: You could form a

11:12 1 network using that wire, yes.

11:13 2 Do you see that?

11:13 3 A. Yes, sir.

11:13 4 MR. POWERS: And, Chris, could you bring  
11:13 5 up the figure that Dr. Jones was discussing in that  
11:13 6 exact testimony.

11:13 7 Q. (By Mr. Powers) That was a page from the  
11:13 8 technology tutorial that had been discussed by the  
11:13 9 parties at that time, right?

11:13 10 A. I don't recall at this point, sir. That's  
11:13 11 certainly possible.

11:13 12 Q. You recall it being a point-to-point wire  
11:13 13 connection?

11:13 14 A. I -- I know that we're referring to a wire  
11:13 15 here, sir. I don't recall the rest of what was being  
11:13 16 done.

11:13 17 Q. And you agree your testimony said that a  
11:13 18 point-to-point wire connection can be a network.

11:13 19 A. I -- I agree that's what I testified to, sir.

11:13 20 Q. All right.

11:13 21 A. And I would agree that under certain  
11:13 22 circumstances, it could, yes, sir.

11:13 23 Q. Now, PPTP, you've already testified, creates a  
11:13 24 virtual private network, right?

11:13 25 A. Yes, sir.

11:13 1 Q. And PPTP stands for point-to-point, doesn't it?

11:13 2 A. Yes. It uses a point-to-point tunnel to  
11:13 3 connect the other multiple computers.

11:13 4 Q. All right.

11:13 5 MR. POWERS: Now, could we bring up  
11:13 6 DX3064, please, at Page 5, Chris?

11:14 7 And can you blow up the portion -- the  
11:14 8 second from the bottom, second paragraph from the  
11:14 9 bottom. Actually -- sorry -- the paragraph just above  
11:14 10 that. It's very small on this. Here we go.

11:14 11 Q. (By Mr. Powers) There it says -- and this is an  
11:14 12 exhibit from the user's perspective of the VPN as a  
11:14 13 point-to-point connection between the user's computer  
11:14 14 and a corporate server.

11:14 15 Do you see that?

11:14 16 A. Yes, sir, I do.

11:14 17 Q. And that's an accurate description, isn't it?

11:14 18 A. I think that's a reasonable description for  
11:14 19 what they're describing here, yes, sir.

11:14 20 Q. All right. Now let's turn to the '180 patent  
11:14 21 for a moment.

11:14 22 You testified --

11:14 23 THE COURT: Mr. Powers, you have about  
11:14 24 three or four minutes left.

11:14 25 MR. POWERS: Thank you, Your Honor.

11:14 1 Q. (By Mr. Powers) You testified that none of the  
11:14 2 prior art references satisfy the secure domain name  
11:14 3 requirement because they're just regular domain names,  
11:14 4 right?

11:14 5 A. Yes, sir.

11:14 6 Q. Now, Judge Davis' construction that the jury  
11:14 7 has to follow doesn't say that it can't be a regular  
11:15 8 domain name, right?

11:15 9 A. I believe it does. It says that they have  
11:15 10 to -- that the domain names must correspond to secure  
11:15 11 computer network addresses.

11:15 12 Q. And a secure address is one that just requires  
11:15 13 authority to access, right, under his construction?

11:15 14 A. I believe it has a -- my recollection is, it  
11:15 15 also requires being capable of DVPN communications.

11:15 16 Q. True. Exactly.

11:15 17 So as long -- and so a regular DNS -- a  
11:15 18 regular domain name, as long as it corresponds to a  
11:15 19 secure domain name address, that satisfies Judge Davis'  
11:15 20 construction, doesn't it?

11:15 21 A. Not -- what you said, sir, is not a  
11:15 22 possibility. So you've used the words, but that's not  
11:15 23 an accurate description of what would happen.

11:15 24 Q. Now, you're -- the reason in your expert report  
11:15 25 that you gave as to why a -- you believe Judge Davis'

11:15 1 construction can't be satisfied by a regular domain name  
11:15 2 is that the domain name has to be designed in order to  
11:15 3 correspond to a secure website, not just that it, in  
11:16 4 fact, corresponds to one. That's true, isn't it?  
11:16 5 That's what you said in your report?

11:16 6 A. That's one way -- being designed to correspond  
11:16 7 is one way that it can correspond, yes, sir.

11:16 8 Q. But that's not what you said in your deposition  
11:16 9 or your report. You said that's what you thought it  
11:16 10 meant to correspond, right?

11:16 11 A. I -- I don't recall whether I used that as an  
11:16 12 example, sir, or I said that it meant that.

11:16 13 Q. Now, you'll recall that VirnetX argued that  
11:16 14 claim construction, and Judge Davis did not adopt it.  
11:16 15 Do you recall that, that it has to be designed  
11:16 16 limitation. Judge Davis said it merely corresponds.  
11:16 17 That was his construction, wasn't it?

11:16 18 A. I don't -- I don't believe that there was an  
11:16 19 argument that it had to be designed, no, sir.

11:16 20 Q. In any event, Judge Davis did not include such  
11:16 21 a requirement of design into the -- into the  
11:16 22 construction, did he?

11:16 23 A. I believe that's one way in which it  
11:16 24 corresponds, so I believe he did by the way he made his  
11:16 25 construction, sir.

11:16 1 Q. Let's be clear. Judge Davis did not include  
11:16 2 anything saying that design to be correspond is  
11:16 3 required, just must correspond; that's fair?

11:17 4 A. He didn't use those exact words, no, sir.

11:17 5 Q. The exact word he used, which is has to  
11:17 6 correspond, right?

11:17 7 A. That's what -- corresponds, one way to satisfy  
11:17 8 that is to be designed to be a secure domain name.

11:17 9 Q. And another way to satisfy it would be, if I  
11:17 10 type in that name, it prints back that secure address,  
11:17 11 that corresponds then, doesn't it?

11:17 12 A. It does, sir.

11:17 13 Q. It does, or it does not?

11:17 14 A. No, sir.

11:17 15 Q. So if I type in the name of a secure address,  
11:17 16 and that goes out and brings back that secure address,  
11:17 17 your testimony to this jury is that that name doesn't  
11:17 18 correspond to the address?

11:17 19 A. Not -- you'd have to tell me the rest of the  
11:17 20 system, sir, but just doing that, no, sir, that doesn't  
11:17 21 meet the elements of the claims.

11:17 22 MR. POWERS: No further questions, Your  
11:17 23 Honor.

11:17 24 THE COURT: Thank you.

11:17 25 Redirect?



11:17 1 MR. McLEROY: Yes, Your Honor.

01:22 2 REDIRECT EXAMINATION

01:22 3 BY MR. McLEROY:

11:17 4 Q. Professor Jones, I'll start where -- the same  
11:18 5 place Mr. Powers started with the Windows NT  
11:18 6 demonstration that we saw in the courtroom here.

11:18 7 Is www.ebay.com, is that a real domain  
11:18 8 name or a bogus domain name?

11:18 9 A. That's a real domain name that you can go find  
11:18 10 on the internet.

11:18 11 Q. What happened when Mr. Pall typed in  
11:18 12 www.ebay.com into the demonstration system?

11:18 13 A. The system set up a VPN.

11:18 14 Q. And what does that indicate to you about  
11:18 15 whether or not Windows NT 4 makes or does not make a  
11:18 16 determination to set up or initiate a VPN based on a DNS  
11:18 17 request?

11:18 18 A. Well, that confirms the understanding I got  
11:18 19 from looking at the rest of the evidence and the source  
11:18 20 code for this, that there's not a determination based on  
11:18 21 a DNS request to set up a VPN in Windows NT.

11:18 22 Q. A little bit more about the demonstration.  
11:18 23 Mr. Powers referred to the time you spent inspecting the  
11:19 24 demonstration system before it was shown here in court.

11:19 25 Do you remember that?

11:19 1 A. Yes, sir.

11:19 2 Q. All right. And he focused on what software was  
11:19 3 running on the computer sitting over there on  
11:19 4 Microsoft's counsel table; is that right?

11:19 5 A. Yes, sir.

11:19 6 Q. And he was careful not to ask you what software  
11:19 7 was running on these three computers on this side of the  
11:19 8 courtroom.

11:19 9 A. Yes, sir.

11:19 10 Q. What software was running on some of the  
11:19 11 computers on this side of the courtroom?

11:19 12 A. Well, on two of those computers, an early  
11:19 13 version, a beta version, of Windows 2000 or what became  
11:19 14 Windows 2000 was running.

11:19 15 Q. Now, turning to DVPN, why did you choose to  
11:19 16 show the source code up here on the screen that you did?

11:19 17 A. That was the source code that Dr. Wicker cited  
11:19 18 to in his chart, and it's the source code he showed to  
11:19 19 the jury, so that was the source code that I discussed,  
11:19 20 but --

11:19 21 Q. Did you just review that source code, or did  
11:19 22 you review all the source code in that file in  
11:19 23 Plaintiff's Exhibit 985 that we saw?

11:19 24 A. Well, I certainly reviewed all the source code  
11:19 25 in that file, but I also reviewed other files in the

11:20 1 DVPN system to understand what was being put forward.

11:20 2 Q. Does any of the other code, any of the other  
11:20 3 source code in Plaintiff's 985 or any of the other DVPN  
11:20 4 source code change your opinion that DVPN does not make  
11:20 5 determinations based on a DNS request?

11:20 6 A. No, sir. It confirms my opinion of how it  
11:20 7 works.

11:20 8 Q. All right. Then on Aventail, on the discussion  
11:20 9 of point-to-point connections, what does PPTP stand for?

11:20 10 A. I believe it's point-to-point tunneling  
11:20 11 protocol.

11:20 12 Q. Is that the same thing as a point-to-point  
11:20 13 connection, or is that something different?

11:20 14 A. That's something different. It uses -- PPTP  
11:20 15 uses a -- what's called a point-to-point tunnel to  
11:20 16 allow, say, a client computer on one side to communicate  
11:20 17 with a network of computers on the other.

11:20 18 That client computer can send a packet  
11:20 19 with -- as it showed, with an IP address in it and have  
11:20 20 that packet delivered to any of the computers on the  
11:20 21 private network on the other side of the tunnel.

11:21 22 So it's not -- it's using a point-to-point  
11:21 23 connection. Many things use a point-to-point  
11:21 24 connection. It, however, is creating a virtual private  
11:21 25 network.

11:21 1 Q. So is the PPTP protocol, does that create a  
11:21 2 garden hose, or does that create something else?

11:21 3 A. That doesn't create a garden hose; that creates  
11:21 4 a network, sir.

11:21 5 Q. Okay. Now, finally, let's look at the secure  
11:21 6 domain names. That's a claim term in the '180 patent,  
11:21 7 right?

11:21 8 A. Yes, sir.

11:21 9 Q. Can you give me an example of what a regular,  
11:21 10 standard domain name was, you know, something that's  
11:21 11 been in existence since the '80s?

11:21 12 A. How about the -- if I can go as far back in the  
11:21 13 '80s in my head, but how about [www.yahoo.com](http://www.yahoo.com) as a  
11:21 14 conventional domain name?

11:21 15 Q. What did the inventors use as examples of  
11:21 16 secure domain names in their '180 patent?

11:21 17 A. Well, in that they would use something like  
11:21 18 [www.yahoo.scom](http://www.yahoo.scom) to -- in that case, indicating that  
11:21 19 that's for a secure domain name.

11:22 20 Q. What would have happened if you sent a secure  
11:22 21 domain name to a regular DNS server?

11:22 22 A. You would have gotten back an error that would  
11:22 23 indicate that it didn't have that address or that it  
11:22 24 couldn't understand that address.

11:22 25 Q. In the Microsoft accused products, and

11:22 1 specifically, the PeerNet interfaces, do those use  
11:22 2 regular domain names, or do they use something  
11:22 3 different?

11:22 4 A. They use something different. They use --  
11:22 5 remember that long string of characters that were  
11:22 6 numbers and letters and dots followed by another string?  
11:22 7 That -- that name is not a conventional domain name  
11:22 8 either.

11:22 9 Q. What happens if that Windows PeerNet name --  
11:22 10 peer name was sent to a regular DNS -- regular standard  
11:22 11 DNS server?

11:22 12 A. You would get an error returned, and I've  
11:22 13 tested and verified that myself.

11:22 14 Q. Just like a secure domain name that's listed in  
11:22 15 the '180 patent?

11:22 16 A. Yes, sir.

11:22 17 MR. McLEROY: Pass the witness.

11:22 18 THE COURT: Any recross?

11:22 19 MR. POWERS: Yes, Your Honor, very brief.

11:23 20 THE COURT: It's going to have to be.

11:23 21 You're out of time.

11:23 22 MR. POWERS: Then I'll make it very brief.

02:44 23 RE CROSS-EXAMINATION

02:44 24 BY MR. POWERS:

11:23 25 Q. Just two subjects, Dr. Jones.

11:23 1                   One, you were asked just then by VirnetX's  
11:23 2 lawyer about the demonstration that Mr. Pall gave  
11:23 3 regarding ebay.com.

11:23 4                   Do you recall that?

11:23 5           A.    Yes, sir, I do.

11:23 6           Q.    Now, the computers that were set up were not  
11:23 7 actually connected to the internet, were they?

11:23 8           A.    They were not.

11:23 9           Q.    So it's not going to find ebay.com, is it?

11:23 10          A.    No, it's not.

11:23 11          Q.    And ebay.com was not in the address book, was  
11:23 12 it?

11:23 13          A.    No, sir, it wasn't in the address book.

11:23 14          Q.    Secondly, with respect to Aventail -- could you  
11:23 15 get Exhibit 362, Plaintiff's Exhibit 362, in front of  
11:23 16 you, please?

11:23 17                   Now, this is an SAIC document, correct?

11:23 18          A.    Yes, sir, I believe it is.

11:24 19          Q.    If you could turn to Page 27.

11:24 20          A.    Is that marked 27 down at the bottom, or the  
11:24 21 page -- which --

11:24 22          Q.    Marked 27 down at the bottom.

11:24 23          A.    Okay, sir. I'm there.

11:24 24          Q.    And if you go --

11:24 25                   MR. POWERS: Chris, could you bring up --

11:24 1 just about, oh, 60 percent down, there's a discussion of  
11:24 2 VPN system providers. See if you can pull that out.

11:24 3 Well, let's get a little less text, if we  
11:24 4 could. Do you see where I'm referring to? About 60  
11:24 5 percent down.

11:24 6 Q. (By Mr. Powers) And VPN starts on the far  
11:24 7 right-hand side, Dr. Jones.

11:24 8 A. Yes, sir, I do.

11:24 9 Q. And it says VPN system providers in the  
11:24 10 parenthetical, and the first one it lists is Aventail.

11:24 11 Do you see that?

11:24 12 A. Yes, sir.

11:24 13 Q. This is a situation where SAIC is calling  
11:24 14 Aventail a VPN system provider, right?

11:24 15 A. I believe it is. I haven't examined this  
11:24 16 document, sir.

11:24 17 MR. POWERS: No further questions, Your  
11:24 18 Honor, but we would offer PX362.

11:24 19 THE COURT: Okay. Any objection?

11:24 20 MR. McCLEROY: No, Your Honor.

11:24 21 Two follow-up questions?

11:24 22 THE COURT: Yes, uh-huh.

11:24 23 That exhibit will be admitted, and you may  
11:25 24 redirect.

01:22 25 REDIRECT EXAMINATION

01:22 1 BY MR. POWERS:

11:25 2 Q. Professor Jones, do you still have Plaintiff's  
11:25 3 362 in front of you?

11:25 4 A. Yes, sir.

11:25 5 Q. What is the date of that document?

11:25 6 A. I don't know, sir. July 8th, 1999, I believe  
11:25 7 is the -- is the date.

11:25 8 Q. Okay. At that time, had Judge Davis defined  
11:25 9 the term VPN yet?

11:25 10 A. No, sir, he had not.

11:25 11 Q. Is it at all possible that SAIC could have been  
11:25 12 applying the Court's definition of VPN when they were?

11:25 13 A. No, sir.

11:25 14 MR. McLEROY: Pass the witness.

11:25 15 THE COURT: Okay. Anything further?

11:25 16 MR. POWERS: No, Your Honor.

11:25 17 THE COURT: Okay. Very good.

11:25 18 All right. You may step down. Thank you.

11:25 19 All right. Microsoft have any further  
11:25 20 evidence -- I'm sorry. VirnetX?

11:25 21 MR. CAWLEY: VirnetX has no further  
11:25 22 evidence and rests, Your Honor.

11:25 23 THE COURT: All right. VirnetX rests.  
11:25 24 Microsoft finally closes?

11:25 25 MR. POWERS: Yes, Your Honor.



11:25 1 THE COURT: And VirnetX finally closes?

11:26 2 MR. CAWLEY: Yes, Your Honor.

11:26 3 THE COURT: All right.

11:26 4 All right, Ladies of the Jury. That  
11:26 5 concludes the evidence stage of the case. I think it  
11:26 6 was a week ago today that we did the opening statements,  
11:26 7 and I told you we would, after that, go through the  
11:26 8 evidence. And then following the evidence, you will  
11:26 9 hear the Court's charge and then the final arguments of  
11:26 10 counsel.

11:26 11 But what I'm going to do now, I have some  
11:26 12 matters I have to take up with the attorneys, so I'm  
11:26 13 going to go ahead and let you recess for lunch, and  
11:26 14 we'll plan to start back here at 1:45. That will give  
11:26 15 you an hour and 20 minutes for lunch. We'll come back  
11:26 16 at 1:45, and at that time, you'll hear the charge and  
11:26 17 the arguments of counsel.

11:26 18 I, again, want to remind you of your  
11:26 19 instructions. Even though the evidence is all closed,  
11:26 20 you still should not discuss this case among yourselves  
11:26 21 or with anyone else.

11:26 22 So enjoy your lunch, and then we'll hear  
11:27 23 the arguments, and finally, later this afternoon, you'll  
11:27 24 be released to begin your deliberations.

11:27 25 I'm going to take about a five-minute

11:27 1 recess, and then I'll be back to visit with the  
11:27 2 attorneys.

11:27 3 So at this time, we are in recess until  
11:27 4 1:45.

11:27 5 COURT SECURITY OFFICER: All rise.  
6 (Jury out.)  
7 (Recess.)  
8  
9

10 CERTIFICATION

11  
12 I HEREBY CERTIFY that the foregoing is a  
13 true and correct transcript from the stenographic notes  
14 of the proceedings in the above-entitled matter to the  
15 best of my ability.  
16  
17  
18

19 /s/\_\_\_\_\_  
SUSAN SIMMONS, CSR Date \_\_\_\_\_  
20 Official Court Reporter  
State of Texas No.: 267  
21 Expiration Date: 12/31/10

22  
23 /s/\_\_\_\_\_  
JUDITH WERLINGER, CSR Date \_\_\_\_\_  
24 Deputy Official Court Reporter  
State of Texas No.: 731  
25 Expiration Date: 12/31/10

EXHIBIT F12

1 IN THE UNITED STATES DISTRICT COURT  
 2 FOR THE EASTERN DISTRICT OF TEXAS  
 3 TYLER DIVISION

4 VIRNETX \* Civil Docket No.  
 5 \* 6:07-CV-80.  
 6 VS. \* Tyler, Texas  
 \*  
 \* March 15, 2010.  
 7 MICROSOFT CORPORATION \* 12:35 P.M.

8 TRANSCRIPT OF JURY TRIAL  
 9 BEFORE THE HONORABLE JUDGE LEONARD DAVIS  
 10 UNITED STATES DISTRICT JUDGE

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19 \* \* \* \* \*

20

21 P R O C E E D I N G S

22 (Jury out)

11:35 23 COURT SECURITY OFFICER: All rise.

11:35 24 THE COURT: Please be seated.

11:35 25 All right. Does Plaintiff have any

11:35 1 motions it wishes to make?

11:35 2 MS. CASSADY: Your Honor, our star  
11:35 3 quarterback has appeared to disappear from the --

11:35 4 THE COURT: Okay. I'll take that as a no  
11:35 5 then, right?

11:35 6 MS. CASSADY: We do have some motions,  
11:35 7 Your Honor.

11:35 8 THE COURT: Oh, okay.

11:35 9 MR. CALDWELL: You mind if I go grab  
11:35 10 Mr. Cawley?

11:35 11 THE COURT: That will be fine.

11:36 12 In the meanwhile, does Defendant have a  
11:36 13 motion they wish to make?

11:36 14 MR. POWERS: Yes, we do, Your Honor.

11:36 15 Before we begin, though, I want to ask the  
11:36 16 Court if I may take my leave. If all you're going to  
11:36 17 handle is instructions, verdict form, and the JMOL  
11:36 18 motions, Mr. Bobrow is going to handle.

11:36 19 If there was something else, I was going  
11:36 20 to stay for that, but if that's what it is, I'd like the  
11:36 21 Court's permission to leave for now.

11:36 22 THE COURT: Permission granted.

11:36 23 MR. POWERS: Thank you, sir.

11:36 24 THE COURT: All right.

11:36 25 MR. CAWLEY: Sorry, Your Honor.

11:36 1 THE COURT: Yes.

11:36 2 MR. CAWLEY: I didn't know we were back  
11:36 3 in.

11:36 4 Are we ready to take up Plaintiff's JMOLs?

11:36 5 THE COURT: Plaintiff have a motion to  
11:36 6 make?

11:36 7 MR. CAWLEY: Your Honor, the Plaintiff,  
11:36 8 VirnetX, makes its motions for judgment as a matter of  
11:36 9 law at the close of the Defendant's case-in-chief.

11:36 10 And pursuant to the agreement of the  
11:36 11 parties and the permission of the Court, we have agreed  
11:36 12 that this may be done at this time as if it were done  
11:36 13 immediately following the close of the Defendant's case.

11:37 14 I'd like to make these motions in two  
11:37 15 sets.

11:37 16 The first is a set of three that I'd like  
11:37 17 to call to the particular attention of the Court, and  
11:37 18 then I've got a second set that I'm going to make that  
11:37 19 I'm sure the Court will be quite attentive to as well.

11:37 20 But these are the ones -- these first  
11:37 21 three are the ones that I'd really like to highlight for  
11:37 22 purposes of the discussion.

11:37 23 The first is, on best mode on the '135  
11:37 24 patent, the Defendant has asserted the defense of  
11:37 25 invalidity based on the failure to disclose the

11:37 1 inventor's best mode of practicing the invention.

11:37 2 We have heard no evidence whatsoever  
11:37 3 during the course of the trial about what the best mode  
11:37 4 would be or certainly about the Defendant's knowledge of  
11:37 5 that and their failure to disclose the best mode.

11:37 6 So we would submit that as a matter of  
11:38 7 law, that defense fails for lack of any proof  
11:38 8 whatsoever.

11:38 9 THE COURT: Okay. Response?

11:38 10 MR. BOBROW: I have no objection. As Your  
11:38 11 Honor knows, we asked that the jury instruction, in  
11:38 12 fact, on that be pulled, and as I understand it, it was.

11:38 13 THE COURT: Okay. So with defense  
11:38 14 counsel's agreement, that motion is granted.

11:38 15 MR. CAWLEY: All right. The second of  
11:38 16 this category is a similar argument of written  
11:38 17 description of the '135 patent.

11:38 18 Once again, that's a factual inquiry.  
11:38 19 There has been no evidence offered whatsoever as to what  
11:38 20 one of skill in the art would have perceived to be the  
11:38 21 adequacy of the written description supporting the  
11:38 22 certain claims.

11:38 23 THE COURT: Response?

11:38 24 MR. BOBROW: Same position, Your Honor.  
11:38 25 We don't oppose. It was --



11:38 1 THE COURT: All right. Motion is granted.

11:38 2 MR. CAWLEY: And the third of this  
11:38 3 category is Microsoft's counterclaim on the invalidity  
11:38 4 of Claim 7 of the '135 patent. As the Court may recall,  
11:38 5 the Plaintiff withdrew that claim and is not asserting  
11:39 6 it.

11:39 7 Microsoft, however, did not withdraw its  
11:39 8 counterclaim as to invalidity. However, there has been  
11:39 9 no proof offered during the course of the trial that  
11:39 10 Claim 7 of the '135 patent is invalid.

11:39 11 THE COURT: Okay.

11:39 12 MR. BOBROW: We would withdraw that  
11:39 13 without prejudice, Your Honor.

11:39 14 MR. CAWLEY: Well, I think --

11:39 15 THE COURT: I think it's a little late  
11:39 16 for --

11:39 17 MR. BOBROW: But it was not put into the  
11:39 18 case at the beginning. In other words, there was  
11:39 19 nothing in the Court's instructions or the parties'  
11:39 20 briefs that said that our counterclaim on Claim 7 was  
11:39 21 in.

11:39 22 The Plaintiff withdrew that claim. We did  
11:39 23 not put forward, either in the materials going in to the  
11:39 24 Court, that that was still an issue. So that was never  
11:39 25 litigated.

11:39 1                   So, certainly, it should be withdrawn only  
11:39 2 without prejudice. Should this claim ever be asserted  
11:39 3 against us again, we would have the opportunity to  
11:39 4 litigate that claim. But as things stand now, that  
11:39 5 claim was not in the case. Only Claims 1, 10, and 12 of  
11:39 6 the '135 patent were in this case.

11:40 7                   MR. CAWLEY: They have a live counterclaim  
11:40 8 on that claim, which they do, Your Honor. It's in the  
11:40 9 case. They have chosen not to offer any evidence on it,  
11:40 10 and that's appropriate for judgment as a matter of law.

11:40 11                   THE COURT: When they withdrew their  
11:40 12 assertion as to Claim 7, did -- Microsoft, did you  
11:40 13 withdraw your counterclaim as to the invalidity?

11:40 14                   MR. BOBROW: In a sense, we did, because  
11:40 15 it was not put forward in the materials pretrial that  
11:40 16 said, we're going to try this. They dropped Claim 7 on  
11:40 17 the eve of trial, and we simply -- the issue then was  
11:40 18 moot. We did not put forward and litigate Claim 7 at  
11:40 19 all.

11:40 20                   And so certainly, any issues that as to  
11:40 21 Claim 7 are withdrawn then without prejudice for  
11:40 22 Microsoft to later challenge that claim.

11:40 23                   THE COURT: I'm going to take that one  
11:40 24 under advisement.

11:40 25                   MR. CAWLEY: All right. Now, Your

11:40 1 Honor --

11:40 2 THE COURT: There's nothing in the charge  
11:40 3 as to Claim 7, right?

11:40 4 MR. BOBROW: That's right.

11:40 5 MR. CAWLEY: I think that's correct, Your  
11:40 6 Honor.

11:40 7 MR. BOBROW: That's correct.

11:40 8 MR. CAWLEY: Now, the second category is  
11:40 9 some motions that I'm going to make now, and in the  
11:41 10 interest of time and efficiency, Your Honor, I will say  
11:41 11 that all of these are based on failures of proof.

11:41 12 And we are prepared to drill as deeply  
11:41 13 down into the evidence in the record as Your Honor would  
11:41 14 care to, but I -- but I -- you know, unless -- unless  
11:41 15 Your Honor -- I mean, I'm going to do what I need to do  
11:41 16 to make my motion and preserve my record, and if Your  
11:41 17 Honor feels as though I'm giving it short shrift and  
11:41 18 that we should get more deeply into the facts --

11:41 19 THE COURT: Give it short shrift, and if I  
11:41 20 want to jump in somewhere, I will.

11:41 21 MR. CAWLEY: All right. Thank you.  
11:41 22 The first, as of this category, anyway, is, we move for  
11:41 23 judgment as a matter of law as to direct infringement of  
11:41 24 the '135 patent. VirnetX seeks judgment under Rule 50  
11:41 25 that it has established as a matter of law that

11:41 1 Microsoft directly infringes Claims 1, 10, and 12 of the  
11:41 2 '135 patent.

11:41 3 This motion is as to Windows XP, Windows  
11:41 4 Vista, Live Communications Server 2003, Live  
11:42 5 Communications Server 2005, Office Communications Server  
11:42 6 2007, Office Communicator 2005, Office Communicator  
11:42 7 2007, Messenger 5.0, Messenger 5.1, and Live Meeting  
11:42 8 Console.

11:42 9 VirnetX has established as a matter of law  
11:42 10 that the -- those accused products that I just named  
11:42 11 meet each claim under the Doctrine of Equivalents with  
11:42 12 testimony from Professor Jones that the website  
11:42 13 limitations are literally present or practiced by the  
11:42 14 '135 patent accused products.

11:42 15 Second, as to direct infringement of the  
11:42 16 '180 --

11:42 17 THE COURT: Just a moment. That motion is  
11:42 18 denied.

11:42 19 MR. CAWLEY: Yes, Your Honor.

11:42 20 As to direct infringement of the '180  
11:42 21 patent, VirnetX seeks judgment under Rule 50 that it has  
11:42 22 established as a matter of law that Microsoft directly  
11:42 23 infringes Claims 1, 4, 15, 17, 20, 31, 33, and 35 of the  
11:43 24 '180 patent in Windows XP and Windows Vista.

11:43 25 Professor Jones has testified that the

11:43 1 limitations of the claims are satisfied in the accused  
11:43 2 products and that no reasonable jury could find  
11:43 3 otherwise.

11:43 4 THE COURT: All right. Motion is denied.

11:43 5 MR. CAWLEY: Next, VirnetX moves for  
11:43 6 judgment as a matter of law on inducement of the '135  
11:43 7 patent and '180 patents. The evidence conclusively  
11:43 8 establishes that Microsoft took actions, such as  
11:43 9 marketing, participating in conferences, and leasing  
11:43 10 material that accuses others of infringing the patents.

11:43 11 There is evidence that the patents were  
11:43 12 directly infringed by Microsoft and others. There is  
11:43 13 undisputed evidence that Microsoft was aware of the  
11:43 14 patents and knew or should have known that the acts  
11:44 15 constituted and encouraged infringement.

11:44 16 And as I said, there is evidence of direct  
11:44 17 infringement, and there is evidence that Microsoft  
11:44 18 should have known that its encouragement or instruction  
11:44 19 would result in others infringing the claim. This  
11:44 20 evidence is so compelling that no reasonable jury could  
11:44 21 find otherwise.

11:44 22 THE COURT: Motion is denied.

11:44 23 MR. CAWLEY: Next, contributory  
11:44 24 infringement of the '135 patent.

11:44 25 Microsoft -- excuse me -- VirnetX has

11:44 1 established conclusively that Microsoft has sold,  
11:44 2 offered for sale, or imported a material component of  
11:44 3 the accused products or a material component used in the  
11:44 4 practicing method that is not a staple article of  
11:44 5 commerce suitable for substantial non-infringing use and  
11:44 6 that Microsoft had knowledge that the component was so  
11:44 7 made and adapted.

11:44 8 As already established, VirnetX has  
11:44 9 offered evidence that Microsoft knew of the '135 patent,  
11:45 10 and no reasonable jury could find otherwise.

11:45 11 THE COURT: Motion is denied.

11:45 12 MR. CAWLEY: VirnetX moves for judgment as  
11:45 13 a matter of law on its willfulness claims. It has  
11:45 14 proved by clear and convincing evidence that Microsoft  
11:45 15 willfully infringed the '135 and '180 patents; that it  
11:45 16 was aware of the patents; that it acted in spite of an  
11:45 17 objectively high likelihood that its actions infringed a  
11:45 18 valid patent, and no reasonable jury could find  
11:45 19 otherwise.

11:45 20 THE COURT: Motion is denied.

11:45 21 MR. CAWLEY: Microsoft -- VirnetX, that  
11:45 22 is, moves for judgment as a matter of law on damages.  
11:45 23 The evidence shows that it is entitled to a reasonable  
11:45 24 royalty in the amount of \$158,700,000 for the '135  
11:45 25 patent, and \$83.6 million for the '180 patent, and no

11:45 1 reasonable jury could find otherwise.

11:46 2 THE COURT: Motion is denied.

11:46 3 MR. CAWLEY: Likewise, VirnetX moves for  
11:46 4 judgment as a matter of law on the defenses of  
11:46 5 anticipation of the '135 and '180 patents on the grounds  
11:46 6 that all asserted references lack one or more central  
11:46 7 elements to establish invalidity, and no reasonable jury  
11:46 8 could find otherwise.

11:46 9 THE COURT: Motion is denied.

11:46 10 MR. CAWLEY: And VirnetX, finally, in this  
11:46 11 category, moves for a judgment as a matter of law on  
11:46 12 obviousness of the '135 and '180 patents on the ground  
11:46 13 that Microsoft has failed to meet its burden to produce  
11:46 14 clear and convincing evidence that any of the asserted  
11:46 15 claims of those patents would have been obvious at the  
11:46 16 time of filing to one of skill in the art, and no  
11:46 17 reasonable jury could find otherwise.

11:47 18 THE COURT: Motion is denied.

11:47 19 MR. CAWLEY: Thank you, Your Honor.

11:47 20 THE COURT: Thank you.

11:47 21 Defendant have any motions?

11:47 22 MR. BOBROW: Yes, Your Honor, we do.

11:47 23 Your Honor, we have a number of motions.

11:47 24 Let me begin by stating that we did file a formal JMOL  
11:47 25 motion this morning, but, obviously, I'm prepared to put

11:47 1 these on the record now for you and for your  
11:47 2 consideration.

11:47 3 THE COURT: If you'd like to just rest on  
11:47 4 your written motion...

11:47 5 MR. BOBROW: Well, we did submit the  
11:47 6 motion, but we do think that it is appropriate to go  
11:47 7 forward on this basis as well, setting forth for the  
11:47 8 record the motions that we are making.

11:47 9 THE COURT: All right.

11:47 10 MR. BOBROW: First of all, on the question  
11:47 11 of infringement, Microsoft moves for judgment as a  
11:47 12 matter of law on the question of infringement -- direct  
11:47 13 infringement of the '135 patent, that no reasonable jury  
11:47 14 could find that Microsoft directly infringes the  
11:47 15 asserted claims of the '135 patent.

11:48 16 There was overwhelming evidence that there  
11:48 17 is no anonymity; that there is no website; and that  
11:48 18 there is no gatekeeper computer.

11:48 19 And in addition, there is no evidence that  
11:48 20 Microsoft employees directly infringe or that making or  
11:48 21 licensing the software that's been accused to end users  
11:48 22 constitutes direct infringement.

11:48 23 THE COURT: Motion is denied.

11:48 24 MR. BOBROW: Secondly, Microsoft moves for  
11:48 25 judgment as a matter of law on the question of



11:48 1 inducement of infringement of the '135 patent. No  
11:48 2 reasonable jury could find that Microsoft induced  
11:48 3 infringement of the '135 patent.

11:48 4           There is no evidence of knowledge before  
11:48 5 2006 of the patent. There is no evidence of knowledge  
11:48 6 by Microsoft of infringement. There is no evidence of  
11:48 7 intent to cause the acts that Microsoft purportedly knew  
11:48 8 would infringe, and there is no evidence of intent to  
11:49 9 encourage infringement.

11:49 10           Of course, there also is no proof of  
11:49 11 direct infringement, and therefore, the motion should be  
11:49 12 granted.

11:49 13           THE COURT: Motion is denied.

11:49 14           MR. BOBROW: Your Honor, Microsoft next  
11:49 15 moves for judgment as a matter of law on the question of  
11:49 16 contributory infringement of the '135 patent. No  
11:49 17 reasonable jury could find contributory infringement by  
11:49 18 Microsoft of the '135 patent.

11:49 19           To begin, the software at issue cannot, as  
11:49 20 a matter of fact law, be a component. The component  
11:49 21 that the Plaintiff has focused on is the wrong thing.  
11:49 22 It is not what Microsoft sells, but instead is a  
11:49 23 specific string of code. There is no basis to find that  
11:49 24 that is a component as a matter of law.

11:49 25           In addition, there is no evidence of the

11:49 1 requisite knowledge that the feature at issue infringes  
11:49 2 or that Microsoft knew that the purported component was  
11:49 3 adapted for infringement.

11:50 4           And in addition, the evidence shows that  
11:50 5 Microsoft knew of substantial non-infringing uses. And  
11:50 6 so there has not been any showing that the accused  
11:50 7 products were especially made or especially adapted for  
11:50 8 infringement.

11:50 9           Finally, there is no evidence of a lack of  
11:50 10 substantial non-infringing uses.

11:50 11           THE COURT: Motion is denied.

11:50 12           MR. BOBROW: Next, Your Honor, on the '180  
11:50 13 patent, Microsoft moves for judgment as a matter of law  
11:50 14 of no infringement on direct infringement, induced  
11:50 15 infringement, and contributory infringement -- I'm  
11:50 16 sorry -- direct infringement and induced infringement.  
11:50 17 There is no claim -- that claim has been withdrawn on  
11:50 18 contributory negligence by VirnetX.

11:50 19           First of all, on direct infringement, no  
11:50 20 reasonable jury could find that Microsoft directly  
11:50 21 infringes the asserted claims of the '180 patent. There  
11:51 22 has been overwhelming evidence that the accused software  
11:51 23 does not include and does not use a virtual private  
11:51 24 network and does not use and there is not included a  
11:51 25 secure computer network address.

11:51 1                   Furthermore, there is no evidence that any  
11:51 2 Microsoft employees use the accused software, and in  
11:51 3 addition, the evidence showed that the software would  
11:51 4 not be invoked -- the accused software would not be  
11:51 5 invoked in normal operation, and finally, that making or  
11:51 6 licensing the software to end users does not constitute  
11:51 7 direct infringement.

11:51 8                   THE COURT: Okay. Motion is denied.

11:51 9                   MR. BOBROW: Microsoft next moves for  
11:51 10 judgment as a matter of law on the question of  
11:51 11 inducement of the '180 patent. No reasonable jury could  
11:51 12 find that Microsoft induces infringement of the '180  
11:51 13 patent.

11:51 14                   We introduced substantial evidence of  
11:51 15 non-infringing uses. We demonstrated certainly that  
11:51 16 since this claim was only filed in after this lawsuit  
11:52 17 was filed, we showed substantial defenses to the  
11:52 18 arguments and compelling arguments on the question of  
11:52 19 invalidity, so as a result, certainly, there's been no  
11:52 20 showing that Microsoft intended to cause acts of  
11:52 21 infringement, knew of the acts of infringement, or  
11:52 22 intended in any way to encourage infringement.

11:52 23                   THE COURT: Motion is denied.

11:52 24                   MR. BOBROW: Furthermore, Your Honor,  
11:52 25 Microsoft moves for judgment as a matter of law that

11:52 1 liability for indirect infringement must be limited  
11:52 2 under the Dyna Corp case to acts of direct infringement.

11:52 3 Any liability for indirect infringement of  
11:52 4 either patent must be limited by the quantifiable acts  
11:52 5 of direct infringement, and we move on that ground.

11:52 6 THE COURT: Motion is denied.

11:52 7 MR. BOBROW: Microsoft next moves for  
11:52 8 judgment as a matter of law on the question of  
11:52 9 invalidity.

11:52 10 And specifically, first of all, on the  
11:52 11 question of anticipation, Microsoft moves for judgment  
11:53 12 as a matter of law that no reasonable jury could fail to  
11:53 13 find, by clear and convincing evidence, that the  
11:53 14 asserted claims of the '135 and '180 patents are  
11:53 15 anticipated.

11:53 16 We submitted evidence -- overwhelming  
11:53 17 evidence on three pieces of prior art, none of which was  
11:53 18 in front of the Patent Office.

11:53 19 Microsoft's NT 4 software with the PPTP,  
11:53 20 VPN, and AutoDial; second, Dynamic VPN; and third, the  
11:53 21 Aventail software guide, all of those prior art, none  
11:53 22 before the Patent Office, and all of that, as a matter  
11:53 23 of law, provides clear and convincing evidence of  
11:53 24 anticipation of all of the claims.

11:53 25 THE COURT: Motion is denied.

11:53 1 MR. BOBROW: Microsoft next moves for  
11:53 2 judgment as a matter of law on the question of  
11:53 3 obviousness. No reasonable jury could fail to find, by  
11:53 4 clear and convincing evidence, that the asserted claims  
11:53 5 are obvious in light of the prior art just mentioned,  
11:54 6 the Microsoft NT 4 with PPTP, VPN, and AutoDial,  
11:54 7 Aventail 3.1, and the DVPN demonstration.

11:54 8 The obviousness certainly should be found  
11:54 9 as a matter of law, both based upon those references by  
11:54 10 themselves, that is, single reference of obviousness, or  
11:54 11 when the various materials for each reference are  
11:54 12 combined together, those prior art references render the  
11:54 13 claims invalid as a matter of law.

11:54 14 THE COURT: Motion is denied.

11:54 15 MR. BOBROW: Microsoft next moves for a  
11:54 16 judgment as a matter of law on the question of  
11:54 17 willfulness. No reasonable jury could find, by clear  
11:54 18 and convincing evidence, that Microsoft willfully  
11:54 19 infringed either the '135 or '180 patents because  
11:54 20 neither prong of the Seagate case has been satisfied.

11:54 21 Certainly, the objective prong has not  
11:54 22 been met. We have put forth compelling evidence of  
11:55 23 non-infringement and validity, and certainly, the cases  
11:55 24 have certainly shown that it is beyond a close case, and  
11:55 25 indeed, one on which we're entitled to judgment as a

11:55 1 matter of law.

11:55 2           On the subjective prong, certainly,  
11:55 3 there's been no evidence that Microsoft believed that  
11:55 4 there was an objectively high likelihood that the  
11:55 5 accused software would infringe any of the patents.

11:55 6           THE COURT: Motion is denied.

11:55 7           MR. BOBROW: Microsoft then moves for  
11:55 8 judgment as a matter of law on the question of damages.  
11:55 9 There is insufficient evidence, as a matter of law, to  
11:55 10 support Plaintiff's requested damages, or for that  
11:55 11 matter, any damage award over \$15 million.

11:55 12           To begin, the testimony of Mr. Reed should  
11:55 13 have been excluded for all of the reasons set forth in  
11:55 14 Microsoft's Daubert motion pretrial.

11:55 15           Secondly, the evidence on the rate base is  
11:55 16 insufficient to support the requested damages award or,  
11:55 17 again, any award over \$15 million, based upon the  
11:56 18 improper reliance on the entire market value, based upon  
11:56 19 the failure to apportion, and based upon the inclusion  
11:56 20 of foreign acts of infringement or alleged infringement.

11:56 21           In addition, the evidence of the royalty  
11:56 22 rate was insufficient to support the alleged claim or,  
11:56 23 again, any claim over \$15 million. Again, there was no  
11:56 24 apportionment. The bases for the rate were essentially  
11:56 25 noncomparable licenses, and the benchmark licenses that

11:56 1 were cited bore no royalties at all.

11:56 2 In addition, the requested amount of  
11:56 3 something on the order of \$242 million is not a  
11:56 4 reasonable royalty, and in this context, is excessive  
11:56 5 and shocks the conscience and is manifestly an excessive  
11:56 6 amount, and we move on that ground as well.

11:56 7 THE COURT: Motion is denied.

11:56 8 MR. BOBROW: And if I may, Your Honor, one  
11:56 9 final point on our judgment as a matter of law on  
11:56 10 contributory infringement. I should have mentioned as  
11:57 11 well an additional ground for that motion. And I  
11:57 12 apologize.

11:57 13 But the item that had been identified as  
11:57 14 the -- essentially, the automatic connection feature, in  
11:57 15 addition to not being a component, it is also not a  
11:57 16 material or apparatus for use in a patented method, and  
11:57 17 we move on that basis as well.

11:57 18 THE COURT: Over -- denied.

11:57 19 Anything further?

11:57 20 MR. BOBROW: That's all, Your Honor.

11:57 21 THE COURT: All right. Plaintiff have any  
11:57 22 objections to the Court's charge?

11:57 23 MR. CALDWELL: Yes, Your Honor.

11:57 24 First, just to get this out of the way, if  
11:57 25 it's okay and we have the Court's permission, the

11:57 1 parties have agreed that by submitting jury instructions  
11:57 2 with respect to the Court's claim constructions, the  
11:57 3 parties are not waiving and hereby expressly preserve  
11:57 4 their contentions in the Markman briefing and the  
11:57 5 arguments to the Court and reserves the right to appeal  
11:57 6 on these claim construction grounds.

11:57 7 THE COURT: Is that so agreed?

11:57 8 MR. BOBROW: Yes, it is, Your Honor, and  
11:57 9 neither side is waiving and is specifically preserving  
11:57 10 on the claim construction.

11:58 11 THE COURT: So noted.

11:58 12 MR. CALDWELL: And I have an observation  
11:58 13 about the verdict form. Are we going to get that -- get  
11:58 14 to that in a minute?

11:58 15 THE COURT: Sure.

11:58 16 MR. CALDWELL: Okay.

11:58 17 MR. BOBROW: Or you can cover whichever  
11:58 18 one you would like to.

11:58 19 MR. CALDWELL: Well, I just -- whichever  
11:58 20 one Your Honor has handy. We'll start with the charge.

11:58 21 THE COURT: I've them both handy.

11:58 22 MR. CALDWELL: Okay. In the charge, at

11:58 23 Page 9 --

11:58 24 THE COURT: Okay.

11:58 25 MR. CALDWELL: -- I direct Your Honor to



11:58 1 the second full paragraph that begins: A patent claim  
11:58 2 is directly infringed only if the accused product or  
11:58 3 method includes each and every element of the patent  
11:58 4 claim.

11:58 5           Following that sentence, VirnetX has  
11:58 6 proposed and we object to the absence of an instruction  
11:58 7 that the accused product infringes a claim but is  
11:58 8 reasonably capable of satisfying the claim element, even  
11:58 9 though it may also be capable of non-infringing modes of  
11:58 10 operation, citing the Hilgraeve Corporations case.

11:58 11           Your Honor gave that instruction in Mass  
11:58 12 Engineering, and it was actually not in the i4i  
11:59 13 instructions, but I think that was because i4i only  
11:59 14 involved a method claim, and so the issue of the  
11:59 15 apparatus being capable of was just sort of a non-issue  
11:59 16 for i4i, and that's why it was absent and -- absent  
11:59 17 there.

11:59 18           THE COURT: All right. Give me the  
11:59 19 sentence again very slowly.

11:59 20           MR. CALDWELL: An accused product  
11:59 21 infringes the claim --

11:59 22           THE COURT: Slower than that.

11:59 23           MR. CALDWELL: Okay. I'm sorry.

11:59 24           An accused product infringes a claim if it  
11:59 25 is reasonably capable of satisfying the claim element

11:59 1 even though it may also be capable of non-infringing  
12:00 2 modes of operation.

12:00 3 THE COURT: Response?

12:00 4 MR. BOBROW: Yes, Your Honor.

12:00 5 On that request, which I believe was not  
12:00 6 given in the i4i case, the issue there is that -- is  
12:00 7 that instruction can be very confusing in this context  
12:00 8 and I think prejudicial to the issue of what the jury  
12:00 9 needs to do.

12:00 10 The jury needs to look at the claim  
12:00 11 limitations and determine whether they are met in the  
12:00 12 methods, whether they're met in the products, whether  
12:00 13 they're met in the systems, and whether they're met in  
12:00 14 the computer-readable storage media claims.

12:00 15 And what, I think, this has the risk of  
12:01 16 doing is essentially lowering the Plaintiff's burden of  
12:01 17 proof by suggesting to the jury that somehow they can  
12:01 18 apply something that is not the limitations of the  
12:01 19 claim, but rather something much more vague and much  
12:01 20 more amorphous than that.

12:01 21 I'm afraid it would lower, essentially,  
12:01 22 VirnetX's burden of proof where it must prove that all  
12:01 23 of those limitations are there either literally or under  
12:01 24 the Doctrine of Equivalents.

12:01 25 THE COURT: All right. I'm going to give

12:01 1 this instruction, the same one that Microsoft -- I mean,  
12:01 2 that VirnetX suggested, except I'm going to strike the  
12:01 3 reasonably -- it-is-reasonably-capable-of language and  
12:01 4 change satisfy to satisfies.

12:01 5 So it will read: An accused product  
12:01 6 infringes the claim if it satisfies the claim elements  
12:01 7 even though it may also be capable of non-infringing  
12:01 8 modes of operation.

12:01 9 MR. CALDWELL: Just for the record,  
12:01 10 VirnetX objects to the exclusion of capable of, given  
12:02 11 that that is the law from the Federal Circuit, in terms  
12:02 12 of an apparatus. It doesn't have to necessarily always  
12:02 13 infringe as long as the apparatus is capable of, so...

12:02 14 THE COURT: What's your opinion on that?

12:02 15 MR. BOBROW: Well, I think the problem, in  
12:02 16 part, with that claim, as you've revised that language,  
12:02 17 Your Honor, is that it may be confusing for the jury on  
12:02 18 the question of indirect infringement because we have  
12:02 19 issues of substantial non-infringing uses and all of  
12:02 20 that, and I'm afraid, again, the jury may be confused in  
12:02 21 terms of understanding what it means when something  
12:02 22 might have other uses.

12:02 23 THE COURT: Well --

12:02 24 MR. BOBROW: That issue can be highly  
12:02 25 relevant in those contexts, so we would still object.

12:02 1 THE COURT: All right. I think the  
12:02 2 instruction is proper under the facts of this case, and  
12:02 3 I will give it the way that Microsoft -- I mean, that  
12:02 4 VirnetX originally proposed with the --

12:02 5 So it will read: An accused product  
12:02 6 infringes a claim if it is reasonably capable of  
12:02 7 satisfying the claim elements, even though it may also  
12:02 8 be capable of non-infringing modes of operation.

12:03 9 MR. CALDWELL: Yes, Your Honor.

12:03 10 THE COURT: Okay. What's next?

12:03 11 MR. CALDWELL: Ready for -- ready for the  
12:03 12 next one?

12:03 13 THE COURT: Uh-huh.

12:03 14 MR. CALDWELL: It's on Page 12.

12:03 15 THE COURT: Okay.

12:03 16 MR. CALDWELL: And do you see the numbered  
12:03 17 elements down toward the bottom.

12:03 18 THE COURT: Uh-huh.

12:03 19 MR. CALDWELL: And this is, I guess, as  
12:03 20 much a request for clarification as it is an objection,  
12:03 21 I would say.

12:03 22 In No. 2, after the words patented method,  
12:03 23 VirnetX had requested just a clause there, comma, which  
12:03 24 can be software, comma, because we believe that the law  
12:03 25 supports the argument in Microsoft's motions for JMOL.

12:03 1 I believe the law supports that the  
12:03 2 component in a contributory infringement analysis  
12:03 3 absolutely can be software, and we were hoping to make  
12:03 4 that express. So I don't know that that's the same  
12:03 5 thing as saying the sentence Your Honor has is legally  
12:03 6 error, but...

12:04 7 THE COURT: Any response?

12:04 8 MR. BOBROW: Well, Your Honor, our  
12:04 9 position -- we object to that. Our position is, is that  
12:04 10 software cannot be a component under the AT&T/Microsoft  
12:04 11 case. So we would object to that -- the inclusion of  
12:04 12 that language.

12:04 13 MR. CALDWELL: Your Honor, we have also  
12:04 14 the i4i Federal Circuit opinion, which I meant to cite  
12:04 15 to you and which also cites the RICO case.

12:04 16 THE COURT: Because there seems to be a  
12:04 17 dispute about it, I will insert the language which can  
12:04 18 be software, patent which can be software.

12:04 19 MR. CALDWELL: Thank you.

12:04 20 THE COURT: All right. What else?

12:04 21 MR. CALDWELL: Let me breeze through this.  
12:04 22 The next observation is on Page 24, Your  
12:04 23 Honor.

12:04 24 THE COURT: Okay.

12:04 25 MR. CALDWELL: There is -- the first full

12:04 1 paragraph that begins with to be relevant.

12:04 2 THE COURT: Okay.

12:04 3 MR. CALDWELL: And that first sentence,  
12:04 4 we -- or that whole paragraph was from Microsoft's  
12:04 5 proposals, not VirnetX's.

12:04 6 At this point, VirnetX is not objecting to  
12:05 7 the first sentence, but VirnetX objects to the second  
12:05 8 sentence beginning with, if a secondary consideration,  
12:05 9 on the grounds that at best, it's repetitious or  
12:05 10 redundant of the first sentence to the extent the first  
12:05 11 sentence properly captures the law, but beyond that, it  
12:05 12 appears to be expanding the scope of what the law is.

12:05 13 In other words, VirnetX is not objecting  
12:05 14 that the jury should consider a nexus between the  
12:05 15 secondary consideration.

12:05 16 THE COURT: So you're objecting -- you're  
12:05 17 asking that that last sentence of the paragraph be  
12:05 18 stricken?

12:05 19 MR. CALDWELL: Yes, Your Honor, because we  
12:05 20 think the first sentence is proper.

12:05 21 THE COURT: Response?

12:05 22 MR. BOBROW: I think the last sentence,  
12:05 23 Your Honor, helps a lay jury understand what that word  
12:05 24 in quotes nexus means. I think this sentence certainly  
12:05 25 gives that first sentence much more meaning and will

12:05 1 help the jurors understand what the requirements are for  
12:05 2 the secondary or objective considerations to be  
12:05 3 relevant.

12:05 4 THE COURT: Objection is overruled.

12:05 5 What's next?

12:06 6 MR. CALDWELL: The next one I would have  
12:06 7 is with the verdict form, Your Honor.

12:06 8 THE COURT: All right.

12:06 9 MR. CALDWELL: And this is just simply a  
12:06 10 matter of clarification. I -- my copy has actually been  
12:06 11 stolen and taken to the back room.

12:06 12 But the first three questions on the  
12:06 13 verdict form refer to Column 1, Column 2, Column 3, and  
12:06 14 VirnetX is merely suggesting that we entitle -- instead  
12:06 15 of Issue 1, Issue 2, and Issue 3 on the second page,  
12:06 16 that we entitle the headings of the top of the second  
12:06 17 page Your Honor is looking at -- we entitle those Column  
12:06 18 1, Column 2, Column 3.

12:06 19 THE COURT: Instead of Issue 1, Issue 2?

12:06 20 MR. CALDWELL: Yes, Your Honor, just for  
12:06 21 clarification.

12:06 22 THE COURT: All right. We'll replace  
12:06 23 column -- issue with column, if there's no objection.

12:06 24 MR. BOBROW: Your Honor, we do have other  
12:06 25 objections to the form, but not with that one per se.

12:06 1 THE COURT: All right. We'll change issue  
12:06 2 to column in those three spots on the second page.

12:07 3 All right. Anything further?

12:07 4 MR. CALDWELL: No, Your Honor.

12:07 5 THE COURT: All right. Microsoft have any  
12:07 6 objections?

12:07 7 MR. BOBROW: Your Honor, we do have a  
12:07 8 number of objections, and we would like the Court to  
12:07 9 know we have a spent a substantial amount of time going  
12:07 10 through these, and I'll be as diligent and expeditious  
12:07 11 as we can.

12:07 12 Would the Court prefer to start with the  
12:07 13 verdict form, since you were just there?

12:07 14 THE COURT: All right.

12:07 15 MR. BOBROW: So, first of all, on the  
12:07 16 verdict form, Microsoft objects to the infringement  
12:07 17 questions here, question No. 1 in the way it's been  
12:07 18 divided up. In particular, we object that there has  
12:07 19 been no division for direct, induced or contributory  
12:07 20 infringement. Those, of course, have separate elements  
12:07 21 and we think they should be broken out separately.

12:07 22 In addition, the infringement question  
12:07 23 does not break out the questions for infringement by the  
12:07 24 different accused software for -- for the different  
12:08 25 accused patents.



12:08 1 THE COURT: Okay. That's all covered in  
12:08 2 the instructions. It's overruled.

12:08 3 MR. BOBROW: Secondly, on the question of  
12:08 4 validity, we object on the grounds that, again,  
12:08 5 anticipation and obviousness have not been broken out,  
12:08 6 creating some -- what we consider to be some general  
12:08 7 verdict issues. We have -- it does not break the issues  
12:08 8 out by prior art reference.

12:08 9 We also object that it includes the clear  
12:08 10 and convincing burden of proof when all the art that we  
12:08 11 have relied upon was indisputably not before the Patent  
12:08 12 Office.

12:08 13 We also object to the submission of the  
12:08 14 obviousness question to the jury and also the  
12:08 15 non-submission to the jury of the underlying fact  
12:08 16 questions for obviousness. We also object on that  
12:08 17 ground.

12:08 18 THE COURT: Okay. Your objection's  
12:08 19 overruled.

12:08 20 MR. BOBROW: On damages, again, we object  
12:09 21 to the failure to break up the damages to ask about lump  
12:09 22 sum versus running royalty, and we think that there's  
12:09 23 been evidence in the case to that effect and that the  
12:09 24 jury should look at that question.

12:09 25 In addition, there has been evidence

12:09 1 presented to the jury on future damages and the form as  
12:09 2 it is now will leave that issue vague, and when it comes  
12:09 3 to any remedies for injunction, will make that issue  
12:09 4 difficult, if not impossible, to resolve. So we object  
12:09 5 to the form in which the amounts has been set forth for  
12:09 6 money damages.

12:09 7 THE COURT: Objection Is overruled.

12:09 8 MR. BOBROW: In addition, we object to the  
12:09 9 form for the failure to ask the jury to specify the term  
12:09 10 covered by the royalty, whether it's up through trial or  
12:09 11 going forward, and we also object to the omission from  
12:09 12 the form of a line that would ask the jurors to  
12:09 13 determine the number of directly infringing sales or  
12:10 14 installations, as it were, under the Dyna Corp. Case.

12:10 15 THE COURT: Overruled.

12:10 16 MR. BOBROW: Your Honor, I'd like to now  
12:10 17 move to the Court's charge.

12:10 18 THE COURT: All right.

12:10 19 MR. BOBROW: And one point in addition to  
12:10 20 the point made earlier about that both parties are  
12:10 21 preserving on the question of claim construction.  
12:10 22 Related to that, of course, is that we had requested  
12:10 23 that Appendix B be modified by motion to include the  
12:10 24 requirement of anonymity that the Court has said is  
12:10 25 there but is not in Appendix B, and we object to the --

12:10 1 the non-inclusion of the word anonymity in Appendix B  
12:10 2 per our prior motion that the Court denied.

12:10 3 THE COURT: Okay. Overruled.

12:10 4 MR. BOBROW: Turning to the Summary of  
12:10 5 Contentions. This is on page 4.

12:10 6 THE COURT: Let me just clarify. Your  
12:10 7 last request, I don't think there's anything, and  
12:10 8 correct me if I'm wrong, but there's any disagreement  
12:11 9 between the parties that anonymity is required. The  
12:11 10 only dispute that's been raised in the evidence is to --  
12:11 11 to what constitutes anonymity.

12:11 12 Is that not correct?

12:11 13 MR. BOBROW: Your Honor, that is correct.  
12:11 14 Our request was to include that requirement in Appendix  
12:11 15 B so that the jurors would have that in front of them in  
12:11 16 the course of their deliberations.

12:11 17 THE COURT: Okay. Overruled.

12:11 18 MR. BOBROW: So in the Summary of  
12:11 19 Contentions which is paragraph 2, we have several  
12:11 20 concerns about the way that the summary of the  
12:11 21 infringement allegations as made.

12:11 22 To begin, in the first part, about four or  
12:11 23 five lines down, it talks about making, using, selling,  
12:11 24 offering to sell and importing into the United States  
12:11 25 the patented apparatuses and/or using the patented

12:11 1 methods in Microsoft's accused software products.

12:11 2 I don't think that Microsoft objects that  
12:12 3 that does not accurately describe the state of play, but  
12:12 4 it doesn't describe the Plaintiff's allegations here.  
12:12 5 And we would propose the following as an alternative:  
12:12 6 That alternative would be to say by making, using,  
12:12 7 selling, offering to sell, or importing into the United  
12:12 8 States patented systems or apparatuses or by using  
12:12 9 Microsoft's accused software to perform the patented  
12:12 10 methods.

12:12 11 THE COURT: Plaintiff's response? Why  
12:12 12 don't you read that again very slowly just so...

12:12 13 MR. BOBROW: Certainly, Your Honor.

12:12 14 By making, using, selling, offering to  
12:12 15 sale or -- as opposed to and -- or importing into the  
12:12 16 United States patented systems or apparatuses, or by  
12:13 17 using Microsoft's accused software to perform the  
12:13 18 patented method or methods.

12:13 19 MR. CALDWELL: I don't think we have any  
12:13 20 problem with that, Your Honor.

12:13 21 THE COURT: All right. Let me ask,  
12:13 22 Ms. Li, did you get that down?

12:13 23 Yeah. Read it one more time very slowly,  
12:13 24 please, because we're making these changes real-time,  
12:13 25 real-time as you speak.

12:13 1 MR. BOBROW: Yes. Thank you.

12:13 2 By making, using, selling, offering to  
12:13 3 sell, or importing into the United States.

12:13 4 THE COURT: Okay. And so you delete the  
12:13 5 word and and replace it with or, right?

12:13 6 MR. BOBROW: Yep. Yes, that's correct.

12:13 7 THE COURT: Importing -- let me read it.  
12:13 8 Importing into the United States, strike the word the.  
12:13 9 Or no. Let's see. No. The stays in, doesn't it?

12:14 10 MR. BOBROW: No. We would ask that that  
12:14 11 be taken out.

12:14 12 THE COURT: All right. Strike the. And  
12:14 13 then patented systems.

12:14 14 MR. BOBROW: Or apparatuses. Or by using  
12:14 15 Microsoft's accused software to perform the patented  
12:14 16 methods.

12:14 17 THE COURT: Okay. Let me read it one more  
12:14 18 time to be sure we've got it right.

12:14 19 By making, using, selling, offering to  
12:14 20 sale or importing into the United States patented  
12:14 21 systems or apparatuses or by using the patented -- or by  
12:15 22 using Microsoft's accused software to perform the  
12:15 23 patented methods.

12:15 24 MR. BOBROW: Yes.

12:15 25 THE COURT: Okay. That's sustained.

12:15 1 What's next?

12:15 2 MR. BOBROW: The next is to -- a little  
12:15 3 further down on page 4, this dealing with the '135  
12:15 4 patent where it says who -- the second line from the  
12:15 5 bottom, who make or use the patented apparatuses or  
12:15 6 perform the patented methods with Microsoft's accused  
12:15 7 software products.

12:15 8 We propose to replace that so that it more  
12:15 9 accurately lines up with the allegations in the -- in  
12:15 10 the language of the claims. Who make or use the  
12:15 11 patented systems or perform the patented methods.

12:15 12 THE COURT: So you would be replacing  
12:15 13 apparatuses with systems.

12:15 14 MR. BOBROW: And also deleting the last  
12:16 15 part, with Microsoft's accused software products.

12:16 16 THE COURT: So you'd strike the last  
12:16 17 clause, with Microsoft's accused software products.

12:16 18 MR. BOBROW: That's what we propose, Your  
19 Honor.

20 THE COURT: Any objections to that change?

21 MR. CALDWELL: Still digesting it. Just  
22 one second.

23 THE COURT: Okay.

12:16 24 MR. CALDWELL: I don't think we have an  
12:16 25 objection. One second.

12:16 1 No objection, Your Honor.

12:16 2 THE COURT: All right. Granted.

12:16 3 MR. BOBROW: On page 5, Your Honor, this  
12:16 4 is dealing with the '180 patent. Second and third lines  
12:16 5 there's a clause that says, who make or use the patented  
12:17 6 apparatuses or perform the patented methods with  
12:17 7 Microsoft's accused software products?

12:17 8 THE COURT: Same change?

12:17 9 MR. BOBROW: I apologize.

12:17 10 THE COURT: Replace apparatuses with  
12:17 11 systems?

12:17 12 MR. BOBROW: We would propose, Your Honor,  
12:17 13 to strike that in its entirety because I think that it  
12:17 14 doesn't capture what is being asserted here in the case.  
12:17 15 The assertion is is that we are inducing others, but  
12:17 16 this is suggesting others who make these various items.  
12:17 17 It seems that the better course would just be to say  
12:17 18 that Microsoft is inducing indirect infringement of the  
12:17 19 '180 patent by others, or, at the very least, to delete  
12:17 20 the phrase, with Microsoft's accused software products.

12:17 21 THE COURT: Response?

12:17 22 MR. CALDWELL: We disagree with that, Your  
12:17 23 Honor. And actually -- and just to answer Your Honor's  
12:17 24 question a little more directly, it can't be the same  
12:17 25 change we made for the '135 patent because the '180

12:18 1 patent, whereas the '135 patent has method and system,  
12:18 2 this one also has computer-readable media claims.

12:18 3 THE COURT: Okay.

12:18 4 MR. CALDWELL: And when folks install that  
12:18 5 on their computer, they make the apparatus  
12:18 6 computer-readable media, et cetera.

12:18 7 THE COURT: Okay. That objection's  
12:18 8 overruled.

12:18 9 MR. BOBROW: Your Honor, at the bottom of  
12:18 10 page 3, in the burden of proof, we object to the  
12:18 11 sentence that, Microsoft has the burden by clear and  
12:18 12 convincing evidence.

12:18 13 THE COURT: That's overruled.

12:18 14 MR. BOBROW: Turning to instruction 6 on  
12:18 15 page 8, Microsoft had asked for an instruction on the  
12:18 16 different types of claims that the jury is considering  
12:19 17 because they have different requirements:

12:19 18 Computer-readable media, system, apparatus, method. We  
12:19 19 noted the Court did not include that proposed language.

12:19 20 THE COURT: Objection's overruled.

12:19 21 MR. BOBROW: On page 9, Your Honor, in the  
12:19 22 third full paragraph that begins, a person can directly  
12:19 23 infringe a patent without knowing that what it is doing  
12:19 24 is an infringement, all the way down to the end of that  
12:19 25 paragraph, which is two sentences, we object to both of



12:19 1 those sentences, again, on the grounds that it is an  
12:19 2 incorrect statement of the law, particularly for  
12:19 3 inducing infringement or contribution or contributory  
12:19 4 infringement, because in that context, knowledge and  
12:19 5 intent are requirements and here it, I think, will  
12:19 6 improperly suggest to the jury that you can directly  
12:19 7 infringe by inducement or by contribution even if you  
12:19 8 don't know what you're doing. And that's not what the  
12:20 9 law is.

12:20 10 THE COURT: Response?

12:20 11 MR. CALDWELL: Well, Your Honor, first of  
12:20 12 all, this is in the heading of Direct Infringement, and  
12:20 13 actually the paragraph says a person can directly  
12:20 14 infringe, and on the next sentence it says someone may  
12:20 15 also directly infringe. So the observation about that  
12:20 16 something might be different for contrib or induced  
12:20 17 is -- is, I think, in opposite. Besides, this is  
12:20 18 actually a correct statement of the law, and it came  
12:20 19 from the Court's instructions in i4i.

12:20 20 THE COURT: Okay. That objection's  
12:20 21 overruled.

12:20 22 MR. BOBROW: Your Honor, on page 10,  
12:20 23 Literal Infringement, we had requested an instruction  
12:20 24 essentially on the all limitations requirement for  
12:20 25 literal infringement, that, in effect, the literal

12:20 1 infringement instruction provide that all limitations  
12:20 2 have to be met literally. Presently, the instruction  
12:20 3 does not say that but just talks about what one must  
12:21 4 provide for an individual limitation as opposed to all  
12:21 5 the limitations together.

12:21 6 THE COURT: Objection's overruled.

12:21 7 MR. BOBROW: Your Honor, on 6.2, page 11,  
12:21 8 VirnetX has proposed language which the Court adopted on  
12:21 9 the standard for active inducement.

12:21 10 We object to this instruction on a number  
12:21 11 of grounds.

12:21 12 To begin, we object that the instruction  
12:21 13 in paragraph 3 provides for the should have known  
12:21 14 standard, which we think is inconsistent with the law.

12:21 15 In paragraph 4, which provides the person  
12:21 16 has an intent to cause the encouraged acts we believe  
12:21 17 doesn't correctly state the law on the question of  
12:21 18 intent. That you must have more intent than that, and  
12:21 19 you must have intent to infringe.

12:21 20 We also object, further down the page in  
12:22 21 the paragraph that talks about advice of counsel which  
12:22 22 we think is inconsistent with the law, to bring that  
12:22 23 issue up in the context of induced infringement.

12:22 24 And then similarly, on page 12, similar to  
12:22 25 the objections already made, there are references to

12:22 1 intent to cause the acts and also the should have known  
12:22 2 standard which we do -- which we do not think are  
12:22 3 correct statements of the law.

12:22 4 We had also asked for an instruction that  
12:22 5 the jury must determine the number of acts of direct  
12:22 6 infringement which was not included here.

12:22 7 THE COURT: All right. Objection's  
12:22 8 overruled.

12:22 9 MR. BOBROW: Your Honor, on contributory  
12:22 10 infringement, 6.3 on page 12 running over to 13, we have  
12:22 11 several objections.

12:22 12 First, in subparagraph 2 where it talks  
12:22 13 about a material component of the product or a material  
12:22 14 component used in practicing the patented method, this  
12:23 15 raises a similar issue as to what we have talked about  
12:23 16 before with respect to component, and we object on that  
12:23 17 ground. But it also misstates the statutory requirement  
12:23 18 here, because for the method, the operative language is  
12:23 19 a material or apparatus for use in practicing a patented  
12:23 20 process as opposed to a component. So we would object  
12:23 21 on that ground as well.

12:23 22 THE COURT: Objection's overruled.

12:23 23 MR. BOBROW: As mentioned before, we  
12:23 24 object to the use of the component here and that  
12:23 25 instruction is violating the -- and inconsistent with

12:23 1 the AT&T Microsoft case.

12:23 2 We also object that the instruction does  
12:23 3 not tell the jury that they must find that -- that the  
12:23 4 component or material or apparatus was a material part  
12:23 5 of the invention that is essential to the advance over  
12:23 6 the prior art.

12:23 7 THE COURT: Objection's overruled.

12:23 8 MR. BOBROW: And further, we object that,  
12:24 9 again, the instruction asks the jury to focus on whether  
12:24 10 the component itself, not the product in which the  
12:24 11 component is bedded is or is not suitable for  
12:24 12 substantial non-infringing use. We think that that is  
12:24 13 not a correct statement of the law.

12:24 14 THE COURT: Objection's overruled.

12:24 15 MR. BOBROW: On the willfulness --  
12:24 16 willfulness infringement instruction, 6.4, we have  
12:24 17 several objections. To begin, we had requested an  
12:24 18 instruction that gave some guidance to the jury on what  
12:24 19 the objective standard is. That instruction was not  
12:24 20 provided for. We are concerned that there is not enough  
12:24 21 guidance in the instruction for the jury to understand  
12:24 22 what that objectively high likelihood standard means or  
12:24 23 how to apply that instruction in practice. And we would  
12:24 24 object on that ground.

12:24 25 We had requested that language be

12:24 1 included, for example, about credible defenses to  
12:25 2 infringement and validity. And that language was not  
12:25 3 included by the Court.

12:25 4 THE COURT: Objection's overruled.

12:25 5 MR. BOBROW: On page 14, we object to the  
12:25 6 two subparagraphs concerning reasonable basis and good  
12:25 7 faith efforts. We think that these instructions  
12:25 8 impermissibly shift the burden to Microsoft to  
12:25 9 demonstrate either reasonable basis or good faith when,  
12:25 10 in fact, it is the Plaintiff's burden here by clear and  
12:25 11 convincing evidence to show that.

12:25 12 THE COURT: Objection's overruled.

13 MR. BOBROW: Your Honor, we further had  
12:25 14 requested language and an instruction providing guidance  
12:25 15 to the jury on what a reasonable basis for concluding  
12:25 16 that a claim was not valid or was not infringed, what  
12:25 17 that language meant. The Court declined to include that  
12:25 18 language in the instruction and we would object on that  
12:25 19 ground.

12:26 20 THE COURT: Overruled.

12:26 21 MR. BOBROW: We also requested in this  
12:26 22 section a sentence asking that you tell the jurors that  
12:26 23 simply notice that someone owns a patent doesn't give  
12:26 24 rise to a duty to investigate, and we asked that that be  
12:26 25 included in this instruction and it's not.

12:26 1 THE COURT: Overruled.

12:26 2 MR. BOBROW: Thank you.

12:26 3 With respect to invalidity, there were,  
12:26 4 again, any number of references to either No. 1, the  
12:26 5 clear and convincing burden and the presumption of  
12:26 6 validity. I see that, for example, at page 14, under  
12:26 7 section 7, we object in light of the proof that  
12:26 8 Microsoft admitted none of which was before the Patent  
12:26 9 Office.

12:26 10 THE COURT: Overruled.

12:26 11 MR. BOBROW: On page 15, there are a  
12:26 12 number of passages in this paragraph that discuss  
12:26 13 inherency and what that means. The -- at the beginning  
12:26 14 of the paragraph, the paragraph provides that for  
12:27 15 anticipation all the requirements must be present in a  
12:27 16 single previous device or described in a single previous  
12:27 17 device -- publication or patent. We had asked that  
12:27 18 inherency be included in there so the jurors knew that  
12:27 19 inherency was a way for something to anticipate and the  
12:27 20 Court declined to include that.

12:27 21 THE COURT: Overruled.

12:27 22 MR. BOBROW: In addition, Your Honor, we  
12:27 23 had objected to the phrasing of what inherency means.  
12:27 24 The Court is telling the jury that it means that  
12:27 25 something is always present in the prior art or always

12:27 1 results from the practice.

12:27 2 Further down, it says that the elements  
12:27 3 are always present in the prior art or always a result.  
12:27 4 We believe the proper phrasing for that should be  
12:27 5 something that essentially is the natural result of the  
12:27 6 prior art or the use of the prior art.

12:27 7 THE COURT: Overruled.

12:27 8 MR. BOBROW: Your Honor, on obviousness,  
12:28 9 to reiterate, we had requested here that the Court make  
12:28 10 the legal determination of obviousness. That does not  
12:28 11 appear to be set forth in the -- in the Court's  
12:28 12 instruction.

12:28 13 THE COURT: Overruled.

12:28 14 MR. BOBROW: Once again, the clear and  
12:28 15 convincing burden appears here, and I understand Your  
12:28 16 Honor's ruling already on that, but we object to the  
12:28 17 clear and convincing burden.

12:28 18 THE COURT: Overruled.

12:28 19 MR. BOBROW: In the next paragraph on page  
12:28 20 19, the Court has an instruction here that the jury  
12:28 21 should not consider what it learned from or about the  
12:28 22 patent during trial. One concern we have about this and  
12:28 23 objection to it, Your Honor, is that there are materials  
12:28 24 in the patent that actually are prior art. There are  
12:28 25 statements about what the prior art included and how the

12:29 1 prior art worked and what the prior art was, and it  
12:29 2 seems to us that that sentence could be clarified.

12:29 3 THE COURT: Which instruction is that?

12:29 4 MR. BOBROW: This is 7.3, third paragraph  
12:29 5 down. This is an instruction on hindsight, and the part  
12:29 6 of it which Microsoft objects to is on lines 3 running  
12:29 7 over to 4 which said, essentially, that the jury can't  
12:29 8 consider what it learned about the patent during the  
12:29 9 trial.

12:29 10 THE COURT: Do you have a suggested change  
12:29 11 to that?

12:29 12 MR. BOBROW: Your Honor, the -- the  
12:29 13 suggested change that -- that we would propose would be  
12:29 14 to make clear that -- essentially what it learned about  
12:29 15 the claimed invention. Because again, it's proper for  
12:29 16 the jury to consider the prior art.

12:29 17 THE COURT: A response?

12:29 18 MR. McLEROY: No objection, Your Honor.

12:30 19 THE COURT: Okay. Where will this  
12:30 20 sentence be inserted?

12:30 21 MR. CALDWELL: I think, actually, it's  
12:30 22 just a substitution of instead of saying what you  
12:30 23 learned from or about the patent during the trial, it  
12:30 24 would be changed to what you learned from or about the  
12:30 25 claimed invention.



12:30 1 THE COURT: Agreed?

12:30 2 MR. BOBROW: Agreed.

12:30 3 THE COURT: All right. We'll substitute  
12:30 4 claimed invention for the word patent.

12:30 5 MR. BOBROW: On page 19, Your Honor, just  
12:30 6 below that there's an instruction on the question of  
12:30 7 motivation. We consider that instruction to be  
12:30 8 inconsistent with KSR and potentially suggesting to the  
12:30 9 jury that that's something that they must consider, and  
12:30 10 we object on that ground.

12:30 11 THE COURT: It's overruled.

12:30 12 MR. BOBROW: On page 20 in 7.3.1 in the  
12:30 13 description of the -- of the person of ordinary skill,  
12:31 14 Microsoft had proposed some language from the KSR case  
12:31 15 to make clear to the jurors that those of ordinary skill  
12:31 16 would employ inferences and create steps appropriate to  
12:31 17 his or her discipline that, essentially, making clear  
12:31 18 what a person of ordinary skill in the art does when  
12:31 19 looking at a matter. That requested instruction was not  
12:31 20 included, and we would object on that ground.

12:31 21 THE COURT: Overruled.

12:31 22 MR. BOBROW: On page 21, in the second  
12:31 23 full paragraph, there are references here to the field  
12:31 24 of endeavor. And in the field of endeavor, the Court  
12:31 25 has defined it in terms of the problems or issues that

12:31 1 the inventor faced, and we believe that that is not the  
12:31 2 standard. The standard is broader than that.

12:31 3 And of course that the issues the inventor  
12:31 4 faced may be relevant, but it could be the standard we  
12:31 5 think should be reasonably related to any need or  
12:32 6 problem known in the field of endeavor including the  
12:32 7 problems or issues faced by the inventors.

12:32 8 THE COURT: Okay. Where is that on page  
12:32 9 21?

12:32 10 MR. BOBROW: Yes, it is, Your Honor. It's  
12:32 11 in the second full paragraph.

12:32 12 THE COURT: All right. And tell me what  
12:32 13 change you're proposing and where it goes.

12:32 14 MR. BOBROW: Well, the change, Your Honor,  
12:32 15 would be at lines 3 and 5. It says, The reference must  
12:32 16 be reasonably related to the particular problem or issue  
12:32 17 the inventor faced or addressed. And we think that  
12:32 18 instead of that, the language should be as we requested  
12:32 19 in our proposed instruction that the reference must be  
12:32 20 reasonably related to any need or problem known in the  
12:32 21 field of endeavor, comma, including --

12:32 22 THE COURT: Just a second. Slow down a  
12:32 23 second.

12:32 24 MR. BOBROW: Certainly.

12:32 25 THE COURT: Any need or problem known in

12:32 1 the --

12:32 2 MR. BOBROW: The field of endeavor.

12:33 3 THE COURT: Okay.

12:33 4 MR. BOBROW: Comma, including the  
12:33 5 particular problem or issue the inventor faced.

12:33 6 And then the next --

12:33 7 THE COURT: All right. Just a moment.

12:33 8 Before you go on, let me see if there's any objection to  
12:33 9 inserting that. I mean, if there's -- what Plaintiff's  
12:33 10 position is with regard to that proposed change.

12:33 11 MR. CALDWELL: Plaintiff's position is  
12:33 12 that the instruction Plaintiff proposed is actually the  
12:33 13 correct one. It's the one that was given in i4i against  
12:33 14 Microsoft, Your Honor.

12:33 15 Now that said, I mean, if -- if the issue  
12:33 16 of -- sorry.

12:33 17 THE COURT: Yeah. Objection's overruled.  
12:33 18 What's next?

12:33 19 MR. BOBROW: Your Honor, next 7.3.3,  
12:33 20 differences over the prior art. We object to the second  
12:33 21 and third sentences of the first paragraph. In that  
12:34 22 section, we think that the instruction is an incorrect  
12:34 23 statement of the law. This section asks the jurors to  
12:34 24 focus on the differences between the prior art and the  
12:34 25 claimed invention, and then immediately says that they

12:34 1 should not focus on those differences between the prior  
12:34 2 art and the invention.

12:34 3 We think that those sentences should be  
12:34 4 struck since, again, this is part of the obviousness  
12:34 5 analysis where the differences are the correct focus for  
12:34 6 the jury.

12:34 7 THE COURT: All right. Objections's  
12:34 8 overruled.

12:34 9 Anything further?

12:34 10 MR. BOBROW: Yes, Your Honor. I  
12:34 11 apologize. I'm just going through my notes.

12:34 12 Yes, we also object to several requested  
12:34 13 instructions that were not included. Microsoft had  
12:34 14 requested an instruction regarding the fact that  
12:34 15 motivation -- motivation combined is a factor but is not  
12:35 16 a requirement. We would ask that that instruction be  
12:35 17 included.

12:35 18 THE COURT: Overruled.

12:35 19 MR. BOBROW: We had also asked for an  
12:35 20 instruction that when there is a design need or market  
12:35 21 pressure to solve a problem and there are a finite  
12:35 22 number of identified predictable solutions, a person of  
12:35 23 ordinary skill has good reason to pursue the known  
12:35 24 options within his or her technical grasp. That also  
12:35 25 was not included.

12:35 1 THE COURT: Overruled.

12:35 2 MR. BOBROW: 7.3.4, Your Honor, additional  
12:35 3 considerations. These are the secondary considerations  
12:35 4 of non-obviousness.

12:35 5 We have two issues here. Issue No. 1 is  
12:35 6 that factor No. 4 is a factor that discusses copying of  
12:35 7 the invention.

12:35 8 The Court might remember that there was a  
12:35 9 stipulation before trial on that question of copying in  
12:35 10 terms of the parties not introducing evidence that  
12:36 11 either Microsoft did copy or Microsoft didn't copy and  
12:36 12 the like. And we think that there has been no evidence  
12:36 13 introduced on copying as a result and so this is not an  
12:36 14 appropriate factor to be listed in the jury instruction.

12:36 15 THE COURT: Response?

12:36 16 MR. CALDWELL: We're fine taking out No. 4  
12:36 17 and just...

12:36 18 THE COURT: All right. No. 4 will come  
12:36 19 out and we'll re-number those 5 through 10.

12:36 20 MR. BOBROW: Your Honor, we also object to  
12:36 21 factor No. 7 on the question of whether or not others  
12:36 22 have taken licenses to use the invention. This was not  
12:36 23 a factor that either party's expert discussed in their  
12:36 24 testimony. It was not anything that was tied to the  
12:36 25 question of obviousness. And since there is no proof on

12:36 1 that subject, we would propose striking No. 7 as well.

12:36 2 THE COURT: Any objection?

12:36 3 MR. CALDWELL: Yes, Your Honor. There is  
12:36 4 objection because their evidence of license is taken to  
12:37 5 the technology from VirnetX.

12:37 6 THE COURT: All right. And overrule the  
12:37 7 objection.

12:37 8 MR. BOBROW: Your Honor, another issue  
12:37 9 here. We had asked for an instruction on page 24, right  
12:37 10 after the numbered factors. We asked for a sentence and  
12:37 11 instruction that apprised the jury that the question of  
12:37 12 the relevance and relative importance of these various  
12:37 13 factors was for them to consider. The Court did not  
12:37 14 provide that instruction and we request that it be so  
12:37 15 given to the jury.

12:37 16 THE COURT: All right. Overruled.

12:37 17 MR. BOBROW: On to the question of  
12:37 18 damages. In Section 8.1, we had objected to the  
12:37 19 requirement as set forth in the instruction that the  
12:38 20 hypothetical negotiation is the required analysis. We  
12:38 21 think that the correct law is that it is one factor in  
12:38 22 the Georgia-Pacific analysis, and the language that  
12:38 23 essentially says that it is the -- the only perspective  
12:38 24 through which to analyze this is not a correct statement  
12:38 25 of the law.

12:38 1 THE COURT: Overruled.

12:38 2 MR. BOBROW: Microsoft also objects to the  
12:38 3 exclusion of an instruction we requested on a lump-sum  
12:38 4 royalty essentially saying that royalties can be running  
12:38 5 or lump sum, and there certainly has been evidence on a  
12:38 6 lump-sum royalty and we think that the jury should be  
12:38 7 instructed on it.

12:38 8 THE COURT: Overruled.

12:38 9 MR. BOBROW: We also object to the  
12:38 10 exclusion of an instruction that asks the jury and tells  
12:38 11 the jury that, essentially, that the number of acts of  
12:38 12 infringement limit the number of damages. This is from  
12:38 13 the Dyna Corp. Case. We think that that should be  
12:38 14 reflected in the instruction.

12:39 15 THE COURT: Overruled.

12:39 16 MR. BOBROW: We have concerns about the --  
12:39 17 and object to the statement that the infringer's actual  
12:39 18 profits may or may not bear on the reasonableness of an  
12:39 19 award based on a reasonable royalty. We have -- we  
12:39 20 object that that violates the entire market value rule  
12:39 21 by having, essentially, profits on a system as a whole,  
12:39 22 on an operating system as a whole or a software as a  
12:39 23 whole as opposed to reflecting any sort of value of that  
12:39 24 which is accused of infringing. In this case which is a  
12:39 25 much, much, much smaller piece of the software at issue.

12:39 1 THE COURT: Overruled.

12:39 2 MR. BOBROW: Microsoft also objects to the  
12:39 3 sentence that says that the jury's determination does  
12:39 4 not depend on the actual willingness of the parties to  
12:39 5 the lawsuit to engage in such negotiations. The  
12:39 6 objection there, Your Honor, is that the jury will be  
12:39 7 asked to consider evidence of what actually happened in  
12:39 8 real life in the hypothetical negotiation, and the  
12:40 9 concern is that they will not understand that they may  
12:40 10 take into account actual license practices, actual  
12:40 11 licenses; for example, the SafeNet license that was  
12:40 12 rejected and the like.

12:40 13 THE COURT: Overruled.

12:40 14 MR. BOBROW: On the reasonable royalty  
12:40 15 factors, 8.2, paragraph 1, we object to the phrasing,  
12:40 16 whether the licensor has established a royalty for the  
12:40 17 patented invention such as by granting other licenses  
12:40 18 for a royalty. We had proposed different language than  
12:40 19 that.

12:40 20 Our concern with this is that this  
12:40 21 language could be misconstrued by the jury as suggesting  
12:40 22 that an established royalty could be met by, for  
12:40 23 example, one or two licenses which we think is not the  
12:40 24 law. It also does not provide that the jury should  
12:40 25 consider the royalties received by the licensor and it's



12:40 1 the royalties received tending to prove or not prove the  
12:41 2 establishment of an established royalty.

12:41 3 THE COURT: Overruled.

12:41 4 MR. BOBROW: Your Honor, we had requested  
12:41 5 an instruction that we had labeled 8.3. This was an  
12:41 6 instruction on apportionment and the entire market  
12:41 7 value. The Court has declined to include that in its  
12:41 8 charge and we object to that exclusion.

12:41 9 THE COURT: Overruled.

12:41 10 MR. BOBROW: Your Honor, those are  
12:41 11 Microsoft's objections to the charge.

12:41 12 THE COURT: Very well. Thank you.

12:41 13 MR. BOBROW: Thank you.

12:41 14 We will be in recess until 1:00 o'clock.  
12:41 15 Please inform the jury they'll have an extra 15 minutes.

12:41 16 COURT SECURITY OFFICER: All rise.

12:41 17 (Recess.)

01:07 18 COURT SECURITY OFFICER: All rise for the  
01:07 19 jury.

01:07 20 (Jury in.)

01:07 21 THE COURT: Please be seated.

01:08 22 All right. Ladies of the Jury, I hope you  
01:08 23 had a good lunch. We all worked during most of the noon  
01:08 24 hour, so I think everyone had sort of an abbreviated  
01:08 25 lunch that's involved in the case, but I am going to

01:08 1 give you your final jury instructions at this time.

01:08 2 I'm going to have my staff pass out to you  
01:08 3 a copy of the Court's charge, and you can follow along,  
01:08 4 if you wish, or -- but I would encourage you to not get  
01:08 5 too caught up in reading it that you don't listen. But  
01:08 6 we may get to some parts that I'll just refer you to and  
01:08 7 let you read at your -- at your leisure to move through  
01:08 8 it.

01:08 9 So do we have those copies made? Let's go  
01:08 10 ahead and pass those out.

01:08 11 Is the verdict form attached to those,  
01:08 12 also?

01:08 13 LAW CLERK: It's also stapled.

01:09 14 THE COURT: It's a separate -- separate  
01:09 15 document? Okay.

01:09 16 All right. You should have a copy of the  
01:09 17 Court's charge, which is a rather thick stack, and then  
01:09 18 you should have a copy of the verdict form. Do you find  
01:09 19 both of those? I believe he's passing out the verdict  
01:09 20 form now.

01:09 21 All right. I'm going to -- let's just  
01:09 22 look at the verdict form first. I'll just cut to sort  
01:09 23 of the bottom line. These are the questions that you're  
01:09 24 going to be answering in light of the legal instructions  
01:09 25 that I'm going to be giving you in a moment.

01:09 1                   But we'll go to the end of the chapter  
01:09 2 first and let you see where -- where you're going to end  
01:09 3 up, and then we'll go back and go through all of the  
01:09 4 legal instructions. But, basically, you're going to  
01:09 5 have three or four questions to answer.

01:09 6                   The first question is: Did VirnetX prove  
01:09 7 by a preponderance of the evidence that Microsoft  
01:09 8 infringes certain claims of the '135 patent and certain  
01:10 9 claims of the '180 patent as listed there?

01:10 10                   Then if you'll look on the next page, the  
01:10 11 top of the page, there's sort of a chart, and it has  
01:10 12 three columns; Column 1 dealing with infringement;  
01:10 13 Column 2 with willfulness; and Column 3 with invalidity.

01:10 14                   And then down the left-hand side, you'll  
01:10 15 see the '135 patent and the three asserted claims; the  
01:10 16 '180 patent and the eight asserted claims underneath it.

01:10 17                   So that first question, you would answer  
01:10 18 in Column 1, and that question is: Did VirnetX prove by  
01:10 19 a preponderance of the evidence that Microsoft  
01:10 20 infringes, and then it lists all of those claims of the  
01:10 21 '135 patent and the '180 patent.

01:10 22                   And for the ones you find -- if you find  
01:10 23 infringement, then you would write yes in that blank.  
01:10 24 If you do not find infringement, then you would write  
01:10 25 no.

01:10 1           Then going back to Page -- the first page  
01:10 2 of the verdict form, you'll see Question No. 2: Of the  
01:11 3 claims that you have found infringed, in other words,  
01:11 4 the ones that you answered yes to, if any, did VirnetX  
01:11 5 prove by clear and convincing evidence that Microsoft's  
01:11 6 infringement was willful? And then an instruction to  
01:11 7 answer in Column 2.

01:11 8           So go back to that second page. For each  
01:11 9 one that you've answered yes to in Column 1, then you  
01:11 10 will answer either yes or no in Column 2 as to  
01:11 11 willfulness.

01:11 12           Then the third question is: Did Microsoft  
01:11 13 prove by clear and convincing evidence that any of the  
01:11 14 listed claims of the following patents are invalid?

01:11 15           And, again, if you find the claim invalid,  
01:11 16 answer yes; otherwise, answer no in Column 3.

01:11 17           And, again, on Column 3, you would answer  
01:11 18 yes or no for each claim.

01:11 19           Now, after you've answered those first  
01:11 20 three questions, then you have an instruction. If you  
01:11 21 have found that any claim -- any claim infringed and  
01:12 22 valid, answer Question 4; otherwise, do not answer  
01:12 23 Question 4.

01:12 24           So if you've found any claim to have been  
01:12 25 infringed and that it was not invalid, in other words,

01:12 1 you answered yes to infringement for that claim and no  
01:12 2 to invalidity for that claim, then you would answer  
01:12 3 Question No. 4, which is the damages question.

01:12 4 And it asks: What sum of money, if paid  
01:12 5 now in cash, do you find, from a preponderance of the  
01:12 6 evidence, would fairly and reasonably compensate VirnetX  
01:12 7 for Microsoft's infringement of the following patents?

01:12 8 First, as to the '135 patent, and then for  
01:12 9 the '180 patent and a dollar sign and a place for your  
01:12 10 answer and then a place at the bottom for your jury  
01:12 11 foreperson to sign and date the verdict form.

01:12 12 Now, that's the end of the chapter, as I  
01:12 13 said. Now we'll go back through the detailed  
01:12 14 instructions. Some of these you've heard earlier and  
01:13 15 will be a repeat, but just please bear with me as we go  
01:13 16 through them.

17 Members of the Jury: You have now heard  
18 all of the evidence in this case. I'm now going to  
19 instruct you about the law which you must apply. It is  
20 your duty to follow the law as I give it to you.

21 On the other hand, you, the jury, are the  
22 judges of the facts. Do not consider any statement that  
23 I may have made during the trial or may make during  
24 these instructions as any indication that I have any  
25 opinion about the facts of this case.

1                   After I instruct you on the law, the  
2 attorneys will have an opportunity to present their  
3 closing arguments. Again, the statements of the -- and  
4 arguments of the attorneys are not evidence and are not  
5 instructions on the law. They are only intended to  
6 assist you in understanding the evidence and the  
7 parties' contentions.

8                   Again, as I told you at the beginning, the  
9 evidence will come -- is what you heard from the witness  
10 stand that was admitted into evidence and the documents  
11 and exhibits that were admitted.

12                   Now, when you come to the questions,  
13 answer them from the facts as you find them. Do not  
14 decide who you think should win and then answer the  
15 questions accordingly. Your answers and your verdict  
16 must be unanimous.

17                   In determining whether any fact has been  
18 proved in this case, you may, unless otherwise  
19 instructed, consider the testimony of all witnesses,  
20 regardless of who may have called them, and all exhibits  
21 received in evidence, regardless of who may have  
22 produced them.

23                   Now, regarding considering witnesses'  
24 testimony, again, you, the jurors, are the sole judges  
25 of the credibility of all witnesses and the weight and

1 effect of all evidence.

2 By the Court allowing testimony or other  
3 evidence to be introduced over the objection of an  
4 attorney, the Court did not indicate any opinion as to  
5 the weight or effect of such evidence.

6 When the Court sustained an  
7 objection to a question addressed to a witness, you must  
8 disregard the question entirely and may draw no  
9 inference from the wording of it or speculate as to what  
10 the witness would have testified to if he or she had  
11 been permitted to answer the question.

12 At times during the trial, it was  
13 necessary for the Court to talk with the lawyers here at  
14 the bench out of your hearing or by calling a recess.  
15 We met because often during a trial something comes up  
16 that does not involve the jury. You should not  
17 speculate on what was discussed during those times.

18 In determining the weight to give  
19 the testimony of a witness, you should ask yourself  
20 whether there was evidence tending to prove that the  
21 witness testified falsely concerning some important fact  
22 or whether there was evidence that at some other time,  
23 the witness said or did something or failed to say or do  
24 something that was different from the testimony the  
25 witness gave before you during the trial.

1                   You should, of course, keep in mind  
2 that a simple mistake by a witness does not necessarily  
3 mean that the witness was not telling the truth as he or  
4 she remembers it, because people may forget some things  
5 or remember other things inaccurately.

6                   So if a witness has made a misstatement,  
7 you need to consider whether that misstatement was an  
8 intentional falsehood or simply an innocent lapse of  
9 memory, and the significance of that may depend on  
10 whether it has to do with an important fact or only with  
11 some unimportant detail.

12                   Now, with regard to examining the  
13 evidence, certain testimony in this case has been  
14 presented to you through a deposition. As I instructed  
15 you during the trial, a deposition is the sworn,  
16 recorded answers to questions asked of a witness in  
17 advance of trial.

18                   Under some circumstances, the witness  
19 cannot be present to testify from the witness stand and  
20 the witness's testimony may be presented under oath in  
21 the form of a deposition.

22                   Sometime before this trial, attorneys  
23 representing the parties in this case questioned this  
24 witness under oath. A court reporter was present and  
25 recorded the testimony.



1           This deposition testimony is entitled to  
2 the same consideration and is to be judged by you, as to  
3 credibility and weight, and otherwise considered by you,  
4 insofar as possible, the same as if the witness had been  
5 present and had testified from the witness stand in open  
6 court.

7           While you should consider all -- only the  
8 evidence in this case, you are permitted to draw such  
9 reasonable inferences from the testimony and exhibits as  
10 you feel are justified in the light of common  
11 experience.

12           In other words, you may make deductions  
13 and reach conclusions that reason and common sense leads  
14 you to draw from the facts that have been established by  
15 the testimony and in the case.

16           Unless you are instructed otherwise, the  
17 testimony of a single witness may be sufficient to prove  
18 any fact even if a greater number of witnesses may have  
19 testified to the contrary if, after considering all of  
20 the other evidence, you believe that single witness.

21           There are two types of evidence that you  
22 may consider in properly finding the truth as to the  
23 facts of the case.

24           One is the direct evidence, such as the  
25 testimony of an eyewitness.

1           The other is indirect or circumstantial  
2 evidence; that is, the proof of a chain of circumstances  
3 that indicates the existence or non-existence of certain  
4 other facts.

5           As a general rule, the law makes no  
6 distinction between direct and circumstantial evidence,  
7 but simply requires that you find the facts from a  
8 preponderance of all the evidence, both direct and  
9 circumstantial.

10           The parties may have stipulated or agreed  
11 to some facts in this case. When the lawyers on both  
12 sides stipulate to the existence of a fact, you must,  
13 unless otherwise instructed, accept the stipulation as  
14 evidence and regard that fact as proved.

15           Now, with regard to expert witnesses, when  
16 the knowledge of a technical subject matter may be  
17 helpful to the jury, a person who has special training  
18 or experience in that technical field is called an  
19 expert witness and is permitted to state his or her  
20 opinion on those technical matters.

21           However, you are not required to accept  
22 that opinion. As with any other witness, it is up to  
23 you to decide whether to rely upon it. In deciding  
24 whether to accept or rely upon the opinion of an expert  
25 witness, you may consider any bias of the witness.

1                   Now, with regard to the contentions of the  
2 parties, I'm going to first give you a brief summary of  
3 each side's contentions in this case, and I will then  
4 tell you what each side must prove to win on these  
5 issues.

6                   Plaintiff, VirnetX, contends that the  
7 Defendant, Microsoft Corporation, is directly infringing  
8 Claims 1, 10, and 12 of the '135 patent and Claims 1, 4,  
9 15, 17, 20, 31, 33, and 35 of the '180 patent by making,  
10 using, selling, offering to sell, or importing into the  
11 United States patented systems or apparatuses or by  
12 using Microsoft's accused software to perform the  
13 patented methods.

14                   These claims have been referred to as the  
15 asserted claims, and these patents have been referred as  
16 the patents-in-suit.

17                   VirnetX also contends that Microsoft is  
18 inducing direct infringement of the '135 patent and  
19 contributing to direct infringement of the '135 patent  
20 by others who make or use the patented systems or  
21 perform the patented methods.

22                   VirnetX also contends that Microsoft is  
23 inducing direct infringement of the '180 patent by  
24 others who make or use the patented apparatuses or  
25 perform the patented methods with Microsoft's accused

1 software products.

2 VirnetX also claims that Microsoft has  
3 infringed the '135 and '180 patents willfully. That's  
4 the second question, as you'll recall from the verdict  
5 form. And VirnetX is seeking damages for Microsoft's  
6 alleged infringement.

7 In response to VirnetX's contentions,  
8 Microsoft contends that it is not infringing any of the  
9 asserted claims, whether willfully or otherwise.

10 Microsoft also contends that the asserted  
11 claims are invalid as being anticipated by or obvious in  
12 light of the prior art. Microsoft also contends that  
13 VirnetX is not entitled to any damages.

14 Now, with regard to the burdens of proof,  
15 we visited about this the first day.

16 VirnetX, in asserting infringement of the  
17 asserted claims of the '135 and '180 patents, has the  
18 burden of proving such infringement by a preponderance  
19 of the evidence.

20 Preponderance of the evidence means  
21 evidence that persuades you that a claim is more likely  
22 true than not true.

23 In determining whether any fact has been  
24 proved by a preponderance of the evidence, you may,  
25 unless otherwise instructed, consider the stipulations,

1 the testimony of all the witnesses, regardless of who  
2 may have called them, and all the exhibits received into  
3 evidence regardless of who may have produced them.

4           If the proof establishes that VirnetX's  
5 infringement claims are more likely true than not true,  
6 then you should find for VirnetX as to that claim.

7           If you find that Microsoft infringed  
8 one or more of the asserted claims of the '135 and '180  
9 patents, then as a separate question, VirnetX has the  
10 burden of proving its additional contention that the  
11 infringement was willful by clear and convincing  
12 evidence.

13           Microsoft has the burden of proving  
14 invalidity by clear and convincing evidence.

15           Clear and convincing evidence means  
16 evidence that produces in your mind a firm belief or  
17 conviction as to the matter at issue.

18           In determining whether any fact has been  
19 proved by clear and convincing evidence, you may, unless  
20 otherwise instructed, again, consider the stipulations  
21 all the witnesses' testimony, regardless of who may have  
22 called them, and all of the exhibits admitted into  
23 evidence, regardless of who may have produced them.

24           Although proof to an absolute certainty is  
25 not required, the clear-and-convincing-evidence standard

1 requires a greater degree of persuasion than is  
2 necessary for the preponderance-of-the-evidence  
3 standard. If the proof establishes in your mind a firm  
4 belief or conviction, then the standard has been met.

01:23 5 So if you'll look back at the verdict  
01:24 6 form, the three -- first three questions and on the  
01:24 7 second page, the Columns 1, 2, and 3, the first column,  
01:24 8 infringement, that's under the  
01:24 9 preponderance-of-the-evidence standard.

01:25 10 The next two columns: Willfulness and  
01:25 11 invalidity, that's under the clear-and-convincing  
01:25 12 standard.

01:25 13 Everybody follow that?

01:25 14 Okay. Now, a glossary of patent terms is  
01:25 15 contained in Appendix B to this charge. I'm not going  
01:25 16 to read through all of those. They're there for your  
01:25 17 reference.

01:25 18 You'll see them over as the last two  
01:25 19 pages -- most of those have been testified to and  
01:25 20 explained, but that's there for your reference, and you  
01:25 21 should read them. They are part of the charge.

22 All right. Now, with regard to the claims  
23 of the patents-in-suit, the claims of a patent are  
24 numbered sentences at the end of the patent.

25 The claims describe the invention made by

1 the inventor and describe what the patent owner owns and  
2 what the owner may prevent others from doing. Claims  
3 may describe products, such as machines or chemical  
4 compounds or processes for making or using a product.

5           Claims are usually divided into parts or  
6 steps called limitations or elements. For example, a  
7 claim that covers the invention of a table may recite  
8 the tabletop, four legs, and the glue that secures the  
9 legs on the tabletop. The tabletop, the legs, and the  
10 glue are each a separate limitation or element of the  
11 claim.

12           Now, there are two types of claims. This  
13 case involves independent claims and dependent claims.

14           An independent claim sets forth all the  
15 requirements that must be met in order to be covered by  
16 that claim. Thus, it is not necessary to look at any  
17 other claim to determine what an independent claim  
18 covers.

19           In this case, Claims 1 and 10 of the '135  
20 patent and Claims 1, 17, and 33 of the '180 patent are  
21 each independent claims.

22           The other claims being asserted in this  
23 case are dependent claims. A dependent claim does not  
24 itself recite all of the requirements of the claim but  
25 refers to another claim for some of its requirements.

1 In this way, the claim depends on another claim.

2           The law considers a dependent claim to  
3 incorporate all of the requirements of the claims to  
4 which it refers. The dependent claim then adds its own  
5 additional requirements.

6           To determine what a dependent claim  
7 covers, it is necessary to look at both the dependent  
8 claim and any other claims to which it refers. A  
9 product or method that meets all of the requirements of  
10 both the dependent claim and the claims to which it  
11 refers is covered by that dependent claim.

12           Construction of the claims.

13           In deciding whether a claim has been  
14 infringed, the first step is to understand the meaning  
15 of the words used in the patent claims.

16           It is my job as judge to determine what  
17 the patent claims mean and to instruct you about that  
18 meaning. You must accept the meanings I give you and  
19 use those meanings when you decide whether or not the  
20 patent claims are infringed and whether or not they are  
21 invalid.

22           I have interpreted the meaning of some of  
23 the language in the patent claims involved in this case.  
24 My interpretation of those claims appears in Appendix A  
25 to this charge.



1           The claim language I have not interpreted  
2 for you in Appendix A is to be given its ordinary and  
3 accustomed meaning as understood by one of skill in the  
4 art.

5           Now, with regard to infringement, any  
6 person or business entity that, without the patent  
7 owner's permission, makes, uses, sells, or offers to  
8 sell a device or practices a method, that is covered by  
9 at least one claim of a patent before the patent expires  
10 infringes the patent.

11           A patent owner has the right to stop  
12 others from infringing the patent claims during the life  
13 of the patent.

14           In this case, VirnetX asserts that  
15 Microsoft has infringed the asserted claims. VirnetX  
16 has the burden of proving infringement by a  
17 preponderance of the evidence.

18           Only the claims of a patent may be  
19 infringed. You must compare each of the asserted  
20 claims, as I have defined them, to the accused acts of  
21 infringement and determine whether or not there is  
22 infringement.

23           You must not compare the accused products  
24 or methods with any specific example set out in the  
25 patents. The only correct comparison is with the

1 language of the claim itself with the meanings I have  
2 given you.

3           In order to prove infringement, VirnetX  
4 must prove that the requirements for one or more of  
5 these types of infringement are met by a preponderance  
6 of the evidence; that is, that it's more likely not,  
7 that all of the requirements of one or more of each of  
8 these types of infringement have been proved.

9           You must consider each claim individually  
10 and must reach your decision as to each assertion of  
11 infringement based on my instructions about the meaning  
12 and scope of the claims, the legal requirements for  
13 infringement, and the evidence presented to you by the  
14 parties.

15           In this case, there are three possible  
16 ways that a claim may be infringed: The first is direct  
17 infringement; the second is active inducement; and the  
18 third is contributory infringement.

19           VirnetX has alleged that Microsoft  
20 directly infringes the asserted claims.

21           In addition, VirnetX has alleged that  
22 customers of Microsoft directly infringe the asserted  
23 claims and that Microsoft is liable for actively  
24 inducing or contributing to that direct infringement by  
25 those customers.

1           I will now explain each of the types of  
2 infringement in more detail.

3           The first is direct Infringement. If any  
4 person makes, uses, sells, or offers to sell what is  
5 covered by the claims of a patent without the patent  
6 owner's permission, that person is said to infringe the  
7 patent. This type of infringement is also called direct  
8 infringement.

9           To determine direct infringement, you must  
10 compare the accused product or method with each of the  
11 asserted claims of the patents-in-suit using my  
12 instructions as to the meaning of the patent claims.

13           A patent claim is directly infringed only  
14 if the accused product or method includes each and every  
15 element in that patent claim. If the accused product or  
16 method does not contain one or more of the limitations  
17 recited in a claim, then that product or method does not  
18 directly infringe that claim.

19           An accused product infringes a claim if it  
20 is reasonably capable of satisfying the claim elements,  
21 even though it may also be capable of non-infringing  
22 modes of operation.

23           If you find that the accused product or  
24 method includes each element or step of the claim, then  
25 the product or method infringes the claim even if such

1 product or method contains additional elements or steps  
2 that are not recited in the claim.

3           A person can directly infringe a patent  
4 without knowing that what it is doing is an infringement  
5 of the patent.

6           It may also directly infringe, even  
7 though, in good faith, it believes that what it is doing  
8 is not an infringement of any patent, and even if it did  
9 not know of the patent infringement -- even if it did  
10 not know of the patent, infringement does not require  
11 proof that the person copied a product or the patent.

12           You must consider each of the asserted  
13 claims of the patents-in-suit individually and decide  
14 whether making, selling, or using the accused  
15 apparatuses or performing the accused methods infringes  
16 that claim.

17           You must be certain to compare such  
18 accused apparatus or method with each claim that such  
19 apparatus or method is alleged to infringe. Such  
20 accused apparatus or method should be compared to the  
21 limitations recited in the patent claims, not to -- and  
22 not to any preferred or commercial embodiment of the  
23 claimed invention.

24           Taking each asserted claim of the '135 and  
25 '180 patents separately, if you find that VirnetX has

1 proved by a preponderance of the evidence that each and  
2 every limitation of that claim is present in the accused  
3 product or method, then you must find that such product  
4 or method infringes the claim.

5           A claim limitation may be directly  
6 infringed in one of two ways: Either literally or under  
7 the Doctrine of Equivalents.

8           Literal infringement.

9           A claim limitation is literally met if it  
10 exists in the accused product or method just as it is  
11 described in the claim language, either as I have  
12 explained that language to you, or if I did not explain  
13 it, as it would be understood by one of skill in the  
14 art.

15           The second way is under the Doctrine of  
16 Equivalents. A claim limitation is present in an  
17 accused product or method under the Doctrine of  
18 Equivalents if the differences between the claim  
19 limitation and a comparable element of the accused  
20 product or method are insubstantial.

21           One way to determine whether a difference  
22 is insubstantial is to look at whether the accused  
23 product or method performs substantially the same  
24 function in substantially the same way to achieve  
25 substantially the same result as the claimed invention.

1           You may also consider whether, at the time  
2 of the alleged infringement, a person having ordinary  
3 skill in the field of technology of the patent would  
4 have known of the interchangeability of the alternative  
5 feature and the unmet requirement of the claim.

6           Interchangeability at the present time is  
7 not sufficient in order for the features to be  
8 considered to be interchangeable; rather, the  
9 interchangeability of the two features must have been  
10 known to persons of ordinary skill in the field of  
11 technology at the time the infringement began.

12           Thus, the inventor need not have foreseen  
13 and the patent need not describe all potential  
14 equivalents to the invention covered by the claims.

15           Also, slight changes in technique or  
16 improvements made possible by technology developed after  
17 the patent application is filed may still be considered  
18 equivalent for the purposes of the Doctrine of  
19 Equivalents.

20           Now, with regard to inducement, VirnetX  
21 alleges that Microsoft is also liable for infringement  
22 by actively inducing others to directly infringe the  
23 '135 and '180 patents.

24           As with direct infringement, you must  
25 determine whether there has been active inducement on a

1 claim-by-claim basis.

2 A person is liable for active inducement  
3 of a claim only if:

4 (1) the person takes action during the  
5 time the patent is in force, which encourages acts  
6 someone else;

7 And (2) the encouraged acts constitute  
8 direct infringement of that claim;

9 And (3) the person is aware of the patent  
10 and knows or should have known that the encouraged acts  
11 constitute infringement of that patent;

12 And (4) the person has an intent to cause  
13 the encouraged acts;

14 And (5) the encouraged acts are actually  
15 carried out by someone else.

16 In order to prove active inducement,  
17 VirnetX must prove that each of the above requirements  
18 is met. Further proof of each element must be by a  
19 preponderance of the evidence; i.e., that it is likely  
20 than not that each of the above requirements has been  
21 met.

22 In considering whether Microsoft has  
23 induced infringement by others, you may consider all the  
24 circumstances, including whether or not Microsoft  
25 obtained the advice of a competent lawyer, whether or

1 not Microsoft knew of the patents when designing and  
2 manufacturing its products, and whether or not Microsoft  
3 removed or diminished the allegedly infringing features.

4           You may not assume that merely because  
5 Microsoft did not obtain an opinion of counsel, the  
6 opinion would have been unfavorable.

7           Intent to cause the acts that constitute  
8 direct infringement may be demonstrated by evidence of  
9 active steps taken to encourage direct infringement,  
10 such as advertising an infringing use or instructing how  
11 to engage in an infringing use.

12           In order to establish active inducement of  
13 infringement, it is not sufficient that the accused  
14 infringer was aware of the acts that allegedly  
15 constitute the direct infringement; rather, you must  
16 find specifically that the inducer intended to cause the  
17 acts that constitute the direct infringement and must  
18 have known or should have known that its action would  
19 cause the direct infringement.

20           If you do not find that the accused  
21 infringer specifically meets these intent requirements,  
22 then you must find that the accused infringer has not  
23 induced the alleged infringement.

24           Next is contributory infringement.

25           VirnetX also alleges that Microsoft is



1 liable for contributory infringement by contributing to  
2 the direct infringement of the '135 patent by another.  
3 As with direct infringement, you must determine whether  
4 there has been contributory infringement on a  
5 claim-by-claim basis.

6           It is not necessary to show that Microsoft  
7 has directly infringed as long as you find that someone  
8 has directly infringed. If there is no direct  
9 infringement by anyone, Microsoft cannot have  
10 contributed to the infringement of the patent.

11           If you find someone has directly infringed  
12 the '135 patent, then contributory infringement exists  
13 if VirnetX proves by a preponderance of the evidence  
14 that:

15                   (1) Microsoft sold, offered for sale, or  
16 imported;

17                   (2) a material component of the product or  
18 material component used in practicing the patented  
19 method, which can be software, that is not a staple  
20 article of commerce suitable for substantial  
21 non-infringing use;

22                   (3) with knowledge that the component was  
23 especially made or adapted for use in an infringing  
24 manner.

25                   A staple article of commerce suitable for

1 substantial non-infringing use is something that has  
2 uses other than a component of the product or patented  
3 method.

4           A substantial non-infringing use is one  
5 that is not occasional, farfetched, impractical,  
6 experimental, or hypothetical.

7           In determining whether or not the  
8 component is a staple article of commerce suitable for  
9 non-infringing use, you should focus on whether the  
10 component itself, not the product in which the component  
11 is embedded, is or is not suitable for substantial  
12 non-infringing use.

13           Whether the product in which the component  
14 is embedded is or is not suitable for substantial  
15 infringing use is not relevant.

16           Now, next is willful infringement.  
17 Again, willfulness is the second question, and you'll  
18 place your answers in Column 2 based on the  
19 clear-and-convincing-evidence standard.

20           VirnetX contends that Microsoft has  
21 willfully infringed the asserted claims. If you find,  
22 on the basis of the evidence and the law, as I have  
23 explained it, that Microsoft directly or indirectly  
24 infringes at least one of the asserted claims, then you  
25 must decide whether or not that infringement was

1 willful.

2 Willfulness is not relevant to your  
3 decision of whether or not there is infringement. It is  
4 relevant only to the amount of damages, if any, and may,  
5 in certain circumstances, entitle the patent owner to  
6 increased damages.

7 But it would be my job to decide whether  
8 to award increased damages to a patent owner, after you  
9 have rendered a verdict. Therefore, you should not  
10 consider willful infringement in making your damage  
11 award, if any.

12 To prove willfulness, a patent owner must  
13 prove by clear and convincing evidence that the accused  
14 infringer acted with reckless disregard to the claims of  
15 the asserted patent.

16 Willfulness requires you to determine  
17 three things:

18 First, that the accused infringer was  
19 aware of the asserted patent;

20 Second, that the alleged infringer acted  
21 despite an objectively high likelihood that its actions  
22 infringed a valid patent;

23 And third, that this objectively high risk  
24 was either known or so obvious that it should have been  
25 known to the alleged infringer.

1           In deciding whether or not the alleged  
2 infringer committed willful infringement, you must  
3 consider all of the facts, including:

4           (1) whether or not the alleged infringer  
5 possessed a reasonable basis to believe that it has a  
6 substantial defense to infringement and reasonably  
7 believed that the defense would be successful if  
8 litigated, including the defense that the patent is  
9 invalid;

10           And (2) whether or not the alleged  
11 infringer made a good faith effort to avoid infringing  
12 the patent; for example, the alleged infringer took  
13 remedial action upon learning of the patent by ceasing  
14 infringing activity or attempting to design around the  
15 patent.

16           Now that covers infringement and  
17 willfulness.

18           Now my instructions regarding invalidity.  
19 That's the third question that you'll answer in Column  
20 3, and that standard of proof is clear and convincing  
21 evidence.

22           Microsoft has challenged the validity of  
23 all of the asserted claims of the '135 and '180 patents  
24 on a number of different grounds. Microsoft must prove  
25 that a patent claim is invalid by clear and convincing

1 evidence.

2           An issued patent is accorded a presumption  
3 of validity based on the presumption that the United  
4 States Patent & Trademark Office acted correctly in  
5 issuing a patent.

6           For a patent to be valid, the invention  
7 claimed in the patent must be new, useful, and obvious.  
8 A patent cannot take away from people their right to use  
9 what was known or what would have been obvious when the  
10 invention was made.

11           In addition, the patent must comply with  
12 certain statutory requirements of disclosure.

13           I will now explain to you in some detail  
14 Microsoft's grounds for invalidity. In making your  
15 determination as to invalidity, you should consider each  
16 claim and each ground for invalidity separately.

17           The first is anticipation. And you've  
18 heard testimony about all of these during the course of  
19 the trial from both sides.

20           Microsoft contends that all of the  
21 asserted claims are invalid for being anticipated by  
22 prior art. Microsoft bears the burden of proof of  
23 establishing anticipation by clear and convincing  
24 evidence.

25           A patent claim is invalid if the claimed

1 invention is not new. For a claim to be invalid on the  
2 basis of anticipation because it is not new, all of its  
3 requirements must be present in a single previous device  
4 or method or described in a single previous publication  
5 or patent. We call these things prior art.

6           Microsoft must prove by clear and  
7 convincing evidence that these items are prior art. The  
8 description in a reference does not have to be in the  
9 same words as the claim, but all the requirements of the  
10 claim must be there, either stated expressly or  
11 necessarily implied or inherent in the level of ordinary  
12 skill in the field of technology of the patent so that  
13 someone of ordinary skill in the field of technology of  
14 the patent, looking at that one reference would be able  
15 to make and use the claimed invention.

16           Something is inherent in an item of prior  
17 art if it is always present in the prior art or always  
18 results from the practice of the prior art.

19           Inherency may not be established by  
20 probabilities or possibilities. The mere fact that a  
21 certain thing may coincidentally result from a given set  
22 of circumstances is not sufficient.

23           A party claiming anticipation by inherency  
24 must show that the elements of the claim are always  
25 present in the prior art or always result from the

1 practice of the prior art. You may not combine one or  
2 more items of prior art to make out an anticipation.

3 Let me now instruct you on two principles  
4 of patent law pertaining to the making of an invention.  
5 Conception and reduction to practice are those two  
6 areas.

7 Conception is the mental part of an  
8 invention; in essence, the formation in one's mind of  
9 the inventor of a definite and permanent idea of the  
10 complete and operative invention as it is hereafter to  
11 be applied in practice.

12 Conception of an invention is complete  
13 when the idea is so clearly defined in the inventor's  
14 mind that a person of ordinary skill in the field of the  
15 technology would be able to reduce the invention to  
16 practice without extensive research or experimentation.

17 Conception may be proved when the  
18 invention is shown in its complete form by drawings,  
19 disclosure to another person or other forms of evidence  
20 presented at trial.

21 The second, a claimed invention is reduced  
22 to practice when it has been tested sufficiently to show  
23 that it will work for its intended purpose.

24 An invention may be reduced to practice  
25 even if the inventor has not made or tested a prototype

1 of the invention. The invention may be reduced to  
2 practice by being fully described in a filed patent  
3 application.

4 Anticipation by public knowledge or use by  
5 another. I will now describe the specific requirements  
6 for the prior art categories relied on by Microsoft in  
7 this case.

8 A patent claim is invalid if the invention  
9 recited in that claim was publicly known or used in the  
10 United States by someone other than the inventor before  
11 the patent applicant invented it or more than one year  
12 before the United States patent application was filed.

13 For the '135 patent, the parties agree  
14 that the invention date was February 15, 2000.

15 For the '180 patent, the parties agree  
16 that the invention date was April 26, 2000.

17 A prior public use by another may  
18 anticipate a patent claim even if the use was accidental  
19 or was not appreciated by the other person. Thus, a  
20 prior public use may anticipate an invention even if the  
21 user did not intend to use the invention or even realize  
22 he or she had done so.

23 Private or secret knowledge, such as  
24 knowledge confidentially discussed within a small group,  
25 is not enough to invalidate a prior -- invalidate a



1 patent claim.

2 Now anticipation by a printed publication.

3 A patent claim is invalid if the invention  
4 defined by that claim was described in a printed  
5 publication anywhere in the world before it was invented  
6 by the patent applicant or more than one year prior to  
7 the filing date of the United States patent application.

8 The effective filing date of the  
9 application of the '135 patent is February 15, 2000.

10 The effective filing date of the  
11 application for the '180 patent is April 26, 2000.

12 Printed publications may include issued  
13 patents, as well as articles, treatises, and other  
14 written materials.

15 A printed publication or patent will not  
16 be an anticipation unless it contains a description of  
17 the invention covered by the patent claims that is  
18 sufficiently detailed to teach a skilled person how to  
19 make and use the invention without undue  
20 experimentation.

21 Factors to be considered in determining  
22 whether a disclosure would require undue experimentation  
23 include:

24 (1) the quantity of the experimentation  
25 necessary;

1                   (2) the amount of direct -- the amount of  
2 direction or guidance disclosed in the printed  
3 publication or patent;

4                   (3) the presence or absence of working  
5 examples in the printed publication or patent;

6                   (4) the nature of the invention;

7                   (5) the state of the prior art;

8                   (6) the relative skill of those in the  
9 art;

10                   (7) the predictability of the art;

11                   And (8) the breadth of the claims.

12                   A printed publication must be reasonably  
13 accessible to those members of the public who would be  
14 interested in its contents. It is not necessary that  
15 the printed publication be available to every member of  
16 the public. The date that a printed publication becomes  
17 prior art is the date that it becomes available to the  
18 public.

19                   So long as the printed publication was  
20 available to the public, the form in which the  
21 information was recorded is unimportant. The  
22 information must, however, have been maintained in some  
23 permanent form, such as printed or typed pages, magnetic  
24 tape, microfilm, photographs, or photocopies.

25                   Now, anticipation by prior sale or offer

1 for sale.

2           The sale or offer for sale in the United  
3 States of a product may be prior art to a patent claim  
4 covering the product or a method of making the product  
5 if the product or method was sold or offered for sale in  
6 the United States more than one year before the  
7 application for the patent was filed.

8           This is known as the on-sale bar. The  
9 date of the invention for the patent claims is  
10 irrelevant to this category of prior art.

11           In order for there to be an offer for  
12 sale, two requirements must be met.

13           First, the product have been the subject  
14 of a commercial offer for sale in the United States.  
15 Even a single offer sale to a single customer may be a  
16 commercial offer, even if the customer does not accept  
17 the offer.

18           The on-sale bar is not limited to sales by  
19 the inventor but may result from sales or offers for  
20 sale by a third party that anticipate the invention.

21           Second, the product must be ready for  
22 patenting. This can be satisfied in at least two ways:

23           (1) by proof of reduction to practice;  
24 that is, the alleged invention worked as actually  
25 intended before the critical date;

1                   Or (2) by proof that prior to the critical  
2 date, the inventor had prepared drawings or other  
3 descriptions of the invention that were sufficiently  
4 specific to enable a person skilled in the art to  
5 practice the invention.

6                   The product may be ready for patenting  
7 even if it is not ready for commercial production or has  
8 not been technically perfected.

9                   Corroboration of oral testimony.

10                  Oral testimony alone is insufficient to  
11 prove prior invention or that something is prior art or  
12 that a particular event or reference occurred before the  
13 filing date of the patents-in-suit.

14                  A party must provide evidence that  
15 corroborates any oral testimony, especially where the  
16 oral testimony comes from an interested witness or a  
17 witness testifying on behalf of an interested party.

18                  This includes any individual or company  
19 testifying that his or her -- or its invention predates  
20 the patents-in-suit and also includes a patent owner  
21 seeking to prove an earlier date of invention than the  
22 effective -- than the effective filing date stated on  
23 the face of the patent.

24                  Documentary or physical evidence that is  
25 made contemporaneously with the inventive process

1 provides the most reliable proof that the testimony has  
2 been corroborated, but corroborating evidence may also  
3 consist of testimony of a witness, other than an  
4 inventor, to the actual reduction to practice, or it may  
5 consist of evidence of surrounding facts and  
6 circumstances independent of information received from  
7 the inventor.

8           If you find that the party has not  
9 corroborated the oral testimony with other evidence, you  
10 are not permitted to find that the subject of the oral  
11 testimony qualifies as prior art or supports a prior  
12 date of invention.

13           Next is the defense of obviousness.

14           Not all innovations are patentable. A  
15 patent claim is invalid for obviousness if the claimed  
16 invention as a whole would have been obvious to one  
17 having ordinary skill in view of all the prior art at  
18 the time the invention was made.

19           The issue is not whether the claimed  
20 invention would have been obvious to you as a layman, to  
21 me as a judge, or to a genius in the art, but whether it  
22 would have been obvious to one of ordinary skill in the  
23 art at the time it was made.

24           Microsoft bears the burden of proving this  
25 defense by clear and convincing evidence.

1           You must not use hindsight when comparing  
2 the prior art to the invention for obviousness. You  
3 should consider only what was known before the invention  
4 was made. You may not judge the invention in light of  
5 present-day knowledge or by what you learned from or  
6 about the claimed invention during trial.

7           In placing yourself in the shoes of one of  
8 ordinary skill in the art at the time that the invention  
9 was made, you may consider whether such a person would  
10 have been motivated to combine the prior art references  
11 in order to arrive at the claimed invention.

12           First, you must decide the level of  
13 ordinary skill in the field that someone would have had  
14 at the time the claimed invention was made.

15           Second, you must decide the scope and  
16 content of the prior art put into evidence in this case.

17           Third, you must decide the differences, if  
18 any, that existed between the claimed invention and the  
19 prior art.

20           Finally, you should consider any  
21 additional considerations relating to the obviousness or  
22 non-obviousness of the invention.

23           I will now describe in detail the specific  
24 determinations you must make.

25           These instructions often refer to a person

1 of ordinary skill in the art. It is up to you to decide  
2 the level of ordinary skill in the field of the claimed  
3 inventions.

4 You should consider all the evidence  
5 introduced at trial in making this decision, including:

6 (1) the levels of education and experience  
7 of persons working in the field;

8 (2) the types of problems encountered in  
9 the field;

10 And (3) the sophistication of the  
11 technology.

12 VirnetX contends a person of ordinary  
13 skill in the art would have a master's degree in  
14 computer science or computer engineering or in a related  
15 field, as well as approximately two years of experience  
16 in computer networking and in security with respect to  
17 computer networks, including actual experience with  
18 networking protocols, as well as the security of those  
19 protocols.

20 Microsoft contends that the level of  
21 ordinary skill in the field was a person with a  
22 bachelor's degree in computer engineering or computer  
23 science or equivalent and two to three years experience  
24 with data networks.

25 Now, with regard to the scope and content

1 of the prior art, in determining whether or not the  
2 invention is valid, you must determine the scope and  
3 content of the prior art at the time the invention was  
4 made.

5           You must decide whether the specific  
6 references relied upon by Microsoft in this case are  
7 prior art to the invention described in the asserted  
8 claims of the patents-in-suit.

9           Prior art includes previous devices,  
10 articles, and methods that were publicly used or offered  
11 for sale and printed publications or patents that  
12 disclose the invention or elements of the invention.

13           Once you decide whether or not specific  
14 references are prior art, you must also decide what  
15 those references would have disclosed or taught to one  
16 having ordinary skill in the field of the technology of  
17 the patent at the time the invention was made.

18           In order for a reference to be relevant,  
19 the reference must be within the field of the inventor's  
20 endeavor, or if it is from another field of endeavor,  
21 the reference must be reasonably related to the  
22 particular problem or issue the inventor faced or  
23 addressed when making the inventions described in the  
24 asserted claims of the patents-in-suit.

25           A reference from a field of endeavor,



1 other than the inventor's, is reasonably related to the  
2 problem or issues the inventors faced if the reference  
3 is one which, because of the matter -- because of the  
4 matter with which the reference deals, logically would  
5 have commended itself to the attention of the inventors  
6 when considering the problems or issues they faced.

7           It is for you to decide what the problems  
8 or issues were that the inventors faced at the time the  
9 inventions in the asserted claims were made.

10           Now the differences over the prior art.

11           The next question you must answer in  
12 determining whether or not the invention was obvious at  
13 the time it was made is what differences there are, if  
14 any, between the prior art and the patented invention.

15           In analyzing this issue, do not focus on  
16 the differences between the prior art and the invention  
17 because the test is not whether there are differences;  
18 rather, the test is whether or not the invention, taken  
19 as a whole, would have been obvious to one having  
20 ordinary skill in view of all the prior art at the time  
21 the invention was made.

22           If you conclude that the prior art  
23 discloses all the elements of the asserted claims, but  
24 those elements are in separate items, you must then  
25 consider whether or not it would have been obvious to

1 combine those items.

2           A claim is not obvious merely because all  
3 of the elements of that claim already existed. One way  
4 to decide whether one of ordinary skill in the art would  
5 combine what is described in various items of prior art  
6 is whether there is some teaching, suggestion, or  
7 motivation in the prior art for a skilled person to make  
8 the combination covered by the patent claims.  
9 Motivation can be implicit or explicit.

10           In considering whether a claimed  
11 combination of prior art elements is obvious, you must  
12 consider whether the improvement is more than the  
13 predictable use of prior art elements according to their  
14 established functions.

15           When a patent simply arranges old elements  
16 with each performing the same function it had been known  
17 to perform and yields no more than one would expect from  
18 such an arrangement, the combination is obvious.

19           It is common sense that familiar items may  
20 have obvious uses beyond their primary purposes, and a  
21 person of ordinary skill often will be able to teach --  
22 to fit the teachings of multiple patents together like  
23 the pieces of a puzzle. Multiple references in the  
24 prior art can be combined to show that a claim is  
25 obvious.

1           Any need or problem known in the field and  
2 addressed by the patent can be -- can provide a reason  
3 for combining the elements in the manner claimed.

4           To determine whether there was an apparent  
5 reason to combine the known elements in the way a patent  
6 claims, you can look to interrelated teachings of  
7 multiple patents, to the effects of demands known to the  
8 design community or present in the marketplace, and to  
9 the background knowledge possessed by a person of  
10 ordinary skill in the art.

11           Neither the particular motivation nor the  
12 alleged purpose of the patentee controls. One of  
13 ordinary skill in the art is not confined only to prior  
14 art that attempts to solve the same problem as the  
15 patent claim.

16           Teachings, suggestions, and motivations  
17 may also be found within the knowledge of a person with  
18 ordinary skill in the art, including inferences and  
19 creative steps that a person of ordinary skill in the  
20 art would employ.

21           Additionally, teachings, suggestions, and  
22 motivations may found in the nature of the problems  
23 solved by the claimed invention. The fact that a  
24 combination was obvious to try may demonstrate that the  
25 combination itself was obvious.

1 Additional considerations.

2 The next question you must answer in  
3 determining whether or not the invention was obvious at  
4 the time it was made is what evidence there is, if any,  
5 of additional considerations relating to the obviousness  
6 or non-obviousness of the invention.

7 You may consider in your analysis any  
8 evidence about the following factors, and then it lists  
9 ten separate factors that are additional considerations  
10 there, and if there's no objection, I'll just leave  
11 those to the jury for reading.

12 To be relevant to your determination of  
13 obviousness, any of these secondary considerations must  
14 have a connection or nexus to the claimed invention set  
15 forth in the patent claims.

16 If a secondary consideration is unrelated  
17 to the claimed invention but is, instead, attributable  
18 to something else, such as innovative marketing, then  
19 you should not consider it relevant to your obviousness  
20 determination.

21 So that concludes the instructions on the  
22 first three questions to be answered in Columns 1, 2,  
23 and 3. The next question is the damage question, and  
24 I'll now give you instructions about that.

25 By instructing you on damages, however, I

1 am not suggesting which party should win this case on  
2 any issue. If you find that Microsoft infringed any  
3 valid asserted claim of the '135 and '180 patents, you  
4 must then determine the amount of money damages to be  
5 awarded to VirnetX to compensate it for the  
6 infringement.

7           VirnetX seeks patent damages in the form  
8 of a reasonable royalty. Generally, a reasonable  
9 royalty is defined by the patent laws as the reasonable  
10 amount that someone wanting to use the patented  
11 invention would expect to pay to the patent owner and  
12 the owner should expect to receive.

13           A damages award should put the patent  
14 owner in approximately the financial position it would  
15 have been in had the infringement not occurred. You may  
16 not add anything -- you may not add anything to the  
17 amount of damages to punish the infringer or to set an  
18 example.

19           VirnetX has the burden to persuade you by  
20 a preponderance of the evidence that it has suffered the  
21 damages it seeks. While VirnetX is not required to  
22 prove damages with mathematical precision, it must prove  
23 them with reasonable certainty. The patent owner is not  
24 entitled to damages that are remote or speculative.

25           Now, reasonable royalty.

1           A royalty in the amount -- a royalty is  
2 the amount of money a licensee pays to a patent owner to  
3 make, use, or sell the patented invention.

4           A reasonable royalty is the amount of  
5 money a willing patent owner and a willing prospective  
6 licensee would have agreed upon at the time of the  
7 infringement for a license to make the invention.

8           It is the royalty that would have resulted  
9 from an arm's-length negotiation between a willing  
10 licensor and a willing licensee, assuming that both  
11 parties understood the patent to be valid and infringed  
12 and that the licensee would respect the patent.

13           Unlike a real world negotiation, in the  
14 hypothetical negotiation, all parties are presumed to  
15 know that the patent is infringed and is valid.

16           In making your determination about the  
17 amount of a reasonable royalty, it is important that you  
18 focus on the time period when the infringer first  
19 infringed the patent and the facts that existed at that  
20 time.

21           Your determination does not depend on the  
22 actual willingness of the parties to this lawsuit to  
23 engage in such negotiations. Your focus should be on  
24 what the parties' expectations would have been had they  
25 entered negotiations for royalties at the time of the

1 infringing activity.

2           The infringer's actual profits may or may  
3 not bear on the reasonableness of an award based on a  
4 reasonable royalty.

5           Reasonable royalty factors.

6           In deciding what is a reasonable royalty,  
7 you may consider the factors that the patent owner and  
8 the alleged infringer would consider in setting the  
9 amount the alleged infringer should pay.

10           Listed below are a number of factors you  
11 may consider. This is not every possible factor, but it  
12 will give you an idea of the kinds of things to consider  
13 in setting a reasonable royalty.

14           You've heard various ones testified about  
15 during this trial. There are 15 of them listed there  
16 for you, and unless, there's an objection, I will just  
17 refer those to you for your reading.

18           No one of these factors is dispositive,  
19 and you can and should consider the evidence that has  
20 been presented to you in this case on each of these  
21 factors. The attorneys, in their arguments, will focus  
22 on the factors that they deem raised by the evidence and  
23 most important.

24           The framework which you should use in  
25 determining a reasonable royalty is, again, a

1 hypothetical negotiation between normally prudent  
2 business people.

3           Now, let me give you some instructions for  
4 your deliberations.

5           You must perform your duties as jurors  
6 without bias or prejudice as to any party. The law does  
7 not permit you to be controlled by sympathy, prejudice,  
8 or public opinion.

9           All parties expect that you will carefully  
10 and impartially consider all the evidence, follow the  
11 law, as it is now being given to you, and reach a just  
12 verdict, regardless of the consequences.

13           You should consider and decide this case  
14 as a dispute between persons of equal standing in the  
15 community, of equal worth, and holding the same or  
16 similar stations in life.

17           A corporation is entitled to the same fair  
18 trial as a private individual. All persons, including  
19 corporations, and other organizations stand equal before  
20 the law, regardless of size or who owns them, and are to  
21 be treated as equals.

22           When you retire to the jury room to  
23 deliberate on your verdict, you may take this charge  
24 with you, as well as the exhibits which the Court has  
25 admitted into evidence.



1           You should first select your foreperson  
2 and then begin your deliberations.

3           If you recess during your deliberations,  
4 follow all of the instructions that the Court has given  
5 you about and on your conduct during the trial.

6           After you have reached your verdict, your  
7 foreperson is to fill in on the form your answers to the  
8 four questions that have been asked of you. Do not  
9 reveal your answers until such time as you are  
10 discharged, unless otherwise directed by me.

11           You must never disclose to anyone, not  
12 even to me, your numerical division on any question.

13           Any notes that you may have taken during  
14 this trial are only aids to your memory. As I told you  
15 earlier, if your memory should differ from your notes,  
16 then you should rely on your memory, not on your notes.  
17 The notes are not evidence.

18           A juror who has not taken notes should  
19 rely on his or her independent recollection of the  
20 evidence and should not be unduly influenced by the  
21 notes of other jurors. Notes are not entitled to any  
22 greater weight than the recollection or impression of  
23 each juror about the testimony.

24           If you wish to communicate with me at any  
25 time, please give a written message or question to the

1 court security officer, who will bring it to me. I will  
2 then respond as promptly as possible either in writing  
3 or having you brought into the courtroom so that I can  
4 address you orally.

5 I will always first disclose to the  
6 attorneys your question and my response before I answer  
7 your question.

8 After you have reached a verdict, you are  
9 not required to talk with anyone about the case unless  
10 the Court orders otherwise.

11 Now, the next sentence doesn't apply yet,  
12 because it says you are to retire to the jury room to  
02:13 13 begin your deliberations. But we're not going to do  
02:15 14 that yet, because you haven't heard the closing  
02:15 15 arguments.

02:15 16 But what I am going to do is give you a  
02:15 17 15-minute break. I'm going to ask you to continue to  
02:15 18 follow my instructions. Even though you've heard the  
02:15 19 opening statements, all the evidence, the Court's  
02:15 20 charge, you still haven't heard the final closing  
02:15 21 arguments.

02:15 22 So I'm going to ask you not to discuss the  
02:15 23 case among yourselves or with anyone else, but just have  
02:15 24 a -- it's been a lengthy time of instruction for you.  
02:16 25 You've been sitting there for well over an hour, so

02:16 1 we're going to take a 15-minute break.

02:16 2           When we come back, each side has been  
02:16 3 given one hour -- is that correct?

02:16 4           MR. CAWLEY: Yes, Your Honor.

02:16 5           THE COURT: One hour for closing argument.

02:16 6           So we're going to come back at 3:30, and  
02:16 7 that's going to push us until 5:30 until the argument is  
02:16 8 over.

02:16 9           Once the arguments are over, I'm going to  
02:16 10 dismiss you to the jury room, and I'm then going to ask  
02:16 11 you to select your jury foreperson, and then you will  
02:16 12 make a decision as to whether you would like to begin  
02:16 13 deliberations tonight for however long you wish or  
02:16 14 whether you would like to go home and come back in the  
02:16 15 morning and begin deliberations.

02:16 16           So I'll remind you of those instructions  
02:16 17 at the end of the case, but I just want to tell you  
02:16 18 that, because in all probability, you're going to be  
02:16 19 here until at least 5:30 to 6:00 o'clock tonight.

02:16 20           So if you need to notify any family  
02:16 21 members or -- now, did somebody have a child issue or  
02:16 22 not on this jury? I guess that was the last case.

02:17 23           Okay. If -- if anyone has any issues with  
02:17 24 that time or need to make arrangements to let anyone  
02:17 25 know, please do so during your break.

02:17 1                   Again, as I've instructed you, I've  
02:17 2 allowed you to have your cell phones for purposes of  
02:17 3 coordinating with family and that type of thing. But,  
02:17 4 again, don't discuss the case in any phone calls that  
02:17 5 you might choose to make to let people know what your  
02:17 6 schedules are going to be.

02:17 7                   I will allow you during this break, if you  
02:17 8 wish, to discuss between yourselves for scheduling  
02:17 9 purposes your collective thought as to whether you think  
02:17 10 you'd like to begin deliberating tonight or whether  
02:17 11 you'd like to come back in the morning.

02:17 12                   But in making that, you're not to discuss  
02:17 13 the case, the merits, one way or the other; just from a  
02:17 14 tiredness standpoint or from a scheduling standpoint.  
02:17 15 You may discuss whether y'all have reached some  
02:18 16 collective decision as to whether you'd like to work for  
02:18 17 a little while tonight.

02:18 18                   Once we get through with the arguments,  
02:18 19 you're going to be in charge. You can go home, come  
02:18 20 back in the morning. You can work for an hour tonight.  
02:18 21 You can work till midnight. You can do whatever you  
02:18 22 want to do. We're going to be at your pleasure.

02:18 23                   You've been at everyone else's pleasure  
02:18 24 all week, and you're going to be in the driver's seat as  
02:18 25 soon as we're through with closing arguments.

02:18 1 So with that, please follow my  
02:18 2 instructions, and you are released to the jury room  
02:18 3 until 2:35. I'm sorry. That will be 3:35.

02:18 4 COURT SECURITY OFFICER: All rise.

02:18 5 (Recess.)

02:37 6 (Jury out.)

02:37 7 COURT SECURITY OFFICER: All rise.

02:37 8 THE COURT: Please be seated.

02:38 9 All right. Now, does someone want to  
02:38 10 withdraw a JMOL?

02:38 11 MR. CAWLEY: I do, Your Honor.

02:38 12 THE COURT: Okay.

02:38 13 MR. CAWLEY: I was reminded over the break  
02:38 14 by Mr. Bobrow that we, in fact, had had some e-mail  
02:38 15 exchange on the -- that issue about claim 7 of the '135  
02:38 16 patent, and I requested that it be JMOL and they  
02:38 17 requested they withdraw it without prejudice, and it  
02:38 18 looks like we agreed to withdraw without prejudice.

02:38 19 THE COURT: Claim 7 is dismissed without  
02:38 20 prejudice.

02:38 21 MR. CAWLEY: We stand by that.

02:38 22 MR. CALDWELL: Thank you, Your Honor.

02:38 23 THE COURT: Thank you.

02:38 24 All right. Ready for the jury to be  
02:38 25 brought in?

02:38 1 MR. CAWLEY: Yes, sir. I would like to  
02:38 2 reserve 10 minutes for rebuttal.

02:38 3 THE COURT: All right. Bring the jury in,  
02:38 4 please.

02:39 5 (Jury in).

02:39 6 THE COURT: Please be seated.

02:39 7 All right, ladies of the jury, we're  
02:39 8 getting near the end now. So we're -- we've now made it  
02:39 9 all the way down to closing arguments which we're about  
02:39 10 to hear in just a moment.

02:39 11 Let me just inquire of you, did y'all have  
02:39 12 a chance to discuss whether you'd like to begin  
02:39 13 deliberations tonight or whether you would like to come  
02:39 14 back in the morning?

02:39 15 JUROR: Both.

02:39 16 THE COURT: Both. Okay. Begin tonight  
02:39 17 and work for a little while and then maybe come back in  
02:39 18 the morning is --

02:39 19 JUROR: We have one that needs to be home  
02:39 20 by 7:00.

02:39 21 THE COURT: Okay.

02:39 22 JUROR: So we thought we would work till  
02:39 23 6:30.

02:39 24 THE COURT: Okay. Very good. Very good.  
02:39 25 You're working well together already. So, very good.

02:39 1 Thank you for your attention. Please bear  
02:39 2 with us and pay attention to the attorneys' closing  
02:39 3 arguments. And I know my instructions were very lengthy  
02:39 4 and somewhat overwhelming, but I promise you the  
02:40 5 attorneys will, just as they -- both sides have done  
02:40 6 throughout this case, they will bring the issues that  
02:40 7 the case is really -- that are dispositive into focus  
02:40 8 for you, point out the instructions that are important,  
02:40 9 and you'll have a -- have a good -- good sense when you  
02:40 10 go to the jury room.

02:40 11 So with that, Mr. Cawley, the Court will  
02:40 12 recognize you for purposes of closing argument.

02:40 13 MR. CAWLEY: Thank you, Your Honor.

02:40 14 When we first met two weeks ago for the  
02:40 15 jury selection, I suggested to you that every lawsuit is  
02:41 16 a story, and as this lawsuit has been tried, it's been  
02:41 17 occurring to me that what we heard is a lot like an old  
02:41 18 story that many of you may have heard.

02:41 19 It's a story about a mustard seed. And  
02:41 20 the story is that the mustard seed is the least of all  
02:41 21 the seeds, because it's so tiny. But the story goes  
02:41 22 that if you plant that tiny seed in a garden and you  
02:41 23 wait, if you wait until its time is right and its time  
02:41 24 comes, that that tiny seed can grow into a mighty tree.  
02:41 25 And the story concludes by telling us that when that

02:41 1 happens, the birds of the air made nests in its  
02:41 2 branches.

02:42 3           The lawsuit is a story about a seed, a  
02:42 4 seed of an idea. You may remember that that seed first  
02:42 5 arose in war time for application on the battlefield.  
02:42 6 The United States was faced with a grave crisis  
02:42 7 involving scud missiles. Those were missiles that the  
02:42 8 Iraqi Army could bring out of hiding and, within 10  
02:42 9 minutes, launch off into Israel. The United States had  
02:42 10 agreed to try and stop that.

02:42 11           They hired Mr. Gif Munger and Mr. Bob  
02:42 12 Short and a handful of other men to find a solution, and  
02:42 13 the solution they came up with was called the Global  
02:42 14 Hawk.

02:42 15           You'll remember that one of the unusual  
02:42 16 things about the Global Hawk system was that it used a  
02:42 17 commercially available satellite rather than a military  
02:42 18 satellite. A satellite that anyone who wanted to rent  
02:42 19 time on could use to broadcast television or radio or  
02:43 20 anything else.

02:43 21           And this presented a real problem for the  
02:43 22 military to be able to secure the communications that  
02:43 23 went from that satellite down to the ground. Without  
02:43 24 securing them, it was possible that someone on the  
02:43 25 ground, a hacker, a member of the enemy military might



02:43 1 be able to intercept those communications and know what  
02:43 2 was about to happen.

02:43 3 Mr. Munger and Mr. Short and their team,  
02:43 4 therefore, came up with a way to secure those satellite  
02:43 5 communications so that any hackers on the ground would  
02:43 6 be locked out.

02:43 7 Now that set Mr. Munger to thinking. You  
02:43 8 heard him testify from the witness stand. This is the  
02:43 9 mid-to-late 1990s, and it began to occur to him that  
02:43 10 this was going to happen more and more frequently. That  
02:43 11 as communications around the world grew, cellular  
02:43 12 telephones, the normal telephone system, the internet,  
02:44 13 satellite communications, that it was going to become  
02:44 14 more and more common that the military would have to use  
02:44 15 publicly-available communications facilities.

02:44 16 He also began to observe that not only the  
02:44 17 military but that all of us were coming to depend on the  
02:44 18 communications through the internet, and not just to  
02:44 19 send our friends e-mail and to send out pictures of our  
02:44 20 grandchildren. But a lot of the commerce of our nation  
02:44 21 was being conducted over the internet, so Mr. Munger  
02:44 22 began to see that in terms of being part of our national  
02:44 23 security, to be able to secure communications on the  
02:44 24 internet.

02:44 25 He wrote a paper about that that he called

02:44 1 the Aladdin paper because he saw a world where you could  
02:44 2 rub a magic lamp and get all kinds of communications  
02:44 3 abilities for the military and for others. And  
02:45 4 eventually his company, SAIC, entered into a contract  
02:45 5 with the CIA, and the purpose of this contract was to  
02:45 6 help the CIA find a way to easily, but safely and  
02:45 7 securely, communicate over the internet.

02:45 8           Mr. Bob Short -- Dr. Bob Short took the  
02:45 9 stand and explained to you that in doing research for  
02:45 10 that project that was called NetEraser, he and his team  
02:45 11 bought all the available software and hardware they  
02:45 12 could find that could be used in that time, 1998 and  
02:45 13 1999, to set up a virtual private network.

02:45 14           Now everybody in the case agrees that  
02:45 15 Mr. Munger and Dr. Short didn't invent virtual private  
02:45 16 networks. Those were already available. And once they  
02:45 17 were set up, could already be used to send  
02:45 18 communications securely across the internet when they  
02:46 19 were doing this job for the CIA.

02:46 20           But what you did hear Mr. Short explain,  
02:46 21 standing right down here, at some length is how  
02:46 22 difficult it was to set up the virtual private networks  
02:46 23 that were available at that time period.

02:46 24           You saw him draw on this board on many  
02:46 25 pages of it with a red marker that showed you step after

02:46 1 step the complicated procedures that had to be followed  
02:46 2 to set up a virtual private network. And although  
02:46 3 Microsoft told you, well, there were other ways to do  
02:46 4 it, we had other projects and documents like this  
02:46 5 Defendant's Exhibit 3021, when we examined them about  
02:46 6 it, we discovered that this supposedly easy way to do it  
02:46 7 has 25 pages of instructions. Again, an example of how  
02:46 8 difficult, how unwieldy, and how impractical the setup  
02:46 9 of virtual private networks were in the late 1990s.

02:47 10 But then these men who had been working on  
02:47 11 this problem, researching it, studying it for about six  
02:47 12 months, had a breakthrough. In their breakthrough they  
02:47 13 planted the seed.

02:47 14 You'll remember, they explained to you the  
02:47 15 vision that they had was that a remote user of a  
02:47 16 computer who wanted to communicate securely could click  
02:47 17 one key on the keypad and their computer would  
02:47 18 automatically use something called a DNS request. That  
02:47 19 DNS request would go to software on the sender's end  
02:47 20 that was part of the invention which would communicate  
02:47 21 back to the remote user the information necessary to set  
02:47 22 up the secure virtual private network.

02:47 23 Again, without having to do anything but  
02:48 24 the click of that one key, that computer would then  
02:48 25 communicate with other computers on the network which in

02:48 1 turn had software that was part of the invention, and  
02:48 2 those computers would negotiate how the virtual private  
02:48 3 network would be set up. It would be just as secure as  
02:48 4 the virtual private network set up the old-fashioned,  
02:48 5 laborious way, but it could be done with one click of  
02:48 6 the key. And Dr. Short showed you that on the laptop  
02:48 7 computer that he had set up that you'll remember went  
02:48 8 out over the internet, came back into the courtroom  
02:48 9 through a completely different channel from Mr. Munger's  
02:48 10 Verizon card, communicated with Mr. Munger's computer,  
02:48 11 and Dr. Short was able to show you he could set up a  
02:48 12 virtual private network actually over the internet  
02:48 13 within five seconds by pushing one key.

02:49 14           After that seed had been planted, there  
02:49 15 was a few dried rocky years for these inventors. You  
02:49 16 heard they had a lot of difficulty getting their  
02:49 17 invention to grow and faced a lot of obstacles getting  
02:49 18 that done. But you heard that eventually the use of  
02:49 19 their invention became widespread, and that today anyone  
02:49 20 who needs to send important information confidentially  
02:49 21 and safely over the internet can shelter in the branches  
02:49 22 of the invention of Gif Munger and Bob Short.

02:49 23           Now, in this case, Judge Davis has already  
02:49 24 showed you the questions that he will ask you in writing  
02:49 25 the final chapter to this particular story. And what

02:50 1 I'd like to do over the next part of this argument is to  
02:50 2 go through those questions with you one by one.

02:50 3 Now you've already seen them, so you know  
02:50 4 that there are quite a few subparts to them that  
02:50 5 eventually you'll have to answer. But what I'd like to  
02:50 6 focus on for the next few minutes is just the four  
02:50 7 questions that he'll ask you.

02:50 8 These aren't the exact words that the  
02:50 9 judge uses but this is shorthand for the general subject  
02:50 10 that he's going to ask you in these first four  
02:50 11 questions.

02:50 12 First, does Microsoft infringe the  
02:50 13 patents? Second, is Microsoft's infringement willful?  
02:50 14 Third, are the patents invalid? And finally, how much  
02:50 15 is VirnetX entitled to as a reasonable royalty?

02:50 16 So let's start with the first of those  
02:50 17 questions. Does Microsoft infringe the patents.

02:51 18 Now, in bringing that evidence to you, we  
02:51 19 brought you Dr. Jones, Dr. Mark Jones from Virginia Tech  
02:51 20 University. You will remember that he testified on I  
02:51 21 think it was the second day of the trial and again this  
02:51 22 morning.

02:51 23 Dr. Jones, you heard, was allowed by Judge  
02:51 24 Davis to study the actual secret computer code that  
02:51 25 Microsoft uses in its products. You heard that he spent

02:51 1 hundreds of hours comparing the claims of the patents to  
02:51 2 the Microsoft products and the Microsoft computer code.

02:51 3           Now two weeks ago at the opening statement  
02:51 4 I apologized and warned you that this testimony was  
02:51 5 going to be lengthy and it was going to be detailed.  
02:51 6 Turns out it was almost three hours long, and I  
02:51 7 explained to you then and as I explain to you again and  
02:52 8 apologize to you again now, the reason we had to do that  
02:52 9 is because we want you to be convinced that Microsoft  
02:52 10 uses each of these claims of both patents just as  
02:52 11 Dr. Jones went through in detail and explained to you  
02:52 12 step by step.

02:52 13           He didn't stop with a generalized  
02:52 14 conclusion, yeah, that claim is infringed, let's go on  
02:52 15 to the next one. Everyone of these checkmarks  
02:52 16 represents Dr. Jones taking the time to go through and  
02:52 17 show you step by step, yes, Microsoft does this, this,  
02:52 18 this, and this before he reached the conclusion and  
02:52 19 explained to you why Microsoft infringes that claim of  
02:52 20 the patent.

02:52 21           But what does Microsoft have to say about  
02:52 22 it? As I suggested to you in the opening statement, I  
02:53 23 think you have heard in this case that Microsoft will  
02:53 24 make any argument to you that they think will lead you  
02:53 25 off the path of requiring them to pay fair value for

02:53 1 their use of this invention. If you don't buy the first  
02:53 2 one, they'll go on to the second one, and if the third  
02:53 3 and the fourth and fifth don't work, they have yet  
02:53 4 another argument in the hopes that eventually you'll  
02:53 5 find something that you think sticks and decide that  
02:53 6 Microsoft shouldn't have to pay fair value for their use  
02:53 7 of Dr. Short and Dr. Munger's -- or Mr. Munger's  
02:53 8 invention.

02:53 9                   So what does Microsoft say at first?  
02:53 10 Well, of course they say we don't infringe. And the  
02:53 11 first reason that they give for claiming that they don't  
02:53 12 infringe is there's no virtual private network in our  
02:54 13 products. We don't have anonymity.

02:54 14                   Well, we heard quite a bit of testimony  
02:54 15 and saw some evidence about that and here's an  
02:54 16 interesting piece of it.

02:54 17                   This is a diagram that you were shown that  
02:54 18 was prepared by Dr. Johnson. You remember that he  
02:54 19 testified late last week. He was Microsoft's expert who  
02:54 20 was going to explain to you why they don't infringe.  
02:54 21 And he the testified to you that there's no anonymity  
02:54 22 because this sender of a message, Sue, her computer puts  
02:54 23 an address on the outside of the message that goes over  
02:54 24 the internet. That message goes over the internet  
02:54 25 addressed to, in this case, this Office Communication

02:54 1 Server which has its own address, and he told you this  
02:54 2 is not anonymous because this hacker can see those  
02:54 3 addresses as it travels across the internet. That's not  
02:55 4 anonymous.

02:55 5 But then remember when Mr. Caldwell was  
02:55 6 asking him some questions on cross-examination, and what  
02:55 7 he asked him was, well, Dr. Johnson, let's look at what  
02:55 8 you left out of your drawing. This is what he left out.  
02:55 9 The reason that you can send a communication safely  
02:55 10 across the internet to the Office Communication Server  
02:55 11 is there's nobody home on the Office Communication  
02:55 12 Server. That server doesn't have a keyboard, that  
02:55 13 server doesn't have a person sitting in it. That's  
02:55 14 sitting in a building somewhere that just does its job  
02:55 15 by its lonely self without any humans even being there.

02:55 16 What it does is to route this message down  
02:55 17 to the people who are actually intended to get it. And  
02:55 18 this address, Dr. Johnson admitted, is inside this  
02:55 19 envelope and is encrypted.

02:56 20 So what he told you is that, yeah, the  
02:56 21 hacker can see the information to send this envelope to  
02:56 22 the communication server, but he left out the part that  
02:56 23 told you that the actual identity of the recipient of  
02:56 24 the message is anonymous. Exactly what Judge Davis  
02:56 25 tells us the claims of the patent require.



02:56 1 We also talked about sender anonymity.  
02:56 2 Now you may remember here we were talking about a system  
02:56 3 called PeerNet. You remember that Dr. Johnson explained  
02:56 4 that you can have a whole group of computers and someone  
02:56 5 in the group may send a message out and a hacker may be  
02:56 6 able to see that the group sent a message but the hacker  
02:56 7 can't tell who it is within the group that sent the  
02:56 8 message. Is that anonymous?

02:56 9 Here's an excerpt from Plaintiff's Exhibit  
02:57 10 2, the actual filing for the patent before the U.S.  
02:57 11 Trademark Office -- Patent & Trademark Office.

02:57 12 You remember there was testimony that this  
02:57 13 is an article about what anonymity in this context of  
02:57 14 internet communication means, and what it says is, A  
02:57 15 sender's anonymity is beyond suspicion though if the  
02:57 16 attacker can see evidence of a sent message, the sender  
02:57 17 appears no more likely to be the originator of that  
02:57 18 message than any other potential sender in the system.  
02:57 19 Exactly the situation that we talked about in  
02:57 20 Microsoft's PeerNet organization where yes, the attacker  
02:57 21 or the hacker may be able to see that somebody in the  
02:57 22 group sent a message, there's no way they can tell who  
02:57 23 it is in that group that sent the message. That is  
02:57 24 sender anonymity beyond suspicion.

02:57 25 Well, if you don't buy Microsoft's

02:58 1 argument that there's no anonymity, how about that  
02:58 2 there's no website. This invokes something that you've  
02:58 3 heard about from Judge Davis a couple of times called  
02:58 4 the Doctrine of Equivalents. And the simple meaning of  
02:58 5 that is there's two ways to show that there's  
02:58 6 infringement. One way is to show that Microsoft does  
02:58 7 exactly what's listed in the claim. The other way is to  
02:58 8 show that Microsoft does something that's substantially  
02:58 9 different, and that's just as good.

02:58 10 Here's what Judge Davis said. A claim  
02:58 11 limitation may be met in one of two ways; either  
02:58 12 literally or under the Doctrine of Equivalents.

02:58 13 A claim limitation is present in an  
02:58 14 accused product or method under the Doctrine of  
02:58 15 Equivalents if the differences between the claim  
02:58 16 limitation and a comparable element of the accused  
02:58 17 product or method are insubstantial.

02:58 18 Well, what about in this instance? This  
02:59 19 again may remind you of some of the testimony of  
02:59 20 Dr. Johnson.

02:59 21 Do you remember that when he was asking  
02:59 22 him some questions, Mr. Caldwell wrote on this board,  
02:59 23 all right, Dr. Johnson, you're talking about the  
02:59 24 differences between a website, that's what the claim  
02:59 25 says, and Office Communication Server, what Microsoft

02:59 1 does. And you're testifying to the jury that these two  
02:59 2 have nothing in common. That's what he said. And then  
02:59 3 he testified that they're completely different.

02:59 4 But then do you remember that Mr. Caldwell  
02:59 5 showed him a document from Microsoft saying they do have  
02:59 6 something in common, and then he showed him another  
02:59 7 document and another document and another document that  
02:59 8 all said the same thing until finally Dr. Johnson had to  
02:59 9 admit to you, well, this was wrong. I was wrong to say  
02:59 10 that they have nothing in common.

03:00 11 Completely different? Same story.

03:00 12 Mr. Caldwell showed him first one  
03:00 13 document, then another document, then another document  
03:00 14 to say they're basically the same until Dr. Johnson had  
03:00 15 to tell you, well, I was wrong about that too. When I  
03:00 16 testified to you that they were completely different,  
03:00 17 they really weren't.

03:00 18 Well, if you won't buy Microsoft's  
03:00 19 argument that they don't infringe because of the  
03:00 20 website, how about the gatekeeper computer? Well,  
03:00 21 really the only testimony you heard in this case has  
03:00 22 been from Dr. Jones and he testified to you that yes,  
03:00 23 the gatekeeper computer can be met by the Microsoft  
03:00 24 software, the functionality of that in the Office  
03:00 25 Communications Server product.

03:00 1                   Okay.  If you don't buy that, how about  
03:00 2 secure computer network address.  This again is  
03:01 3 Dr. Johnson.  He showed you this picture and he said,  
03:01 4 well, see this part over here, this is out of the  
03:01 5 patent.  And you see what it shows is that what the  
03:01 6 patent is talking about is to have this secure address,  
03:01 7 you have the SCOM, that's the secure communication, and  
03:01 8 the COM, that's the regular unsecured, and you see that  
03:01 9 they each have their own independent connection to the  
03:01 10 internet.

03:01 11                   Well, that's not what we do at Microsoft.  
03:01 12 At Microsoft, if you're in a group meeting using our  
03:01 13 software, you can communicate securely with other  
03:01 14 members of the group, but at the same time, over the  
03:01 15 same connection, you can communicate just out in the  
03:01 16 regular unsecured internet, so we don't -- we don't have  
03:01 17 this different connection.

03:01 18                   But then Mr. Caldwell said to him, yeah,  
03:01 19 but what about this part of the picture.  What this part  
03:01 20 shows is the secured communication and the unsecured  
03:01 21 communication both communicating with the internet  
03:01 22 through the same communication channel.  Exactly what  
03:02 23 Dr. Johnson told you Microsoft does.

03:02 24                   Ladies and gentlemen [sic] of the jury, I  
03:02 25 think you'll find that every argument about infringement

03:02 1 Microsoft has made to you is nothing more than an  
03:02 2 attempt to lead you off the path of requiring Microsoft  
03:02 3 to pay fair value for using this invention.

03:02 4           If after considering all of the evidence  
03:02 5 in your deliberation, if you believe in response to  
03:02 6 question 1 that VirnetX has proved by a preponderance of  
03:02 7 the evidence that Microsoft infringes, then you should  
03:02 8 answer yes as to the '135 patent and answer yes as to  
03:02 9 the '180 patent.

03:02 10           The second question that Judge Davis will  
03:02 11 ask you to consider is is Microsoft's infringement  
03:02 12 willful. The first thing that we, VirnetX, are required  
03:03 13 to show you in order for you to find that infringement  
03:03 14 willful is that Microsoft knew of the patent. Well,  
03:03 15 there's not any question about that. Here's a  
03:03 16 communication that Microsoft got in 2003 from the U.S.  
03:03 17 Patent Office specifically telling Microsoft that its  
03:03 18 patent was being rejected because of the Munger '135  
03:03 19 patent, the patent we're here, one of them, talking  
03:03 20 about.

03:03 21           And then we've seen this document several  
03:03 22 times. In May of 2006, SAIC who owned the patent at the  
03:03 23 time sent this letter to Mr. Gupta who sent it to  
03:03 24 Mr. Smith in the Microsoft legal department who sent to  
03:03 25 it Mr. Marshall Phelps who was the head patent lawyer

03:03 1 for Microsoft.

03:03 2 In this letter that you've seen a number  
03:03 3 of times, SAIC suggested we'd like to contact you to  
03:03 4 discuss the possibility of offering a license to the  
03:03 5 patent. It enclosed a copy of the patent; it named the  
03:04 6 Microsoft products that we're talking about here today.

03:04 7 Now several letters went back and forth  
03:04 8 between the parties, but the fact of the matter is that  
03:04 9 Microsoft has never agreed to pay fair value for this  
03:04 10 patent.

03:04 11 And after getting this letter, what steps  
03:04 12 have they told you about that they took to avoid  
03:04 13 infringing after they've been told you need to take a  
03:04 14 look at this?

03:04 15 Mr. Pall testified did Microsoft, after  
03:04 16 receiving this letter, take any steps to avoid  
03:04 17 infringing the '135 patent?

03:04 18 He answers: I do not know of taking any  
03:04 19 steps. I know there was follow-up to the letter, but I  
03:04 20 do not know of any steps we would take on infringing the  
03:04 21 letter.

03:04 22 And I said now you said it. And he  
03:04 23 corrects himself I -- I said it on infringing the  
03:04 24 patents.

03:04 25 Mr. Pall who was a vice-president in that

03:04 1 very business division, he doesn't know of any steps  
03:04 2 they took. And why is that? I'll suggest to you it's  
03:05 3 because of the next deposition testimony you heard, not  
03:05 4 from a man like Mr. Pall, very senior in Microsoft, but  
03:05 5 a deposition you heard from one of the little people,  
03:05 6 the man who spends his day writing software all day  
03:05 7 long. That's Mr. Ryan Kim.

03:05 8 He was deposed, a Microsoft design  
03:05 9 engineer, and he said, We were actually expressly told  
03:05 10 not to look at patents.

03:05 11 Question: Who told you not to look at  
03:05 12 patents during the development of Meeting Space?

03:05 13 Answer: It's a pretty well-known practice  
03:05 14 inside Microsoft for developers.

03:05 15 Ladies of the Jury, were you shocked when  
03:05 16 you heard that? Were you shocked that a company of the  
03:05 17 stature of Microsoft would tell its employees not to  
03:06 18 even look at the patents of others.

03:06 19 What does Microsoft have to say about its  
03:06 20 infringement being willful or not? Who have they  
03:06 21 brought to court to explain to you, well, here's the  
03:06 22 reasons why we really thought we were infringing, here's  
03:06 23 the reasons back when we got that letter in 2006, you  
03:06 24 know, we looked at this and we just decided the patent  
03:06 25 must not be valid? Nobody. Nobody has come to explain

03:06 1 to you any reason whatsoever that Microsoft can offer  
03:06 2 why it chose, after getting that letter or getting that  
03:06 3 notice from the Patent Office how it formed any kind of  
03:06 4 reasonable belief that it was not infringing a valid  
03:06 5 patent.

03:06 6           If you believe that Microsoft's  
03:06 7 infringement was willful, then when the time comes to  
03:07 8 answer the jury questions as to the '135, you should  
03:07 9 answer yes, and as to the '180, you should answer yes.

03:07 10           So that brings us to the third question  
03:07 11 Judge Davis will ask you to consider: Are the patents  
03:07 12 invalid?

03:07 13           Now here the situation is a little  
03:07 14 different because as Judge Davis has told you several  
03:07 15 times, it's Microsoft's responsibility to show you that  
03:07 16 the patent is invalid and to do so by clear and  
03:07 17 convincing evidence. Now why is that? Judge Davis has  
03:07 18 explained it to us.

03:07 19           On the very first day of the trial, he  
03:07 20 read you some instructions and here's what he said. He  
03:07 21 said that the granting of a patent by the United States  
03:07 22 Patent & Trademark Office, however, carries with it the  
03:07 23 presumption that the patent is valid.

03:07 24           However, the granting of a patent by the  
03:07 25 Patent & Trademark Office carries with it the



03:07 1 presumption that the patent is valid. This is another  
03:08 2 place in the same instruction he said that sentence.  
03:08 3 The presumption of patent validity imposes the burden on  
03:08 4 Microsoft to prove invalidity by the clear and  
03:08 5 convincing evidence standard.

03:08 6 In other words, what you've heard is that  
03:08 7 because the United States Patent Office spent more than  
03:08 8 two years examining the first patent and more than seven  
03:08 9 years studying and examining the '180 patent, there is a  
03:08 10 presumption that they did their job properly.

03:08 11 Judge Davis told you just today an issued  
03:08 12 patent is accorded a presumption of validity based on  
03:08 13 the presumption that the United States Patent &  
03:08 14 Trademark Office acted correctly in issue a patent.

03:08 15 So the question on this issue No. 3,  
03:08 16 invalidity, really is what has Microsoft done and shown  
03:08 17 you to convince you by clear and convincing evidence  
03:09 18 that Microsoft should not be required to pay fair value  
03:09 19 for their use of this invention.

03:09 20 Well, they'll tell you, of course, that  
03:09 21 the patent is invalid, and the first reason they'll give  
03:09 22 you is the Windows NT system using AutoDial, that did it  
03:09 23 first. That did it back in 1996, and indeed we'll bring  
03:09 24 you in a demonstration and show you.

03:09 25 Well, let's talk about that demonstration

03:09 1 you saw. The three computers, the three beige computers  
03:09 2 over here and the one beige computer here and under the  
03:09 3 table.

03:09 4           The first thing we noticed on  
03:09 5 cross-examination was that sticker we've heard about  
03:09 6 that said Windows 2000 Professional on it. Now you've  
03:09 7 heard testimony that that's just a sticker on the  
03:09 8 outside of the computer. It doesn't necessarily tell  
03:09 9 you anything about the date of the software that's  
03:09 10 inside the computer, but it was the first red flag that  
03:09 11 maybe things weren't really like Microsoft was telling  
03:10 12 you they are.

03:10 13           So the next thing I did was to ask  
03:10 14 Mr. Pall to go into the computer and to open up some  
03:10 15 critical software called the BIOS, the basic  
03:10 16 input/output system. You remember that he testified to  
03:10 17 you that without the BIOS, without that software, the  
03:10 18 computer would not work. Without that software the  
03:10 19 system that you saw demonstrated by Mr. Pall could not  
03:10 20 be built.

03:10 21           And do you remember when I asked him to  
03:10 22 push the right buttons and pull up the right  
03:10 23 information, he had to admit to you that that software  
03:10 24 on the computer that he told you was from 1996 was dated  
03:10 25 July 2000. Six months after the patent was filed.

03:11 1 But we didn't stop there. Mr. Wicker testified about  
03:11 2 this feature in that demonstration called AutoDial and  
03:11 3 here's what he told you. He says that AutoDial only  
03:11 4 reconnects a user. Do you agree with that?

03:11 5 His answer: Reconnect -- yes. I would say it  
03:11 6 reconnects in the sense that you have to have it  
03:11 7 connected once before at some point in time.

03:11 8 Question: And its only function is to  
03:11 9 reconnect to a user, right?

03:11 10 Yes, that's correct.

03:11 11 Question: We don't know how that VPN was  
03:11 12 initiated for the first time, do we?

03:11 13 Answer: No.

03:11 14 When Mr. Pall sat here and told you that  
03:11 15 with one click he was connecting to a VPN, remember, the  
03:11 16 way Microsoft supposedly did it in 1996, what he didn't  
03:11 17 tell you was, that was a reconnection that he or  
03:12 18 Microsoft's lawyers had to do it for the first time a  
03:12 19 different way.

03:12 20 And my question, ladies of the jury is,  
03:12 21 why didn't they show you what they had to do to make  
03:12 22 that first connection? And I'll suggest to you, because  
03:12 23 it would look a lot like what Dr. Short spent about 20  
03:12 24 long minutes explaining to you how difficult it was to  
03:12 25 do it -- not in the reconnection, but the first time.

03:12 1 But there's more.

03:12 2           You'll remember that one of the claims of  
03:12 3 the '135 patent says that part of the invention is that  
03:12 4 the DNS request, the domain name service request that  
03:12 5 gets typed in and you hit the one click, that has to  
03:12 6 determine whether the user is looking for a secure site  
03:12 7 or just a regular site.

03:13 8           That determining step was something  
03:13 9 Mr. Pall was asked about. Isn't it true, don't you  
03:13 10 agree, Mr. Pall, that the system you're demonstrating is  
03:13 11 not determining whether the VPN DNS request transmitted  
03:13 12 is requesting access to a secure website?

03:13 13           And by that time he had to admit, the  
03:13 14 system is not determining that specifically, sir. The  
03:13 15 system from 1996, that supposedly means that Microsoft  
03:13 16 did it before these inventors, it didn't do what they  
03:13 17 invented. And Mr. Pall admitted it right here.

03:13 18           And finally on this subject of the  
03:13 19 Microsoft NT with AutoDial, this is how Mr. Wicker did  
03:13 20 his study to tell you about the source code, the  
03:13 21 computer code for that AutoDial and NT product.

03:14 22           You remember he told you that he studied  
03:14 23 that code and he says here that the key source code  
03:14 24 relating to Microsoft Windows NT 4 is what he studied,  
03:14 25 that's the product we're talking about from 1996, NT 4.

03:14 1 And now down here he lists one of the pieces of source  
03:14 2 code he looked at, sure enough, Windows 4. That's the  
03:14 3 NT 4 product.

03:14 4 But you remember when Mr. McLeroy asked  
03:14 5 him questions on cross-examination and he said flip  
03:14 6 about halfway through that big fat stack of computer  
03:14 7 code, and what we found was he slipped in Windows NT 5.  
03:14 8 Different software.

03:14 9 When Mr. Wicker -- Dr. Wicker testified to  
03:14 10 you that NT 4 did it all, they did the invention before  
03:14 11 Mr. Munger and Mr. Short, he didn't tell you that he  
03:14 12 mixed and matched that software and later software in  
03:14 13 order to be able to come to that conclusion.

03:15 14 Well, if you won't buy, says Microsoft,  
03:15 15 that Windows NT AutoDial makes the patents invalid, how  
03:15 16 about DVPN? Well, DVPN was a product that DARPA, this  
03:15 17 government agency, paid to have developed. It was --  
03:15 18 something was demonstrated exactly once in March of  
03:15 19 1998. But the question is what really got demonstrated?  
03:15 20 What clear and convincing evidence have you seen and  
03:15 21 heard to tell you what happened at that demonstration?

03:15 22 Well, you heard from one man who was  
03:15 23 there, Mr. Sami Saydjari. He's the man that Microsoft  
03:15 24 was paying \$475 an hour. He was asked, Do you have any  
03:15 25 recollection of whether the DVPN system used in the --

03:15 1 used the DNS request to trigger a VPN? Remember that?  
03:15 2 That's the basis of the invention you use the DNS  
03:16 3 request to trigger the VPN.

03:16 4 He said, I don't have a specific  
03:16 5 recollection, but given my recollection of the coalition  
03:16 6 manager, the CM being centrally involved, I would doubt  
03:16 7 that they would use the DNS call to trigger. He doubts  
03:16 8 that that even worked that away.

03:16 9 So what else has done -- has Microsoft  
03:16 10 done to bring you clear and convincing evidence? Well,  
03:16 11 they and VirnetX told you about one man who wrote the  
03:16 12 computer code for DVPN and who went to that  
03:16 13 demonstration and actually demonstrated it. He's the  
03:16 14 man who knows what was in it. He's the man who knows  
03:16 15 what parts of it were actually demonstrated to the  
03:16 16 public.

03:16 17 His name is Domenic Turchi. He was from  
03:16 18 Maryland we knew from some documents. So you heard that  
03:16 19 Mr. McLeroy, when he entered his name the search  
03:17 20 request, found Domenic Turchi, Jr., in Maryland, his  
03:17 21 phone number, his address. And if you click on this  
03:17 22 link right here, it'll even give you a map to his house.  
03:17 23 But Microsoft didn't bring Mr. Turchi here to testify to  
03:17 24 you.

03:17 25 Remember, it's Microsoft, with Microsoft's

03:17 1 resources, who bears the burden of trying to convince  
03:17 2 you that somebody else did this first and to convince  
03:17 3 you by clear and convincing evidence.

03:17 4 I would respectfully suggest to you that  
03:17 5 on this DVPN, the combination of Mr. Saydjari saying I  
03:17 6 don't really remember how it triggered, and Microsoft  
03:17 7 bringing no one else who can tell you what happened in  
03:17 8 that demonstration is a failure of their obligation to  
03:18 9 prove that to you.

03:18 10 Well, if you haven't bought Windows NT  
03:18 11 with AutoDial and you haven't bought DVPN, they've got  
03:18 12 more. How about Aventail. Maybe you'll believe that  
03:18 13 that should make the patents invalid.

03:18 14 Dr. Jones, though, you'll remember, just  
03:18 15 this morning testified that Aventail is a point-to-point  
03:18 16 technology. One computer to one computer, not a  
03:18 17 network-to-network technology.

03:18 18 And Mr. Pall testified, You agree,  
03:18 19 therefore, that a VPN is more than just a point-to-point  
03:18 20 connection?

03:18 21 And then here was some evidence on another  
03:18 22 issue about Aventail. Secure domain names. The patent  
03:18 23 required that there be secure domain names. Aventail  
03:18 24 doesn't use them. Didn't use the standard domain names.

03:18 25 Well, Dr. Wicker was asked about this, and

03:19 1 I have to say I believe and I'm going to suggest to you  
03:19 2 that in an effort to try and salvage his argument that  
03:19 3 Aventail renders the patents invalid, he said, well,  
03:19 4 yeah, Aventail uses standard domain names but they can  
03:19 5 overlap with secure domain names so they may be the same  
03:19 6 thing.

03:19 7 But Dr. Johnson for Microsoft was asked  
03:19 8 the same question, and he said no, they can't. They  
03:19 9 don't overlap. Microsoft's Dr. Wicker says yes,  
03:19 10 Microsoft's. Dr. Johnson says no.

03:19 11 Now, ladies of the jury, you may be asking  
03:19 12 yourself, well, how are we supposed to know? I mean --  
03:19 13 I mean, these two men are experts. A week ago some of  
03:19 14 us had never heard of domain names and standard and  
03:19 15 secure. How are we supposed to resolve one -- one says  
03:19 16 yes and one says no?

03:19 17 I will suggest to you, ladies of the jury,  
03:20 18 Judge Davis will tell you how. He's already told you  
03:20 19 there's a presumption of that the valid patent. And  
03:20 20 unless Microsoft proves different to you by clear and  
03:20 21 convincing evidence, you should find the patent is not  
03:20 22 invalid.

03:20 23 And I will finally suggest to you that  
03:20 24 this kind of contradiction between Microsoft's own  
03:20 25 experts is nothing like clear or convincing evidence.



03:20 1 If, after considering the evidence, you  
03:20 2 find that Microsoft has failed to prove to you that the  
03:20 3 patents are invalid by clear and convincing evidence,  
03:20 4 then on column 3, under Invalidity, you should answer  
03:20 5 no, the patents are not invalid as to the 135; and no,  
03:20 6 the patents are not invalid as to the 180.

03:21 7 Now that brings us to the last of the four  
03:21 8 questions that Judge Davis is going to ask you to  
03:21 9 consider. How much is VirnetX entitled to as a  
03:21 10 reasonable royalty?

03:21 11 This is the summary of the work that  
03:21 12 Mr. Reed did as he testified to you at some length about  
03:21 13 how he arrived at a total reasonable royalty of \$242  
03:21 14 million.

03:21 15 Now I'll go through this a little more in  
03:21 16 a minute to point out some specific matters to you that  
03:21 17 you might want to keep in mind. But let's talk about  
03:21 18 what Microsoft says to you: No, you -- there should be  
03:21 19 very little royalty for this invention.

03:21 20 Dr. Ugone, who you heard testify for  
03:21 21 Microsoft this morning, says IT shouldn't be anymore  
03:21 22 than \$15 million. Well, why do they say that that's so?

03:21 23 Well, first of all, they say what about  
03:21 24 all the failures. Remember the businesses that weren't  
03:22 25 interested in this invention and all the work that

03:22 1 Mr. Munger did, all those failures show this isn't worth  
03:22 2 anything.

03:22 3           You know, when I heard that, I couldn't  
03:22 4 help but remember back to an earlier time in my life,  
03:22 5 and I'll take just a minute to share it with you.

03:22 6           It was when I was in junior high. I was  
03:22 7 in the seventh grade. You remember I told you I grew up  
03:22 8 in Arlington and back then there were no big stadiums,  
03:22 9 no Six Flags, and the junior high that I went to was so  
03:22 10 small that they had one football team for the seventh  
03:22 11 and eighth graders.

03:22 12           And I'm new to junior high, so I decided  
03:22 13 to go out for the football team that year. And I was a  
03:22 14 lot smaller then than I am now and a lot skinnier, and I  
03:22 15 learned that I was just about the smallest kid who was  
03:22 16 going out for football.

03:22 17           Well, after a couple of days of that, I  
03:22 18 decided I was going to quit. So, I went home and my  
03:22 19 grandfather was there, and this was the kind of thing  
03:23 20 that I'd usually share with him. So I told him, I'm --  
03:23 21 I'm not going out for football. Football is boring.  
03:23 22 The coaches are stupid. I don't want to do it.

03:23 23           Well, as was his way, he didn't argue with  
03:23 24 me, he didn't give me any advice, he just sat there and  
03:23 25 after minute, he said to me son, a little man can beat a

03:23 1 big man if the little man's tough and keeps on comin'.  
03:23 2 Well, I took that advice to heart, and I was on the  
03:23 3 football team that year.

03:23 4 But I have to say that that reminded me of  
03:23 5 Mr. Munger and Dr. Short.

03:23 6 After they conceived of this invention,  
03:23 7 they went out and tried to raise money from venture  
03:23 8 capitalists. Mr. Munger talked on the road day after  
03:23 9 day to more than 30 investors and they all said no, but  
03:24 10 he kept on comin'.

03:24 11 Then he went off to some companies like  
03:24 12 Amazon, like J.P. Morgan, like others you've heard about  
03:24 13 in the proposal. Why don't we do this, why don't you  
03:24 14 invest money and we'll show you how to do it. They said  
03:24 15 no, we can do things ourselves. We're -- we don't --  
03:24 16 we're not interested. He kept on comin'.

03:24 17 He went to government agencies that you  
03:24 18 heard about, Homeland Security, others. Couldn't get  
03:24 19 them interested at that time. He kept on comin'. His  
03:24 20 own company decided they could no longer continue to  
03:24 21 fund the development. He got a license from the company  
03:24 22 called SafeNet, but they were required to spend a lot of  
03:24 23 money to develop the product and they decided they  
03:24 24 wouldn't do it. He kept on comin'.

03:24 25 By this time five years had gone by, and

03:25 1 Mr. Munger, pretty much by accident, discovers that  
03:25 2 Microsoft is already using his invention. And I'll  
03:25 3 suggest to you that at that point, he, Dr. Short, and  
03:25 4 others basically had two choices. One choice was they  
03:25 5 could contact Microsoft and propose a reasonable  
03:25 6 arrangement where Microsoft would pay them fair value  
03:25 7 for using the invention. Well, they did that.

03:25 8           The reason we're here today is Microsoft  
03:25 9 refused to pay fair value for the invention. The only  
03:25 10 other choice they had was to file a lawsuit against the  
03:25 11 largest software company in the world. And these two  
03:25 12 men have battled through three long years of litigation  
03:25 13 until they finally get to come to this day when they can  
03:26 14 present their case to eight jurors in Tyler, Texas.

03:26 15           Ladies and Gentlemen [sic], Microsoft may  
03:26 16 call these two men failures. I call them tough.

03:26 17           Now, what does Microsoft have to say about  
03:26 18 the value of this invention that supposedly no one  
03:26 19 wanted? Well, you saw this document.

03:26 20           Microsoft says, We believe unified  
03:26 21 communications which is -- depends on these inventions  
03:26 22 will transform business in the coming decade in the same  
03:26 23 way e-mail changed the business landscape of the 1990s.  
03:26 24 Here's a document from 2001 saying that, RTC which  
03:26 25 you've heard uses the invention, is one of the top five

03:26 1 reasons to buy Windows XP, Microsoft's new flagship  
03:26 2 operating system product.

03:26 3           In 2007, Microsoft said, For Windows  
03:27 4 peer-to-peer is a natural destiny. With market leading  
03:27 5 install base of clients, Windows can create the largest  
03:27 6 P2P systems. Over the past several years, we've been  
03:27 7 working to realize that P2P destiny. A destiny that  
03:27 8 depends on their use of these inventions.

03:27 9           In August of 2006, they said that Meeting  
03:27 10 Space -- you remember you heard that product described  
03:27 11 and you heard how it uses the invention -- is being  
03:27 12 positioned by marketing as one of the top enterprise  
03:27 13 features for Vista client.

03:27 14           Ladies of the jury, Microsoft thought this  
03:27 15 invention was very important.

03:27 16           Here's the back of the box of Windows  
03:27 17 Vista Operating System. You may remember that this was  
03:27 18 the hot new Microsoft product from about 18 months ago.  
03:27 19 On the back of the box this home edition, it lists seven  
03:27 20 reasons why you, the person looking at this box and  
03:28 21 trying to make a decision, should decide to buy this  
03:28 22 product. And one of those seven is you can collaborate  
03:28 23 and share documents with Windows Meeting Space, a  
03:28 24 feature that depends on this invention.

03:28 25           Well, the invention, I'd suggest to you,

03:28 1 hasn't been a failure at all. Microsoft has made a  
03:28 2 great success of it and has made an enormous amount of  
03:28 3 money from using it.

03:28 4 Well, what else will Microsoft tell you  
03:28 5 about why you should award only a little royalty. Well,  
03:28 6 they'll say the damages haven't been apportioned.  
03:28 7 There's lots of features in this complex software and  
03:28 8 you haven't accounted for all of those.

03:28 9 Well, here's the slide you saw from  
03:28 10 Mr. Reed setting forth in a lot of detail how he  
03:28 11 apportioned the money that Microsoft made from selling  
03:28 12 these products, 48 billion, down to 33 billion for some  
03:29 13 features in the software that he could say definitely  
03:29 14 had nothing to do with the invention, down to 30 billion  
03:29 15 from Microsoft's market size and contribution.

03:29 16 Then he arrived at the opinion that not 20  
03:29 17 percent like the SafeNet license but only 1 percent per  
03:29 18 patent would be a fair royalty.

03:29 19 But he didn't stop there. He said that  
03:29 20 because this tree of invention was still growing back in  
03:29 21 2003, it would really be fair only to start off at  
03:29 22 one-third of 1 percent growing to two-thirds of one  
03:29 23 percent per patent in 2008. What he's telling you then  
03:29 24 is he has apportioned down to what this invention is  
03:29 25 worth down to one-third of a penny per patent for the

03:29 1 money that Microsoft has made from the invention.

03:30 2 He explained to you here that if he hadn't  
03:30 3 done that, if he hadn't made that apportionment, the  
03:30 4 number he would have told you was reasonable was \$704  
03:30 5 million instead of the number he told you was  
03:30 6 reasonable, 242.

03:30 7 Well, finally Microsoft will tell you,  
03:30 8 okay, if you don't buy failure and you don't buy not a  
03:30 9 portion, how about lump sum. Maybe you'll believe that  
03:30 10 the parties would only have agreed to a lump sum. But  
03:30 11 you see, the thing about that is, what Mr. Reed  
03:30 12 explained to you is if Mr. Munger and Microsoft had set  
03:30 13 down at the table in 2003 and Microsoft had said, okay,  
03:30 14 we're not going to pay you as we go, we're just going to  
03:30 15 pay you one sum today, not just for today and not just  
03:30 16 from tomorrow, but all the way to the end of the life of  
03:30 17 this patent, that's what it would have taken to do that  
03:31 18 deal. And Mr. Reed explained to you that number would  
03:31 19 have been something like \$942 million.

03:31 20 Now, he didn't suggest to you that that's  
03:31 21 the amount you should award as a reasonable royalty. He  
03:31 22 suggests to you that because it would take so much money  
03:31 23 to compensate VirnetX and the inventors for the entire  
03:31 24 life of the patent, that Microsoft would have agreed and  
03:31 25 Mr. Munger would have agreed to a pay-as-you-go running

03:31 1 royalty deal.

03:31 2 Now, for those of you who -- who are  
03:31 3 accustomed to dealing with numbers on the page, here's  
03:31 4 how Mr. Reed arrived at the separate damages figure.  
03:31 5 First of all, on this top line, he calculated the '135  
03:31 6 damages, that's right here, for Windows XP Vista, and  
03:31 7 the '135 for Microsoft LCS/OCS. So the sum of these two  
03:32 8 numbers represents the total damages for the '135  
03:32 9 patent. That's \$158,700,000. I'll show you that number  
03:32 10 again in a second.

03:32 11 For the '108 patent, that's not implicated  
03:32 12 by these Microsoft Products, so the '180 patent is  
03:32 13 \$83,600,000.

03:32 14 Ladies of the jury, if you refuse to be  
03:32 15 led off the path of fair value by Microsoft's many  
03:32 16 arguments, and if you believe the testimony of Mr. Reed  
03:32 17 and others as to the amount that is a fair and  
03:32 18 reasonable royalty for the use of these patents, then  
03:32 19 the damages for the '135 patent would be \$158,700,000,  
03:33 20 and for the '180 patent \$83,600,000?

03:33 21 THE COURT: You have 10 minutes left, Mr.  
03:33 22 Cawley.

03:33 23 MR. CAWLEY: Thank you, Your Honor.

03:33 24 Ladies and gentlemen [sic] of the jury,  
03:33 25 Judge Davis has told me that I have 10 minutes left.



03:33 1 And the rules of these lawsuits that Judge Davis runs  
03:33 2 herd over so well allow me to save those 10 minutes so  
03:33 3 that I can come back and talk to you again just for  
03:33 4 those 10 minutes at the very end of this argument.

03:33 5 I'll tell that when I do that, I'm going  
03:33 6 to want to go back through these four questions that  
03:33 7 Judge Davis is going to ask you so that we can review  
03:33 8 one last time the evidence that you may find is  
03:33 9 important in making your decision. Thank you.

03:34 10 THE COURT: All right. Counsel for  
03:34 11 Microsoft.

03:34 12 MR. POWERS: Thank you, Your Honor.

03:34 13 MR. SAYLES: May I move these and give  
03:34 14 some room to Mr. Powers?

03:34 15 THE COURT: Yes, you may.

03:34 16 MR. POWERS: May I proceed, Your Honor?

03:34 17 THE COURT: Yes, you may.

03:34 18 MR. POWERS: Good afternoon.

03:34 19 This is a lawsuit that never should have  
03:34 20 been brought. The reason is the facts don't support it.  
03:34 21 Judge Davis told you at the very beginning of the case  
03:34 22 and he also told you again now that what should guide  
03:34 23 your decision in the case are the facts, the facts that  
03:34 24 are relevant to the issues he's asked you to decide, not  
03:34 25 emotion, not prejudice, not anything like that, but the

03:35 1 facts relevant to the issues he's asked you to decide.  
03:35 2 And those facts suggest this lawsuit should never have  
03:35 3 been brought.

03:35 4           As I sat listening to the witnesses  
03:35 5 testify, it occurred to me that there were three things  
03:35 6 that were happening, and those three things I wanted to  
03:35 7 summarize for you because they were helpful to me in  
03:35 8 organizing my thoughts about the case.

03:35 9           The first is that this case, unlike many  
03:35 10 others, is really about the difference between people's  
03:35 11 hopes and the reality. There's no doubt that Mr. Munger  
03:35 12 and Dr. Short hoped that they had solved the problem of  
03:35 13 the internet.

03:35 14           That's what they testified they thought  
03:35 15 they did. The reality is quite different. They're  
03:35 16 asking you to pay them as if they had solved that  
03:35 17 problem.

03:35 18           A second thought that occurred to me when  
03:35 19 I was listening to particularly the cross-examination of  
03:36 20 Microsoft witnesses was the difference between words and  
03:36 21 facts. And I'm going to show you some examples of that  
03:36 22 as well.

03:36 23           There's a lot of words that have been  
03:36 24 thrown around this courtroom, but the facts that are  
03:36 25 relevant to your decision I'm going to summarize in a

03:36 1 way that we think is relevant and ask you to decide  
03:36 2 based on those.

03:36 3           And last but not least is the question of  
03:36 4 distractions versus the real issues. You'll recall that  
03:36 5 Mr. Cawley, at the very beginning of his opening  
03:36 6 statement, put a picture of a sign post up with the  
03:36 7 distractions. I'm going to come back to and put it up  
03:36 8 on the screen and see how distracting they were.

03:36 9           Now let's talk about hope versus reality.  
03:36 10 This is from the opening statement by counsel for  
03:36 11 VirnetX, and he said they solved the problem of secure  
03:36 12 communications over the internet.

03:36 13           That was the hope. They thought they  
03:36 14 might have done that, but they didn't. How do we know  
03:36 15 they didn't? Because that is a real problem. It always  
03:36 16 has been and always will be.

03:37 17           And if you truly, truly solve that problem  
03:37 18 once and for all better than everybody else that did,  
03:37 19 that would be worth money. But we know that, in fact,  
03:37 20 everybody who looked at their technology said this  
03:37 21 doesn't do that. That may be your hope, but it's not  
03:37 22 the reality.

03:37 23           The CIA, who looked at their own  
03:37 24 invention, got the source code and said: Nope, we're  
03:37 25 not funding it anymore. Why? Because the product has

03:37 1 not lived up to expectations. That was the CIA's or  
03:37 2 In-Q-Tel's own analysis after looking at the source  
03:37 3 code.

03:37 4 High hopes before they looked at the  
03:37 5 product; rejection afterwards. And they actually use  
03:37 6 some pretty harsh words. The President -- the CEO of  
03:37 7 that group called it: The living dead category. And  
03:37 8 for that living dead, the product not living up to its  
03:37 9 expectations, they want \$242. The CIA wouldn't even  
03:37 10 give them two.

03:38 11 Their own company, SAIC, they knew exactly  
03:38 12 what this was worth. They say: We're not going to  
03:38 13 pull -- we're going to pull the plug. We're not going  
03:38 14 to fund you at all.

03:38 15 If it were really worth \$242 million,  
03:38 16 don't you think they would have invested the seven that  
03:38 17 Mr. Munger asked for? They knew what it was worth.  
03:38 18 They pulled the plug.

03:38 19 Venture capitalists, they were in the  
03:38 20 business of making money funding people who have great  
03:38 21 ideas. They talked to 32 of them. All 32 said no.

03:38 22 They talked to the CIA, the FBI, Homeland  
03:38 23 Security, each of which had a free license to these  
03:38 24 patents, free, and they still said no.

03:38 25 They talked to companies who are

03:38 1 interested in internet security, desperately interested  
03:38 2 in it. If this product with their technology really had  
03:39 3 any value, somebody, somebody would have funded it.  
03:39 4 Somebody would have bought it. It didn't. That's the  
03:39 5 reality.

03:39 6 The hope was they had done something  
03:39 7 great. The reality was very, very different.

03:39 8 SafeNet was the very last possibility.  
03:39 9 Remember that? They had gone through 2001 and SafeNet  
03:39 10 finally says: Well, we'll take a license, but we want  
03:39 11 to look at the source code first and really see if this  
03:39 12 is worth it.

03:39 13 When they got the source code and looked  
03:39 14 at it, they said: Well, it doesn't really accomplish  
03:39 15 any simplicity. It just moves that complexity around.  
03:39 16 SafeNet terminates the license, pays nothing. The  
03:39 17 reality is what they're asking you to give them \$242  
03:39 18 million for.

03:39 19 Everybody who has looked at their  
03:39 20 technology closely, who had the technical expertise to  
03:39 21 evaluate it, who had the economic motivation to invest  
03:39 22 in it or buy it because it would be worth a lot of money  
03:39 23 if it really worked, all of those people said no.  
03:40 24 That's the reality.

03:40 25 Now, what excuses have we heard for that?

03:40 1 Well, the first was: Well, September 11th changed  
03:40 2 everything. Nobody was going to invest in this type of  
03:40 3 technology anymore.

03:40 4 Well, it turns out it was the opposite.  
03:40 5 In fact, in a memo that Dr. Short had talked about, he  
03:40 6 admitted that, in fact, September 11th increased the  
03:40 7 demand. As an article they were circulating around  
03:40 8 internally said: They're jamming the pedal to the metal  
03:40 9 on spending for information security. It didn't slow it  
03:40 10 down; it sped it up.

03:40 11 So that excuse didn't work. What was the  
03:40 12 next excuse? Well, we're in a recession. Remember you  
03:40 13 heard that from both Mr. Short and Mr. Munger. But that  
03:40 14 recession didn't stop Aventail from getting funded.  
03:40 15 They were funded in October of 2001, not only after  
03:40 16 9/11, but right in the middle of the very recession  
03:40 17 these guys were talking about.

03:40 18 And they were not just funded by anybody.  
03:41 19 They got \$7 million from Mr. Munger and Dr. Short's  
03:41 20 employer, SAIC.

03:41 21 So the best analysis of reality that you  
03:41 22 can have is SAIC knew the facts back in 2001. They knew  
03:41 23 which technology was valuable. They knew which  
03:41 24 technology was first.

03:41 25 Mr. Munger asked \$7 million. SAIC said

03:41 1 no, even though it was their own project that they had  
03:41 2 already invested something in. They took that 7 million  
03:41 3 and gave to it Aventail, which was first and worked.

03:41 4           So it wasn't the recession. It wasn't  
03:41 5 9/11. So what's the next excuse? Well, the next  
03:41 6 question that's been given is: Well, we can't compete  
03:41 7 if Microsoft is out there. You heard that from almost  
03:41 8 everybody.

03:41 9           Well, the problem with that is timing. As  
03:41 10 Ronald Reagan once said, facts is stubborn things, and  
03:41 11 the timing just doesn't work. They ran out of money in  
03:42 12 October of 2001. The products they're complaining about  
03:42 13 competing with them didn't happen until 2003, two years  
03:42 14 later. Facts are stubborn things.

03:42 15           Now, we're not saying, as Counsel  
03:42 16 suggested, that these men are failures. No. They  
03:42 17 succeeded with Global Hawk. They succeeded with many  
03:42 18 things in their lives. We're saying this technology  
03:42 19 failed.

03:42 20           And that's okay. As I said in opening  
03:42 21 statement, there's no shame in having a project that you  
03:42 22 worked on fail. It happens to companies all over the  
03:42 23 place. It happens at Microsoft. We've had some  
03:42 24 clunkers over the years as well.

03:42 25           But what you're supposed to do then, as I

03:42 1 said in opening statement, is pick yourself back up and  
03:42 2 go make something people want. Go make something that  
03:42 3 works. That's what Mr. Pall did.

03:42 4 Mr. Munger and Dr. Short, instead of being  
03:42 5 in this courtroom, should be back working on something  
03:42 6 that works that people want. Then they'll get paid.  
03:43 7 Then they'll get money, because that's the way the  
03:43 8 system is supposed to work.

03:43 9 Words versus facts. Well, you saw them  
03:43 10 point to this word anonymous, and say, well, obviously,  
03:43 11 it's anonymous. No, no. That's not a fact; that's a  
03:43 12 word.

03:43 13 The fact, according to their own expert,  
03:43 14 is that that hacker, using our products, would know  
03:43 15 which computer is talking to which other computer. Not  
03:43 16 anonymous at all. Words versus facts.

03:43 17 Another word, they say: Well, Microsoft  
03:43 18 changed its website from serverless DNS. Is serverless  
03:43 19 DNS a requirement of the claims? No. Secure domain  
03:43 20 name service is a requirement. And we're not arguing  
03:43 21 about that. That's just words. Not a fact that's  
03:43 22 relevant.

03:43 23 Rejected. You heard Mr. Cawley talk about  
03:43 24 this: That Microsoft's patent was rejected based on  
03:44 25 Mr. Munger's patent in the Patent Office. Well, it



03:44 1 turns out later it was actually allowed. The Patent  
03:44 2 Office gave Microsoft the very patent that they were  
03:44 3 talking about.

03:44 4 The next thing I want to talk is  
03:44 5 distractions versus real issues. And this is actually a  
03:44 6 very central theme of this case. Mr. Cawley set this  
03:44 7 theme in his very initial opening statement. And he  
03:44 8 showed you this slide, and he said: These are  
03:44 9 Microsoft's distractions.

03:44 10 Well, no infringement, that's the very  
03:44 11 first question you're being asked to decide on the  
03:44 12 verdict form. That's a distraction? That's what they  
03:44 13 have to prove.

03:44 14 Not willful. That's the second on your  
03:44 15 verdict form. That's what they have to prove.

03:44 16 Third supposed distraction invalidity?  
03:44 17 Well, that's exactly the next issue on your verdict  
03:44 18 form. That's not a distraction. Those issues that he  
03:44 19 accused us of raising are the issues that they have to  
03:44 20 prove and that you have to decide. Those aren't  
03:44 21 distractions.

03:44 22 Fourth issue, that the patents aren't  
03:45 23 valuable. That goes directly to the fourth question,  
03:45 24 damages. How much is it worth?

03:45 25 So these supposed distractions for

03:45 1 Microsoft are exactly the four issues you have to  
03:45 2 decide. But there are distractions in this case, and I  
03:45 3 want to talk about a few of them.

03:45 4           The first is exactly the one that  
03:45 5 Mr. Cawley just referenced in his closing argument.  
03:45 6 Remember, Dr. Short, who got up in front of you and  
03:45 7 marked up all over the board, he was saying that he went  
03:45 8 out and investigated the ways that you could do remote  
03:45 9 access.

03:45 10           Remember our remote user? And he used  
03:45 11 this slide over here. Let's talk about it. He said: I  
03:45 12 looked at how people used remote users to contact and I  
03:45 13 found out that they're very complicated. And then he  
03:45 14 spent, as Mr. Cawley said, 20 more minutes marking up  
03:45 15 all of that.

03:45 16           Now, you would expect that if he spent  
03:45 17 that time, that he was talking about a product that was  
03:45 18 designed for exactly this situation, for a remote user.

03:45 19           This is his markup that he did  
03:46 20 extensively. It turns out, when you look at the product  
03:46 21 that he was marking up, it says that it's not supported  
03:46 22 for client remote access, VPN. That's not what it's  
03:46 23 for.

03:46 24           So he was criticizing a product for not  
03:46 25 being good for a purpose for which it was not designed,

03:46 1 and he knew it.

03:46 2 Now, there's another product that is  
03:46 3 designed for remote access that he could have looked at  
03:46 4 but didn't, and that was exactly the product that  
03:46 5 Mr. Pall described and demonstrated to you, which was  
03:46 6 PPTP.

03:46 7 It had come out four years earlier, and  
03:46 8 it's specifically designed for remote access and remote  
03:46 9 users. Did he mark up the user's manual for PPTP in  
03:46 10 front of you? No. He chose something called IP SEC  
03:46 11 that wasn't designed for it at all. That is a  
03:46 12 distraction.

03:46 13 The fact is, we weren't arguing that IP  
03:46 14 SEC was a relevant piece of prior art here. We weren't  
03:47 15 arguing that that's what you should consider, the old IP  
03:47 16 SEC. We were saying look at PPTP.

03:47 17 He didn't choose to mark that up. Why?  
03:47 18 Well, because it's easy. PPTP is easy of use -- easy to  
03:47 19 use, the easiest way to do it. He demonstrated with one  
03:47 20 click. That's why he didn't demonstrate that or  
03:47 21 criticize it, because he couldn't. That's why what he  
03:47 22 did do was an attempt to distract from the facts that  
03:47 23 are relevant to your decision.

03:47 24 Now, you've heard Mr. Cawley say: Well,  
03:47 25 PPTP has a user's manual that's 25 pages long. So is

03:47 1 theirs. That's the difference that Mr. Pall pointed out  
03:47 2 between the mechanic and the driver.

03:47 3           The mechanic has to look at a thick user's  
03:47 4 manual for any of this product. The issue is, how easy  
03:47 5 it is for the driver. Mr. Pall showed that with one  
03:47 6 click, 1996, four years before their invention.

03:47 7           The VPN connection can be set up and  
03:48 8 activated from one easy AutoDial phone book entry.  
03:48 9 Click on that entry, and you're done. They didn't  
03:48 10 criticize that. They didn't demonstrate that.

03:48 11           Other distractions that you've heard a lot  
03:48 12 about from the VirnetX side of this case, scud missiles,  
03:48 13 Global Hawk, FBI antiterrorism.

03:48 14           We applaud whatever work they've done in  
03:48 15 this area. They're not relevant to this case. They  
03:48 16 didn't invent anything relevant to this case with all of  
03:48 17 that. Yet they've spent a lot of their precious, scarce  
03:48 18 time talking about all of that.

03:48 19           The Windows 2000 sticker. Mr. Cawley  
03:48 20 still talked about it in closing argument. Remember he  
03:48 21 made Mr. Pall get down on his hands and knees. He made  
03:48 22 Ms. Weiswasser move out so that we could all huddle  
03:48 23 around and look at this 2000 sticker.

03:48 24           And then you heard their expert, their  
03:48 25 technical expert, Dr. Jones, say, well, that sticker

03:48 1 didn't mean anything. Why? Because you can look right  
03:48 2 on the monitor and see that the actual software running  
03:48 3 was 1996. That sticker was an older stick in an old  
03:49 4 box.

03:49 5 Dr. Jones admitted that in front of you  
03:49 6 today. And he knew it, and their lawyer knew it, but  
03:49 7 they chose to make everybody go down on the ground and  
03:49 8 look at a sticker that meant nothing. That's a  
03:49 9 distraction.

03:49 10 The facts are it was 1996 software. He  
03:49 11 talked about BIOS. Dr. Wicker explained how that  
03:49 12 doesn't affect 1996 software at all. The software was  
03:49 13 1996. Dr. Wicker said it. Dr. Jones said it. The  
03:49 14 lawyers' arguments don't change those facts.

03:49 15 The next distraction was consulting rates.  
03:49 16 Mr. Saydjari. Their suggestion, I guess, is that he's  
03:49 17 the only person who should be here for free, even though  
03:49 18 he doesn't have a dog in this fight.

03:49 19 Mr. Munger is getting paid. Dr. Short is  
03:49 20 getting paid. The lawyers are getting paid, and the  
03:49 21 other experts are getting paid. Saydjari should come  
03:49 22 here from Wisconsin for free, even though it takes him  
03:49 23 away from his business? That's a distraction.

03:49 24 What is the evidence? Well, the evidence  
03:50 25 is, he was there at the demonstration, and it was wildly

03:50 1 successful.

03:50 2 Now, the next distraction, Domenic Turchi.  
03:50 3 Saw it again in closing arguments. Why didn't Microsoft  
03:50 4 call him? Why didn't -- why didn't they call him? We  
03:50 5 called three people to testify about this product, VPN:  
03:50 6 Mr. Saydjari, Mr. Sterne, and Mr. Kindred.

03:50 7 Mr. Sterne led that project; Mr. Kindred  
03:50 8 led that project after Mr. Turchi; and Mr. Saydjari was  
03:50 9 the one who was funding that project. They are the  
03:50 10 right people. If they wanted Mr. Turchi here, they  
03:50 11 could have brought him here.

03:50 12 Now, those are the distractions. There's  
03:50 13 a real question, though, about missing witnesses.

03:50 14 Where is Kendall Larsen? Kendall Larsen  
03:50 15 is the CEO, founder, President, Chairman of the Board,  
03:50 16 largest single stockholder of VirnetX. He's the man who  
03:51 17 stands to gain the most from this, and he didn't even  
03:51 18 bother to show up.

03:51 19 Now, there's a reason for that, because  
03:51 20 his testimony tells you the reason for that. You  
03:51 21 remember all this testimony about the letter that was  
03:51 22 sent from SAIC in May of 2006. VirnetX counsel showed  
03:51 23 it to you again in closing argument.

03:51 24 It asserted that this RFC 3263 is the  
03:51 25 reason Microsoft infringes. Well, Mr. Larsen said:

03:51 1 Yeah. That was a mistake. They didn't want Mr. Larsen  
03:51 2 here to talk -- to have to answer to that.

03:51 3           You know, another very important about  
03:51 4 Mr. Larsen is that you'll remember in 2006, he asked  
03:51 5 that company called Magenic, Magenic, M-A-G-E-N-I-C, to  
03:51 6 take the two specific products that are accused here of  
03:51 7 infringing, Office Communicator and Live Communications  
03:51 8 Server, and he said: Please add to them and make them  
03:51 9 work using our patents. Add our patented technologies  
03:51 10 to those products.

03:51 11           And he had raised a little bit of money by  
03:52 12 that point, and he spent it all trying to do that. But  
03:52 13 here VirnetX says those products already infringe. Why  
03:52 14 in the world would VirnetX have spent the only money it  
03:52 15 had raised trying to make those products work, according  
03:52 16 to their patents, if they already did?

03:52 17           Mr. Larsen could have answered that.  
03:52 18 Mr. Munger first disagreed with me, said: Well, I don't  
03:52 19 think he was trying to modify those products to add  
03:52 20 VirnetX's patented technology. He disagreed. And then  
03:52 21 he said: Well, that's a real surprise once I showed him  
03:52 22 the documentation.

03:52 23           I guess Mr. Kendall Larsen would have to  
03:52 24 answer that because he was there, and I wasn't. So what  
03:52 25 did Mr. Larsen say?

1                   QUESTION: The objectives were to modify  
2 Microsoft's products to utilize patents -- VirnetX's  
3 patented technology in those products.

4                   ANSWER: Correct.

5                   Yet those are the very same products that  
6 VirnetX is standing in front of you here and saying  
03:52 7 already use them.

03:53 8                   Now, why in the world would Mr. Larsen  
03:53 9 spend the only money he had raised trying to convert  
03:53 10 Microsoft's products into one that used the patents if  
03:53 11 they already do. Well, Mr. Larsen chose not to come  
03:53 12 here to have to answer that.

03:53 13                   But it goes beyond that. You'll recall  
03:53 14 that he submitted a sworn affidavit about when these  
03:53 15 patents were invented, September 23rd, 1999. I showed  
03:53 16 that to Mr. Munger. He said: Oops, that sworn  
03:53 17 statement is not true. It was false.

03:53 18                   They chose not to bring him here for that  
03:53 19 reason, too.

03:53 20                   The second person that's not here that  
03:53 21 should be, particularly when you're asking for \$272 is  
03:53 22 Dr. Victor Larson. And he's not here for a reason.  
03:53 23 He's one of the co-inventors, so they certainly could  
03:53 24 have brought him. And why didn't they bring him?

03:53 25                   Well, he said the patents provide -- don't



03:53 1 provide any amount of protection. It's real hard to see  
03:53 2 from here, but don't provide any amount of protection  
03:54 3 for something which is SIP secure. But that's exactly  
03:54 4 what they're accusing here.

03:54 5           So Victor Larson, one of the inventors, he  
03:54 6 knew there was no infringement. He knew it, and that's  
03:54 7 why they didn't bring him to testify to you.

03:54 8           Mr. Munger says the products they say  
03:54 9 infringe here use SIP plus TLS. Mr. Munger agrees.  
03:54 10 That's what they're here in front of you saying  
03:54 11 infringes.

03:54 12           So what does Dr. Larson say? This was in  
03:54 13 the deposition testimony that we played today. He had a  
03:54 14 strong feeling that the patent provided no protection  
03:54 15 against secure SIP using TLS. And he hadn't changed his  
03:54 16 mind even after studying the patent and all of that  
03:54 17 information.

03:54 18           That's why those two key people aren't  
03:54 19 here. Both of them knew there was no infringement, and  
03:54 20 they said it, and their actions confirmed it. So they  
03:54 21 bring other people here to ask for \$242 million.

03:55 22           So what excuse did they give? Dr. Short  
03:55 23 says: Well, we have pretty limited time. Well, they  
03:55 24 could have spent a little less time talking about Global  
03:55 25 Hawk and scud missiles just to bring the two key people

03:55 1 who could have answered the questions that this Court  
03:55 2 has asked you to answer, particularly when they're  
03:55 3 asking for \$242 million.

03:55 4           Why didn't VirnetX call any SAIC  
03:55 5 witnesses? The letter they keep relying upon is from  
03:55 6 Pamela Bumann from SAIC. And they say: Well, she says  
03:55 7 she never even got that September 2006 letter from us.

03:55 8           Hmmm, maybe that's why. Because  
03:55 9 Mr. Larsen said, yeah, he got it, and it wasn't even  
03:55 10 addressed to him. So where did he get it from, if not  
03:55 11 her?

03:55 12           So probably that's why they didn't bring  
03:55 13 her, but she's the one who sent the letter who could  
03:55 14 have testified about why she didn't send Microsoft the  
03:55 15 information it asked for when it said: Put up. Show us  
03:55 16 the reason we really infringe, according to you. They  
03:55 17 didn't.

03:56 18           And why there was no meeting when  
03:56 19 Microsoft said, yes, let's have a meeting; why, instead  
03:56 20 of having a meeting, why, instead of giving us the  
03:56 21 information we asked for, why all they did was transfer  
03:56 22 the patent to VirnetX so they could sue us. That tells  
03:56 23 you what kind of case this is, what the case is about.  
03:56 24 Not distractions.

03:56 25           First, do we use the VirnetX's patents?

03:56 1 That's infringement.

03:56 2 Second, was VirnetX first? That's  
03:56 3 anticipation.

03:56 4 Third, are those claimed inventions  
03:56 5 obvious?

03:56 6 Let's talk about infringement first.  
03:56 7 Judge Davis' construction says, if they're missing only  
03:56 8 one of those limitations of the claims, there's no  
03:56 9 infringement.

03:56 10 On the '135 patent, they're missing two:  
03:56 11 The VPN and the website. Those aren't distractions.  
03:56 12 Those are things they have to prove. Those aren't  
03:56 13 distractions off the path. That's part of the  
03:56 14 requirements for their claim that Judge Davis has laid  
03:57 15 out in the instructions.

03:57 16 So let's talk about VPN first. The issue  
03:57 17 is anonymity, of course. You've heard a lot about that.  
03:57 18 Judge Davis' construction. Dr. Jones admitted that the  
03:57 19 order requires anonymity, so the question is, does it  
03:57 20 provide anonymity?

03:57 21 The patent tells you what that means. You  
03:57 22 want to prevent an eavesdropper from discovering that  
03:57 23 Terminal 100 -- that's a computer -- is talking to  
03:57 24 Terminal 110, another computer.

03:57 25 So let's look at the accused product and

03:57 1 see if that's true. Can an eavesdropper determine that  
03:57 2 one computer is talking to a second computer?

03:57 3 Dr. Jones says that's exactly what that  
03:57 4 means. Anonymity says you can't determine the identity  
03:57 5 of the computers that are talking with each other. They  
03:57 6 agree.

03:57 7 Now, this is what they're accusing. Now,  
03:57 8 Office Communicator talking to OCS, those two computers  
03:57 9 have one address that defines them and one only. That's  
03:57 10 like their name. And that address is visible plainly  
03:58 11 over the internet. There's nothing hidden as to that  
03:58 12 address. That address identifies those computers, and  
03:58 13 it can be seen.

03:58 14 And Dr. Jones admitted that. He admitted  
03:58 15 that by his own Wireshark data. This is his slide that  
03:58 16 he showed you. That address from that sender is  
03:58 17 visible. That address from that recipient is visible.

03:58 18 And he admits that our eavesdropper would  
03:58 19 know that this computer is in communication with that  
03:58 20 computer. That's about Office Communicator. He admits  
03:58 21 that that is true. But that is exactly what the patents  
03:58 22 say can't be true for infringement.

03:58 23 In the '135, anonymity is preventing an  
03:58 24 eavesdropper from knowing that one computer is in  
03:58 25 communication with another. But that's exactly what he

03:58 1 admitted is true in our case. Their own expert, who  
03:58 2 they brought to try to prove infringement, admitted no  
03:58 3 anonymity.

03:58 4                   And on the question of whether it's a VPN,  
03:59 5 we showed you lots of marketing material that said one  
03:59 6 of the benefits of Office Communicator is you don't need  
03:59 7 a VPN. We said over and over again that it doesn't  
03:59 8 require a VPN. That's why it's -- one of the reasons  
03:59 9 it's better.

03:59 10                   Remember, Dr. Jones said: Well, I think  
03:59 11 that might be saying you don't need another VPN. And  
03:59 12 then he admitted that's not what any of the facts said,  
03:59 13 and even more so, Office Communicator is beneficial when  
03:59 14 VPN connections are not possible.

03:59 15                   So not only is it not a VPN, as required  
03:59 16 for the claims; the advantage of it is you can use when  
03:59 17 VPNs aren't even possible.

03:59 18                   So what does VirnetX have to say? They  
03:59 19 have a lot of arguments here.

03:59 20                   The first one is: Well, there's always an  
03:59 21 IP address. You can't hide that. That's from  
03:59 22 Dr. Jones.

03:59 23                   And then on cross-examination, he  
03:59 24 admitted: Well, there are different ways you can hide  
03:59 25 that IP address. It's just that Microsoft doesn't do

03:59 1 it. There are ways you can hide the IP address so that  
04:00 2 you don't know which computer is talking to which other  
04:00 3 computer.

04:00 4 And the first one was from the book he  
04:00 5 used with his own class at the University of Tennessee.  
04:00 6 It says: The identify of the original source and  
04:00 7 destination are hidden in a VPN, and only addresses of  
04:00 8 the outer routers are visible.

04:00 9 So that's one way of hiding those actual  
04:00 10 true addresses of the sender and receiver. You use  
04:00 11 what's called -- what they're calling a tunnel.

04:00 12 Dr. Short's own demonstration showed you  
04:00 13 that, too. This is, remember, the slide he used to show  
04:00 14 what he called a typical VPN, and here you have what he  
04:00 15 called a private source address and a private  
04:00 16 destination and a message: Cut our prices today.

04:00 17 And what happened is that private or true  
04:00 18 address got put into an encrypted wrapper right there,  
04:00 19 and only an outer address was visible. Not the true  
04:00 20 private address. That was over here in the encrypted  
04:00 21 packet.

04:01 22 So what any hacker could see was not  
04:01 23 what's in this yellow box but the fake address is on the  
04:01 24 outside, just like the book that Dr. Jones used at his  
04:01 25 class at the University of Tennessee. Exactly the same

04:01 1 approach.

04:01 2           The true IP addresses were scrambled.

04:01 3 That's one way you could have hidden it. Also,

04:01 4 Microsoft doesn't do that.

04:01 5           The patent tells you another way you can  
04:01 6 hide it. He says you can -- the true destination  
04:01 7 address is concealed, and he describes that in Column 3.  
04:01 8 But we don't do that either. It's not concealed. It's  
04:01 9 plainly visible.

04:01 10           Now, they also talk about those degrees of  
04:01 11 anonymity. Remember that cross-examination?

04:01 12           And the patent doesn't talk about degrees  
04:01 13 of anonymity. It says: Can you tell whether computer  
04:01 14 one is talking to computer two, and if the answer is  
04:01 15 yes, there's no anonymity.

04:01 16           And Dr. Jones was forced to admit to that.  
04:01 17 Anonymity means you can't determine the identity of the  
04:01 18 computers that are talking to each other.

04:01 19           He also agreed that the CIA wouldn't be  
04:02 20 too happy with something like our product, which has the  
04:02 21 IP addresses visible, which is just common sense. And  
04:02 22 you've heard over and over again how they're trying to  
04:02 23 make this something that would be anonymous to the CIA  
04:02 24 and their agents sitting in remote places around the  
04:02 25 world.

04:02 1                   Our products are being used by people in  
04:02 2 coffee shops. It's not for the CIA. That's the reason  
04:02 3 it's not anonymous in the same way their patents are  
04:02 4 talking about. Their patents were designed for a  
04:02 5 totally different purpose than the Microsoft products  
04:02 6 are being used for that are being accused.

04:02 7                   But even more than that, Dr. Jones  
04:02 8 admitted the reason why the CIA wouldn't be happy. From  
04:02 9 an IP address, which is plainly visible in our product,  
04:02 10 you can learn the information about where that machine  
04:02 11 is and what's going on. It's not anonymous at all. He  
04:02 12 conceded that.

04:02 13                   The next argument was SIP addresses, that  
04:02 14 the SIP addresses are concealed. And he's right.  
04:02 15 That's true. But those SIP addresses correspond to  
04:02 16 people, not machines. And he agreed that you had to be  
04:03 17 anonymous as to the machines.

04:03 18                   And, in fact, that's what the patent says.  
04:03 19 Column 1, the very first column of the patent where it's  
04:03 20 talking about anonymity, it doesn't say you want to  
04:03 21 prevent the person from being identified, although you  
04:03 22 probably want that, too. It's the machine. And the SIP  
04:03 23 address has nothing to do with that.

04:03 24                   Under their theory, you could conceal my  
04:03 25 name but put my address out on the internet, and that



04:03 1 would be anonymous. Doesn't sound very anonymous to me.  
04:03 2 They can find me. And they can do that with an IP  
04:03 3 address, too, which is exactly what Dr. Jones admitted.

04:03 4 So on VPN, there's no VPN. That's a  
04:03 5 requirement for all claims. No infringement of any  
04:03 6 claim if VPN is not there, and it's not.

04:03 7 The second issue on '135 is the website.  
04:03 8 Here it's admitted that there's no website. So now  
04:03 9 we're just talking about whether this OC server is  
04:03 10 equivalent to a website.

04:03 11 Now, this testimony was absolutely  
04:03 12 un rebutted from Dr. Johnson. He showed you all of the  
04:04 13 things that are important about a website and all of the  
04:04 14 things that are important about OCS, and they just  
04:04 15 simply don't overlap.

04:04 16 Now, you he heard counsel for VirnetX say  
04:04 17 that Dr. Johnson had to admit that he was wrong. He  
04:04 18 didn't admit he was wrong. He was marking out X's no  
04:04 19 matter what Dr. Johnson said. He disagreed with them on  
04:04 20 the stand and said, I disagree with you, and he still  
04:04 21 put an X to the testimony. That's words, not facts.

04:04 22 Now, here's what Dr. Jones did say, and  
04:04 23 it's important. He said: Well, I think they're  
04:04 24 equivalent, because of this function-way-result test.  
04:04 25 And that was in the instructions that Judge Davis just

04:04 1 gave you.

04:04 2 But when you read his testimony,  
04:04 3 basically, he's saying any VPN is equivalent. Well, we  
04:04 4 know that can't be true, because they didn't invent  
04:04 5 VPNs.

04:04 6 He says: Well, the function is, you use  
04:04 7 computers and a VPN to present information to clients,  
04:04 8 and the clients are authorized. And then he was forced  
04:04 9 to admit that every VPN does that.

04:05 10 Well, what was the way on  
04:05 11 function-way-result? Well, you use computers and a VPN  
04:05 12 to present information.

04:05 13 So if function and way are the same now,  
04:05 14 what's result? Well, you communicate with computers and  
04:05 15 a VPN and only clients that are registered.

04:05 16 All right. So it's all the same.

04:05 17 And then I asked him over and over again,  
04:05 18 every VPN does that, doesn't it? So, basically, you're  
04:05 19 saying every VPN is covered.

04:05 20 And he said: Well, yes, any VPN meets  
04:05 21 that requirement. That's typical on VPNs; typical of  
04:05 22 VPNs; typical of VPNs.

04:05 23 So what he's saying is, he wants them to  
04:05 24 get paid for anything that's a VPN. But they've  
04:05 25 admitted they didn't invent VPN. So that's not

04:05 1 supported here.

04:05 2           So on the '135, two requirements are  
04:05 3 missing. Even if only one is missing, there's no  
04:05 4 infringement.

04:05 5           The '180 patent, two missing: VPN, we've  
04:05 6 already talked about most of that, and no secure  
04:05 7 computer address, both requirements of the claims.

04:06 8           The PeerNet software, exactly the same  
04:06 9 issue. They can see exactly the same thing. On the  
04:06 10 PeerNet software, you have a one true address, not a  
04:06 11 separate address, and a one true address over here, and  
04:06 12 the hacker can see that. And there's no dispute about  
04:06 13 those facts.

04:06 14           So what do they say? They say: Well, you  
04:06 15 can't see the groups. That's what the claim says. And  
04:06 16 look at what the patent says, if the patent says we're  
04:06 17 concerned about groups. It says, no, we're concerned  
04:06 18 about anonymity between whether computer one is in  
04:06 19 communication with computer two.

04:06 20           And the same holds true with the OC issue.  
04:06 21 Remember when Mr. Cawley, in closing argument, said,  
04:06 22 let's add all these other computers at the other side of  
04:06 23 the slide on OC?

04:06 24           That's not what the claim is talking  
04:06 25 about. The claim is saying computer one talking to

04:06 1 computer two. Computer one was the computer on the  
04:06 2 left; computer two is the OC server. And the hacker can  
04:06 3 plainly see that, plain as day.

04:07 4 The second issue is no computer has a  
04:07 5 secure network address. Judge Davis' instruction is  
04:07 6 that an address requires authentication for access. So  
04:07 7 let's look.

04:07 8 This computer -- you remember this  
04:07 9 demonstration from the testimony -- has one address, and  
04:07 10 it's not secure because anybody can send spam e-mail or  
04:07 11 anything else into that address even when a Windows  
04:07 12 Meeting Space session is in play.

04:07 13 So the application might be secure, you  
04:07 14 have to log in for an application, but the address is  
04:07 15 not. And that's what the claim requires: A secure  
04:07 16 address.

04:07 17 Mr. Cawley says: Well, you could have a  
04:07 18 communication line coming in, and he shows you the  
04:07 19 patent.

04:07 20 Remember the address, though, was  
04:07 21 different. One was .com, and one was .scom. Here it  
04:07 22 was talking about a single address, and it's not secure,  
04:07 23 because any spam coming into that e-mail can come right  
04:07 24 in.

04:07 25 So that's the first issue: Does

04:07 1 Microsoft's software use the VirnetX's patents? The  
04:08 2 answer to that is no. We don't have the anonymity  
04:08 3 that's required because we're using it for different  
04:08 4 purposes. It's not a secure computer network address.  
04:08 5 And it's not a website or an equivalent to it.

04:08 6 The second: Was VirnetX first. This is  
04:08 7 issue -- part of the issue of validity. We showed you  
04:08 8 extensive evidence.

04:08 9 But even they knew they were in trouble  
04:08 10 from the very beginning. This is a presentation given  
04:08 11 to the CEO, Dr. Beyster, of SAIC that Mr. Munger had  
04:08 12 presented and prepared.

04:08 13 He said: Wow, there's a lot of companies  
04:08 14 addressing the issue that we're talking about. The race  
04:08 15 is on. They were in a race, and they knew it, and  
04:08 16 that's the same issue cited here. Who won the race?

04:08 17 Was VirnetX first when it filed its patent  
04:08 18 in 2000, or were others first? And the answer is others  
04:08 19 were first.

04:08 20 Mr. Munger may have had this realization  
04:08 21 in the late 1990s when he was working on Global Hawk,  
04:09 22 and he may have thought that he could try to solve that  
04:09 23 problem. The problem is that others who were working in  
04:09 24 this space before had had that same realization many,  
04:09 25 many years before, and they had the same solutions many

04:09 1 years before. That's why he wasn't first.

04:09 2 SAIC's date is over here in 2000.

04:09 3 PPTP, invented by Mr. Pall, was four years  
04:09 4 earlier in '96.

04:09 5 AutoDial, also in '96, four years earlier.

04:09 6 DVPN from TIS, that was in 1998, two years  
04:09 7 earlier.

04:09 8 Aventail, one year earlier.

04:09 9 They didn't win the race, and yet that's  
04:09 10 exactly the issue the Court is asking you to decide, who  
04:09 11 was first?

04:09 12 Now, you might say: Why is it -- why is  
04:09 13 all of this relevant? Why didn't the Patent Office find  
04:09 14 it? We showed you that earlier. The Patent Office did  
04:09 15 not consider this material, and there's no dispute about  
04:09 16 that, none at all.

04:09 17 So when counsel for VirnetX says the  
04:09 18 presumption of validity applies because the Patent  
04:10 19 Office is presumed to have done its job well, it did its  
04:10 20 job well with the information they had, but they didn't  
04:10 21 have any of this information that you're seeing.

04:10 22 In the video and all the witnesses agreed,  
04:10 23 this is your task. This is your job to decide. You  
04:10 24 can't defer to the Patent Office and say they must have  
04:10 25 decided this is okay, because they didn't have the same

04:10 1 information.

04:10 2           And when you hear counsel for VirnetX say  
04:10 3 over and over again with every witness, there's a  
04:10 4 presumption of validity, that's a suggestion that you  
04:10 5 really shouldn't have to look at this too hard.

04:10 6           Doesn't reduce how hard you have to look  
04:10 7 at it at all, because the Patent Office has not looked  
04:10 8 at this at all. You will be the first, and you'll be  
04:10 9 the only to decide this question.

04:10 10           Aventail. Aventail, we know they lost the  
04:10 11 race, and we know that Mr. Munger and Dr. Short knew  
04:10 12 they lost the race, because SAIC, their own employer,  
04:10 13 chose Aventail over Mr. Munger's technology. They had a  
04:11 14 choice as to what to use with ANX, and they said let's  
04:11 15 go with Aventail. It's better. It works. And they  
04:11 16 invested in Aventail as we talked about earlier. So  
04:11 17 they lost the race to Aventail very clearly.

04:11 18           Aventail: Secure, authenticated access to  
04:11 19 a customer's critical software application, exactly how  
04:11 20 they described their invention to you here over and over  
04:11 21 again. It's automatic. It's being used by a number of  
04:11 22 Fortune 100 companies. It works. It's automatic. It's  
04:11 23 easy. All of the things that they claim to have  
04:11 24 invented were done by Aventail earlier and better.

04:11 25           Large virtual private networks. You heard

04:11 1 that -- you heard them argue that Aventail is not a  
04:11 2 private network. Well, large virtual private network.  
04:11 3 Everybody else in the world is calling what they're  
04:11 4 doing a VPN. Only VirnetX.

04:11 5           You heard Dr. Wicker transparently and  
04:11 6 automatic. There's no debate that they do exactly what  
04:12 7 Mr. Munger and Dr. Short claim, but they did it earlier.

04:12 8           So what does Dr. Jones argue? He argued  
04:12 9 to you today: But it's not a network. Well, how can it  
04:12 10 not be a network when over and over again, not only  
04:12 11 Aventail is saying it's a VPN, a virtual private  
04:12 12 network, but everybody else is calling it a network,  
04:12 13 too, including SAIC.

04:12 14           Mr. Munger's own employer says: Well, VPN  
04:12 15 system providers, and they list Aventail as the very  
04:12 16 first one. So the only people not calling Aventail a  
04:12 17 network, a VPN, is VirnetX in front of you. But their  
04:12 18 employers and everybody else acknowledges that's exactly  
04:12 19 what it is. And that's Exhibit 382, one of the  
04:12 20 Plaintiff's exhibits.

04:12 21           The next piece of prior art is the PPTP,  
04:12 22 what Mr. Pall invented in 1996 with AutoDial, way  
04:12 23 before, four years before, and improved on even twice  
04:12 24 before the work that Mr. Munger and Dr. Short did.

04:13 25           Recognized by everyone as a break-through



04:13 1 four years earlier. A new protocol secure remote access  
04:13 2 across the internet, a great virtual private network or  
04:13 3 VPN. Four years earlier.

04:13 4 Automatic. Automatic. Easy. Easy.  
04:13 5 Easy. You heard that testimony over and over again.

04:13 6 So what's the first point that you hear  
04:13 7 raised? Well, it only reconnects. That means it's --  
04:13 8 the second time you call them up, it does it  
04:13 9 automatically.

04:13 10 And you heard the arguments, well, why  
04:13 11 didn't they show you the first time that they connected  
04:13 12 them? And without arguing about the demonstration, did  
04:13 13 you see Mr. Munger or Dr. Short show you how they  
04:13 14 connected the first time on their demonstration? No.  
04:13 15 No. But it was one click for each, exactly the same  
04:13 16 setup, exactly the same, but four years earlier for PPTP  
04:13 17 with AutoDial.

04:13 18 So what does Mr. Jones say? He says  
04:14 19 there's not a determination step. And, in fact,  
04:14 20 Professor Wicker explained to you in detail why there's  
04:14 21 a determination step.

04:14 22 And you heard Dr. Jones today on the stand  
04:14 23 admit that what happens is that the system looks up at  
04:14 24 the address book and says, is there an entry? And if  
04:14 25 there's an entry, it determines that it should use PPTP.

04:14 1 PPTP is actually in the phone book entry.  
04:14 2 You heard him admit that this morning. That's exactly  
04:14 3 where the determination step happens. If it's in the  
04:14 4 phone book, it says use PPTP. If it's not in the phone  
04:14 5 book, it goes off and forms a different path. Dr. Jones  
04:14 6 admitted that this morning in this courtroom.

04:14 7 Now, you heard them talk about the false  
04:14 8 step demonstration that was given with eBay and  
04:14 9 this-is-not-a-secure-website.com. Well, that doesn't  
04:14 10 work either, because -- Dr. Wicker explained, because  
04:14 11 the only reason that it happened that way in this  
04:14 12 demonstration is they picked a bogus name in  
04:14 13 thisisnotasecurewebsite.com.

04:15 14 And as to eBay, which is not a bogus name,  
04:15 15 it wasn't connected to the internet, so it couldn't find  
04:15 16 it.

04:15 17 So those demonstration examples that they  
04:15 18 did on cross-examination weren't applicable, and he  
04:15 19 explained that in detail.

04:15 20 And this is the phone book entry that I  
04:15 21 was talking about earlier where it says -- it's sort of  
04:15 22 hard to see here, but it says: PPTP. That's what  
04:15 23 Dr. Jones had to admit on cross-examination today, that  
04:15 24 if that is there, the phone book entry, that's  
04:15 25 determining.

04:15 1 Now, one of the things you heard in  
04:15 2 cross-examination was, well, wait a minute. How can  
04:15 3 PPTP be private and anonymous if Office Communicator  
04:15 4 isn't? Because you can still see some IP addresses.  
04:15 5 And there's no doubt you can see IP addresses, but you  
04:15 6 can't see the private IP addresses that Dr. Short  
04:15 7 admitted were there.

04:15 8 And so let's take Office Communicator  
04:15 9 first. That true source sending to that true  
04:15 10 destination has one and only one IP address, and that's  
04:16 11 visible plainly in what that hacker can see.

04:16 12 On PPTP, what that's -- what's visible are  
04:16 13 the IP addresses of these two boxes, not the real  
04:16 14 source, not the real destination. Mr. Pall explained  
04:16 15 that. Dr. Wicker explained that. The addresses of the  
04:16 16 true source and true destination are in this encrypted  
04:16 17 packet. The hacker cannot see it. That's why it's  
04:16 18 different.

04:16 19 And PPTP, it's anonymous because they're  
04:16 20 encrypted. And Office Communicator, what they're  
04:16 21 accusing of infringement, they're plain to see by  
04:16 22 anybody out there, like Dr. Jones admitted.

04:16 23 The last piece of prior art I want to talk  
04:16 24 to about is DVPN or Dynamic VPN. That was a product  
04:16 25 developed by Trusted Information Systems and

04:16 1 demonstrated at DARPA, well before any of the work that  
04:16 2 they -- that Mr. Munger and Dr. Short ever talked about.  
04:16 3 So they lost that race, too.

04:16 4           You heard from Mr. Saydjari, 17 years with  
04:17 5 the Department of Defense. He's the man who's actually  
04:17 6 responsible for cyber security in the United States.  
04:17 7 He's the one who was actually responsible for trying to  
04:17 8 maintain our security and deciding which technologies  
04:17 9 would do that best.

04:17 10           He represents reality. He doesn't have  
04:17 11 any dog in this fight. And he came here to say what  
04:17 12 actually happened at that conference in March of 1998.

04:17 13           And what happened? It was a successful  
04:17 14 demonstration. In fact, unqualified success. The  
04:17 15 documents -- not just people's recollection, but the  
04:17 16 contemporaneous documents were also very, very clear and  
04:17 17 undeniable.

04:17 18           Automated VPN. Automatically activate the  
04:17 19 VPN. Exactly what Mr. Munger and Dr. Short claimed they  
04:17 20 invented, VPN did before. That's automatic activation.

04:18 21           And was it easy? Yes. Mr. Saydjari said  
04:18 22 that was a requirement. Remember he said we want to do  
04:18 23 this with coalition forces when we're sitting over in  
04:18 24 Iraq someplace, and we have to deal with the British  
04:18 25 forces and the German forces and the Belgium forces and

04:18 1 other forces. We have to be able to communicate  
04:18 2 securely with everybody. That's what this is for. It's  
04:18 3 real world, real facts, real life. So it had to be  
04:18 4 easy.

04:18 5 Did it work? You bet. Absolutely  
04:18 6 critical, great success in that way. Demonstrated it a  
04:18 7 year before -- two years before the relevant time period  
04:18 8 of Mr. Munger and Dr. Short.

04:18 9 Now, did DARPA fund the SAIC and  
04:18 10 Mr. Munger's VPN invention? Because, remember,  
04:18 11 Mr. Munger submitted a proposal directly to Mr. Saydjari  
04:18 12 saying: Please fund my technology instead of others.

04:18 13 And Mr. Saydjari didn't -- as I say,  
04:18 14 didn't have a dog in that fight. He's going to decide  
04:18 15 what's better and what works. That's his job. And he  
04:19 16 said: No, we didn't fund it.

04:19 17 Why? It was a duplicate of what we had  
04:19 18 already created with DVPN technology. They lost the  
04:19 19 race with DVPN, too.

04:19 20 Now, the cross-examination of Dr. Wicker  
04:19 21 on DVPN was interesting. Over and over and over and  
04:19 22 over again, the VirnetX lawyer said: Well, do you know  
04:19 23 with absolute certainty what happened 12 years ago?

04:19 24 And Professor Wicker said: Well, I wasn't  
04:19 25 there, so I guess I don't know with absolutely certainty

04:19 1 almost anything, but I think it's clear and convincing.

04:19 2 That, of course, is the standard that  
04:19 3 Judge Davis just instructed you on.

04:19 4 Again, well, is it -- are you absolutely  
04:19 5 certain?

04:19 6 Well, no, but I think it's clear.

04:19 7 Judge Davis' instructions told you proof  
04:19 8 to an absolute certainty is not required. But over and  
04:19 9 over and over again, VirnetX's counsel was trying to  
04:19 10 suggest that that is the standard; that if Professor  
04:19 11 Wicker is not absolutely certain, you shouldn't rely on  
04:20 12 him. But that's exactly the wrong statement.

04:20 13 So was VirnetX first? No. They lost the  
04:20 14 race to Aventail; they lost it to DVPN; and they lost it  
04:20 15 to Mr. Pall, four years late, on PPTP.

04:20 16 Obviousness. Mr. Wicker testified at  
04:20 17 length about obviousness, told you why it was obvious  
04:20 18 and told you why all the people who were looking at this  
04:20 19 in detail sitting in the Engineering Internet Task Force  
04:20 20 would know why this is obvious.

04:20 21 Now, Dr. Jones spoke about obviousness for  
04:20 22 about to two minutes, maybe a minute and a half. And  
04:20 23 always said, well, you can't use hindsight, and  
04:20 24 Dr. Wicker didn't. He showed you at the time why  
04:20 25 everything they're claiming was known, because we had a

04:20 1 lot of very smart people working on this problem for a  
04:20 2 long time, and they were working together to make that  
04:20 3 work.

04:20 4           The objective considerations that are in  
04:21 5 that long list that Judge Davis says he would leave to  
04:21 6 you to read when he was reading the instructions,  
04:21 7 remember Dr. Wicker went quite through and showed how  
04:21 8 those considerations showed absolute obviousness. Their  
04:21 9 expert, Dr. Jones, didn't respond to that at all. At  
04:21 10 all. Didn't even mention it.

04:21 11           Now, you've heard many, many times this  
04:21 12 presumption of validity. But the presumption can be  
04:21 13 rebutted. You, the finder of fact, can find the patent  
04:21 14 to be invalid. That's from the Court and also from the  
04:21 15 video.

04:21 16           It's important that you understand your  
04:21 17 role in the process. You will be the first people to  
04:21 18 decide this question. And any suggestion that you  
04:21 19 should look at this with less rigor or with less  
04:21 20 scrutiny because of the presumption of validity is  
04:21 21 asking you not to do your job as jurors.

04:21 22           And that's wrong. The presumption of  
04:21 23 validity does not change the fact that jurors have to  
04:21 24 look at this evidence that the Patent Office didn't see.

04:22 25           So was it obvious? Yes.

04:22 1 Willfulness: Objectively high likelihood  
04:22 2 that the actions infringed. Well, what evidence do we  
04:22 3 have on this?

04:22 4 First, SAIC -- VirnetX relies on the  
04:22 5 letter from Pam Bumann in May of 2006. Talked to you  
04:22 6 about RFC 3263. Well, that's the one that Mr. Larsen  
04:22 7 admitted was wrong.

04:22 8 How are we supposed to know objectively  
04:22 9 that we infringe when they can't even get it written in  
04:22 10 the letter? They say you infringe because of X, and X  
04:22 11 is false. It's not objectively true even under their  
04:22 12 theory.

04:22 13 Do they correct that? Do they send us any  
04:22 14 information? No.

04:22 15 How can it be objectively true when their  
04:22 16 own inventor, Dr. Larson, said: No, I haven't changed  
04:22 17 my mind. My patents offer, as he put it, no protection  
04:22 18 against what Microsoft is doing.

04:22 19 How can -- objectively, we're supposed to  
04:22 20 know we infringe when their own inventor and Mr. Larsen  
04:23 21 don't?

04:23 22 So also on willfulness, does Microsoft  
04:23 23 just say: Forget it; we didn't want to talk to you;  
04:23 24 we're not interested; we don't care; go away; file a  
04:23 25 lawsuit; we're big; we're powerful? No.



04:23 1                   They said: Let's have a meeting and  
04:23 2 discuss it, but please provide us the information that  
04:23 3 supports your claim.

04:23 4                   Everybody in this courtroom has admitted  
04:23 5 that's a reasonable thing to do.

04:23 6                   Did SAIC and VirnetX give us any  
04:23 7 information to back up the claim which later turned out  
04:23 8 to be false? No.

04:23 9                   Did they do anything to set up a meeting?  
04:23 10 No.

04:23 11                   Mr. Larsen, do you know whether Ms. Bumann  
04:23 12 set up a meeting?

04:23 13                   Can't speak for her.

04:23 14                   He sure didn't. There's absolutely  
04:23 15 nothing suggesting that any such meeting occurred. And  
04:23 16 this Bumann member even said that she didn't get the  
04:23 17 letter. That was her reason, that was her explanation  
04:24 18 for why she didn't even send the letter.

04:24 19                   So patent review policies. You heard this  
04:24 20 in closing argument just a minute ago. That  
04:24 21 Microsoft -- you should be shocked. VirnetX's lawyers  
04:24 22 asked you if you were shocked that Microsoft doesn't go  
04:24 23 look at patents.

04:24 24                   Well, Microsoft explained why. If you're  
04:24 25 writing a song and you're creating it yourself, you

04:24 1 don't need to go look at patents. We want people to  
04:24 2 innovate.

04:24 3 And he said: Well, and if somebody shows  
04:24 4 us that we're -- that we might be using their  
04:24 5 technology, we go out to them and license it.

04:24 6 That's not the voice of a willful  
04:24 7 infringer. That's somebody who's reasonably respecting  
04:24 8 intellectual property.

04:24 9 But now let's look -- put the shoe on the  
04:24 10 other foot.

04:24 11 Mr. Munger, well, wait a minute. When  
04:24 12 you're going out to work on Gabriel, do you look at  
04:24 13 other people's patents?

04:24 14 Mr. Munger, well, he wasn't shocked when  
04:24 15 he learned about it, because he doesn't do it either.  
04:24 16 VirnetX has no policy saying you should go look at  
04:24 17 anybody's patents.

04:24 18 Dr. Larson, he says, well, why didn't you  
04:24 19 do an analysis of other people's patents.

04:24 20 He says: It doesn't even make sense to  
04:24 21 me.

04:25 22 So if VirnetX's lawyer is suggesting you  
04:25 23 should be shocked about it, their own people say it's  
04:25 24 standard.

04:25 25 Last issue: The Patent Office.

04:25 1 Say, Well, Microsoft got a notice from the  
04:25 2 Patent Office about Mr. Munger's patent. True. But did  
04:25 3 they go to the Microsoft? No. It went to a law firm.  
04:25 4 No evidence that anybody at Microsoft ever learned about  
04:25 5 it.

04:25 6 And the Patent Office issued the patent  
04:25 7 over it, as I showed you earlier.

04:25 8 Now, damages. Defendants never like to  
04:25 9 talk about damages, but I have to. Our view is the  
04:25 10 damages are zero. The damages are zero, because there's  
04:25 11 no infringement, and the patents are invalid.

04:25 12 Well, now I'm going to assume for a minute  
04:25 13 that you disagree with me, and let's talk about what  
04:25 14 those damages should be.

04:25 15 The Court tells you they can't be remote  
04:25 16 or speculative. Those were the instructions you just  
04:25 17 got. And this is the real evidence they relied upon.

04:25 18 They said: Well, these are the  
04:25 19 benchmarks. Remember Mr. Reed said: These are the key  
04:25 20 licenses you look at, and he pointed to these high  
04:25 21 rates.

04:26 22 What he didn't point out was there was  
04:26 23 absolutely zero dollars under any one of them. Their  
04:26 24 benchmarks for the value of this technology and not -- a  
04:26 25 dime wasn't paid under those royalties.

04:26 1 Hypothetical negotiation, what everybody  
04:26 2 talked about would have occurred in 2003. They're  
04:26 3 saying that at that negotiation, Microsoft would have  
04:26 4 said: Here's \$242 million.

04:26 5 Well, what would have happened? What had  
04:26 6 happened already is that SAIC would be coming into that  
04:26 7 negotiation being told by the CIA that their technology  
04:26 8 is in the living dead category. Their own company  
04:26 9 hadn't pulled the plug because the product's not worth  
04:26 10 investing in.

04:26 11 They go to 32 venture capitalists, and  
04:26 12 everybody else in the world who says: Sorry, your  
04:26 13 technology is worth nothing.

04:26 14 SafeNet terminates and doesn't pay them a  
04:26 15 dime.

04:26 16 And what Mr. Reed and VirnetX is saying  
04:26 17 is, just a couple of months later, SAIC would have been  
04:26 18 so confident about the strength of its technology that  
04:27 19 they would have held out to \$242 million. That was his  
04:27 20 testimony.

04:27 21 And you remember when Mr. Sayles was  
04:27 22 asking him questions, he said: Well, if Microsoft had  
04:27 23 offered at that hypothetical negotiation 10 million,  
04:27 24 they would have gotten up and left?

04:27 25 Absolutely would have.

04:27 1 15 million?

04:27 2 Without a question, they would have gotten  
04:27 3 up in a huff and walked out of the room.

04:27 4 Well, there's two problems with that. One  
04:27 5 is, he admitted that part of the deal of a hypothetical  
04:27 6 negotiation is you can't walk away.

04:27 7 The other problem is it violates common  
04:27 8 sense. Here you have a company that's spent years  
04:27 9 trying to get someone to give them millions, 2 million,  
04:27 10 \$3 million, 7, being told no everywhere they went, and  
04:27 11 all of a sudden, Microsoft would offer them 5, \$10  
04:27 12 million, and they would throw a fit and leave? It just  
04:27 13 doesn't make sense.

04:27 14 It also is inconsistent with all the  
04:27 15 evidence in the case about the entire value of the  
04:28 16 company, not just these patents, the entire value of the  
04:28 17 company, which consistently across the range is between  
04:28 18 the 15-million-dollar range.

04:28 19 And yet all around the hypothetical  
04:28 20 negotiation time, before and after the patent issues,  
04:28 21 and yet they said: You really ought to say now it's  
04:28 22 worth \$242 million.

04:28 23 The reason this bar is so high and these  
04:28 24 bars are so low is that these bars reflect their best  
04:28 25 estimate of the value of the entire company. This bar

04:28 1 represents what Microsoft contributed, and they're  
04:28 2 trying to take that.

04:28 3           Now, you heard this morning about CSMG, a  
04:28 4 company that said: Hey, if your technology really  
04:28 5 works, there's a huge opportunity out there. It might  
04:28 6 be worth \$200 million.

04:28 7           It didn't say the technology was good. It  
04:28 8 didn't say the technology was actually worth that. It  
04:28 9 said, if the technology sells like hot cakes, then you  
04:28 10 could make that amount of money. That's what that  
04:28 11 document says.

04:28 12           So in terms of the actual verdict form,  
04:29 13 we, obviously, have a different view as to how we would  
04:29 14 ask you to fill it out. We believe that in the question  
04:29 15 of infringement, the answer should be no. Website, VPN,  
04:29 16 secure network address.

04:29 17           Willfulness? No, they failed to meet  
04:29 18 their burden of proof. We asked them for a meeting, and  
04:29 19 they didn't even show up. We asked them to give us some  
04:29 20 information to back up the claim that turned out to be  
04:29 21 false. They didn't give it.

04:29 22           Invalidity? Yes. They lost the race to  
04:29 23 three different companies, all of which provided fast,  
04:29 24 easy, automatic ways of connecting VPN years before  
04:29 25 Mr. Munger and Dr. Short.

04:29 1 Damages? Zero.

04:29 2 Remember this slogan? This was the log-in  
04:29 3 box that was on the Gabriel prototype, that Mr. Munger  
04:29 4 had to put in, that Dr. Short had to put in, everybody  
04:29 5 had -- when they were going to put in to work on Gabriel  
04:29 6 at all, the number, the password they had to put in was  
04:30 7 Microsoft for money in 2009, question mark.

04:30 8 Now, that's tells you more than almost  
04:30 9 anything I could say about what this case is actually  
04:30 10 about. That's what this case is about.

04:30 11 And you heard, well -- Mr. Munger said:  
04:30 12 Well, that was just in there for a couple of weeks.  
04:30 13 Well, it turns out that's not true.

04:30 14 Dr. Larson, who testified by video this  
04:30 15 morning, said: Well, he's the one who actually put it  
04:30 16 in there.

04:30 17 And where did he get it? He says: I  
04:30 18 copied it from one of my other passwords that I use as a  
04:30 19 standard password for other developers.

04:30 20 So all of -- all of VirnetX was saying  
04:30 21 this lawsuit, Gabriel, everything is just about whether  
04:30 22 we can get money out of Microsoft. Microsoft and money,  
04:30 23 now that we're in 2010, we suggest the answer to that  
04:30 24 question should be no.

04:30 25 Now, this is my last opportunity to speak

04:30 1 to you. Many times in trials, there's cheering and  
04:30 2 applause when that happens. But I do -- and Mr. Cawley  
04:30 3 will have a few minutes to respond to what I'm saying,  
04:31 4 and I won't be able to answer it.

04:31 5 But I want to ask you to please listen to  
04:31 6 see if he answers these questions. Not talk about  
04:31 7 Global Hawk, Purple Hearts, or scud missiles, but the  
04:31 8 questions that are in the case and see if he answers  
04:31 9 these questions.

04:31 10 First, why did everybody refuse to buy or  
04:31 11 invest in the VirnetX technology if it really worked, if  
04:31 12 it really did what they say it does?

04:31 13 If it was really worth \$242 million, why  
04:31 14 did 32 venture capitalists, every company, every  
04:31 15 government agency, SAIC, the CIA, In-Q-Tel, SafeNet,  
04:31 16 everybody, why did everybody with motivation to invest  
04:31 17 or buy it, to use it if it worked, say no?

04:31 18 Ask for an answer to that question that  
04:31 19 makes sense to you.

04:31 20 Would the CIA use software that doesn't  
04:31 21 provide anonymity? Their own expert, Dr. Jones, said  
04:31 22 no. They told you over and over again that's what they  
04:31 23 were trying to do: Create software for the CIA.

04:31 24 Well, that's not what Microsoft is  
04:32 25 creating. We're creating it for normal people using it



04:32 1 for normal things.

04:32 2           What was first? Was VirnetX before  
04:32 3 Aventail? Before VPN, but before DVPN? You heard no  
04:32 4 denial from Dr. Jones. Dr. Jones testified on the stand  
04:32 5 today -- he didn't deny that Aventail, VPN, or PPTP were  
04:32 6 all fast, automatic, easy. And I pointed that out to  
04:32 7 him on cross-examination, and he didn't deny that.

04:32 8           How can VirnetX demand 20 times, 20 times  
04:32 9 what SAIC and the missing Kendall Larsen thought the  
04:32 10 entire company was worth? Does that make sense? Does  
04:32 11 that make any sense at all? That's just way, way too  
04:32 12 high. And we all in the courtroom know that. Twenty  
04:32 13 times clearly shows that they're trying to get the value  
04:32 14 Microsoft contributes, not that they contributed.

04:33 15           And last, where is Kendall Larsen, if he's  
04:33 16 the President, the CEO, Chairman of the Board, founder,  
04:33 17 the largest stockholder, and he said some things that  
04:33 18 are critical to this case that show there's no  
04:33 19 infringement and no validity?

04:33 20           He's the one that stands to make the most  
04:33 21 out of this lawsuit, and he didn't have the guts to come  
04:33 22 and stand before you and ask that and defend that. And  
04:33 23 that tells you a lot about what this case is about.

04:33 24           I thank you very much for your attention  
04:33 25 and respectfully ask that you enter a verdict for

04:33 1 Microsoft.

04:33 2 THE COURT: Thank you, Mr. Powers.

04:33 3 All right. Rebuttal, Mr. Cawley.

04:33 4 MR. CAWLEY: Thank you, Your Honor.

04:33 5 Ladies of the Jury, what I want to do in  
04:33 6 the last 10 minutes, what I said I would do, Mr. --

04:34 7 Microsoft's lawyer had had some questions he thinks I  
04:34 8 should spend 10 minutes answering.

04:34 9 And I think we will touch on some of  
04:34 10 those, but I think it's more important at the very end  
04:34 11 of at least the lawyer part of the trial that we focus  
04:34 12 on the questions that Judge Davis is going to ask you.  
04:34 13 His questions, I'd suggest, are the important ones and  
04:34 14 the ones you'll need to really wrestle with in deciding  
04:34 15 the case.

04:34 16 First of all, let's talk about Kendall  
04:34 17 Larsen. Why isn't he here? Well, there's several  
04:34 18 reasons. First of all, Mr. Larsen is not an inventor of  
04:34 19 these patents. At the time Mr. Munger and Dr. Short  
04:34 20 came up with their invention, they didn't even know  
04:34 21 Kendall Larsen.

04:34 22 Kendall Larsen did meet them later. He  
04:34 23 believes in the invention. He helped them start a  
04:34 24 company and helped them raise money and invested quite a  
04:34 25 bit of money in himself for -- in it himself. I don't

04:34 1 see why there's anything wrong with him getting a return  
04:34 2 on that investment when he's the one that helped  
04:34 3 Mr. Munger and Dr. Short be able to come here and  
04:35 4 enforce their rights against Microsoft's infringement.

04:35 5 And remember, anyway, isn't this just a  
04:35 6 red herring? Mr. Larsen's deposition got taken. He was  
04:35 7 on videotape. You saw that played this morning.  
04:35 8 Microsoft had an opportunity to ask him any questions  
04:35 9 they wanted and to play for you any of his testimony  
04:35 10 that they thought was relevant.

04:35 11 They talked about Magenic. Remember how  
04:35 12 strange and mysterious it was that Mr. Larsen wasn't  
04:35 13 here to explain why if he thought that Microsoft was  
04:35 14 already doing what the patent said; he was hiring this  
04:35 15 company Magenic to put the invention in the Microsoft  
04:35 16 products?

04:35 17 Mr. Munger explained all that, and that's  
04:35 18 not the way it happened at all. What he told you is  
04:35 19 that he and Mr. Larsen had decided that it would be a  
04:35 20 good idea to show that their invention could be used  
04:35 21 with the Microsoft products, but they didn't know  
04:35 22 Microsoft was already using their invention.

04:36 23 That's how Mr. Munger explained to you, in  
04:36 24 2005, someone he was working on that said, Come in here  
04:36 25 and look at this computer screen. It looks as though

04:36 1 Microsoft is already doing what we're trying to do with  
04:36 2 the invention.

04:36 3 Dr. Vic Larson, you saw him this morning.  
04:36 4 His deposition was taken in this case. As much as we  
04:36 5 would have loved to have brought the co-inventor here to  
04:36 6 testify to you live, we have to cut back somewhere due  
04:36 7 to time constraints.

04:36 8 His deposition was taken. Microsoft had  
04:36 9 an opportunity to ask him any questions they wanted and  
04:36 10 play for you any of the testimony that they thought was  
04:36 11 relevant.

04:36 12 SAIC and Pam Bumann, same thing. Her  
04:36 13 deposition was taken. They could have played any part  
04:36 14 of that deposition they wanted to.

04:36 15 So let's talk about the first question  
04:36 16 that Judge Davis is going to ask you. Is there  
04:36 17 infringement? Once again, you heard about this  
04:36 18 question, is it anonymous?

04:37 19 But remember that slide -- I won't take  
04:37 20 the time to put it up again -- where Microsoft tried to  
04:37 21 show you the envelope and said the hacker or spy could  
04:37 22 see the address on the envelope?

04:37 23 But I'll be darned if they didn't do again  
04:37 24 what Dr. Johnson did you in the first place: They only  
04:37 25 showed you half of the story. They showed you that you

04:37 1 could see that address that goes across the internet and  
04:37 2 you could see the destination of the server computer,  
04:37 3 but you can't see the address of the person that it's  
04:37 4 intended to reach. That's why it's anonymous.

04:37 5           You didn't even hear them address  
04:37 6 anonymity in PeerNet where you remember the document  
04:37 7 said it is beyond suspicion that when Microsoft's group  
04:37 8 sends a message and you can't tell which group member it  
04:37 9 is, that is anonymity beyond suspicion.

04:37 10           And they say again, well, website. We  
04:37 11 don't really meet the website limitation of the claims.  
04:38 12 But remember, Dr. Jones testified to you and explained  
04:38 13 while how a website is not substantially different from  
04:38 14 what Microsoft does, he explained how it's not different  
04:38 15 and explained to you the function and way and result  
04:38 16 test that shows under the Doctrine of Equivalents that  
04:38 17 there is still infringement.

04:38 18           And despite what Microsoft's lawyer  
04:38 19 attempted to tell you, Dr. Johnson sat on the stand and  
04:38 20 admitted to you under Mr. Caldwell's questioning that he  
04:38 21 had been wrong when he told you that it was  
04:38 22 substantially different, when he told you that it wasn't  
04:38 23 at all the same.

04:38 24           Second question: Is Microsoft's  
04:38 25 infringement willful?

04:38 1 Well, where was the witness who came to  
04:39 2 court and explained why Microsoft believed, when it got  
04:39 3 that letter in 2006, that it didn't infringe?

04:39 4 Where was the witness who explained how  
04:39 5 Microsoft studied that patent and reached a good-faith  
04:39 6 conclusion that it didn't infringe? You never heard  
04:39 7 that testimony because Microsoft has given you no  
04:39 8 excuses for why it continued to infringe the patent from  
04:39 9 2006 until now.

04:39 10 And as far as -- there was some -- some  
04:39 11 confusion you just heard, remember, about the shock of  
04:39 12 what Microsoft told its employees. It wasn't  
04:39 13 necessarily shocking that they don't go out and do a  
04:39 14 bunch of research. But what that Microsoft developer  
04:39 15 told you is they are instructed not to read patents.  
04:39 16 And I suggest to you that's a very different thing.

04:40 17 On the third question: Are the issues of  
04:40 18 the patents invalid? On the Windows NT demonstration  
04:40 19 that you were shown, if it's easy to set up a PPTP  
04:40 20 connection the first time, why didn't they show you  
04:40 21 that? Dr. Short showed you that but Mr. Pall didn't,  
04:40 22 and he didn't because of the complexity of setting up  
04:40 23 that system for the first time.

04:40 24 And what about the BIOS software? It was  
04:40 25 repeated again to you just now. Oh, all that software

04:40 1 was from 1996. The BIOS software was from 2000. Some  
04:40 2 of the software running on his computer was running  
04:40 3 Windows 2000. We heard that this morning.

04:40 4 And the attempt to communicate to eBay,  
04:40 5 which I asked Mr. Pall to do, well, they pointed out to  
04:40 6 you, and maybe quite correctly, they couldn't  
04:40 7 communicate with eBay because they didn't hook their  
04:40 8 demonstration up to the internet.

04:41 9 Why is that; do you think? Dr. Short did.  
04:41 10 We know that the Court provides internet connection in  
04:41 11 this courtroom. You saw Dr. Short using it. Why  
04:41 12 wouldn't Microsoft give its demonstration to you using a  
04:41 13 realistic internet connection?

04:41 14 DVPN. Mr. Sterne testified by deposition,  
04:41 15 but he said he didn't know what was in that  
04:41 16 demonstration. Mr. Kendrick, the same thing. The only  
04:41 17 person you've heard from who was at that demonstration  
04:41 18 was Mr. Saydjari, and he testified to you he wasn't sure  
04:41 19 what was demonstrated and he didn't think they used a  
04:41 20 DNS trigger as the patent called for.

04:41 21 And Aventail, the evidence is undisputed  
04:41 22 that Aventail is point-to-point and that that is not a  
04:41 23 VPN by Judge Davis' definition.

04:41 24 The documents you saw in which people in  
04:42 25 2002 or so described Aventail as being a network, as

04:42 1 being a VPN connection, they didn't have Judge Davis'  
04:42 2 definition about what that phrase means in this case.

04:42 3 And finally, how much is a reasonable  
04:42 4 royalty? Consider these facts: There was a recession  
04:42 5 in 2001. It mostly affected tech companies.

04:42 6 Mr. Munger explained to you how at the  
04:42 7 time he came up with this invention, most people were  
04:42 8 using slow dial-up connections and not the rapid  
04:42 9 connections that they have now.

04:42 10 In short, although the seed of his  
04:42 11 invention had been planted, the tree had not yet grown  
04:42 12 because the need had not yet developed in the way that  
04:42 13 it would in the next few years.

04:42 14 But Mr. Munger never told you that he  
04:42 15 couldn't raise money because of 9/11. He told you that  
04:43 16 he was distracted by working at the FBI headquarters for  
04:43 17 a year.

04:43 18 And finally, there was this strange  
04:43 19 discussion about the timing is not right because that  
04:43 20 they -- they couldn't get money in 2001 and Microsoft  
04:43 21 didn't start using it in 2003.

04:43 22 The timing is perfect. The whole point of  
04:43 23 it is that although Mr. Munger and Dr. Short kept on  
04:43 24 comin' and kept on trying, by the time there was a major  
04:43 25 demand for their invention, Microsoft was already using



04:43 1 it.

04:43 2 And once the largest software company in  
04:43 3 the world starts using your invention, you, as a tiny  
04:43 4 company, are going to have very little opportunity to go  
04:43 5 out there and compete with them unless they're made to  
04:43 6 respect your patent rights.

04:43 7 And finally, did we suggest to you that  
04:43 8 the negotiators with Microsoft in this hypothetical  
04:44 9 negotiation in 2003 would have held out for \$242  
04:44 10 million? Not what anyone said at all.

04:44 11 What Mr. Reed suggested to you is that  
04:44 12 Microsoft and the owners of the patent would have agreed  
04:44 13 to a royalty of one-third of a penny for the sales that  
04:44 14 Microsoft would make in the future.

04:44 15 What he also testified is, if you go back  
04:44 16 and do the arithmetic, which, of course, no one knew at  
04:44 17 that time, but today, because of the enormous amount of  
04:44 18 money that Microsoft has made from using this invention,  
04:44 19 that number would come to a total of \$242 million.

04:44 20 THE COURT: Mr. Cawley, your time's  
04:44 21 expired.

04:44 22 MR. CAWLEY: Thank you.

04:44 23 Ladies of the Jury, I appreciate your  
04:44 24 attention. This is now your time to write the last  
04:44 25 chapter of this story, and we look forward to your

04:44 1 answer.

04:44 2 THE COURT: Thank you, Mr. Cawley.

04:45 3 All right, Ladies of the Jury. It's  
04:45 4 almost 5:45. We're about to send you to deliberate. As  
04:45 5 you'll recall, a week ago we started. You've heard the  
04:45 6 opening statements, all the evidence, the Court's  
04:45 7 charge, the closing arguments of counsel. So now is the  
04:45 8 time that you can go to the jury room and begin your  
04:45 9 deliberations.

04:45 10 I have a few instructions to give you in  
04:45 11 that regard.

04:45 12 First of all, only deliberate if all eight  
04:45 13 of you are in the room. If someone has to leave the  
04:45 14 room for a moment, please stop deliberating. And the  
04:45 15 reason for that is important. Everyone needs to hear  
04:45 16 everything that everyone else has to say. So follow  
04:45 17 that instruction during your deliberations.

04:45 18 If you need to communicate with me, again,  
04:45 19 send a note. If you wish to recess this evening and  
04:45 20 resume tomorrow, please send me a note before you do so  
04:45 21 advising me of your plans and outlining what you intend  
04:46 22 to do.

04:46 23 Then I will send you a note back  
04:46 24 confirming that that is acceptable, which I'm sure it  
04:46 25 will be.

04:46 1                   Again, if you do recess tonight, please  
04:46 2 follow my instructions. Do not discuss the case with  
04:46 3 anyone else. Do not discuss the case among yourselves  
04:46 4 unless you're all together and make no independent  
04:46 5 investigation.

04:46 6                   On behalf of all the parties and the  
04:46 7 Court, I want to thank you immensely for your sacrifice  
04:46 8 of time, energy and attention here this week hearing  
04:46 9 this case. And you are now released to the jury room to  
04:46 10 begin your deliberations.

04:46 11                   COURT SECURITY OFFICER: All rise for the  
04:46 12 jury.

04:47 13                   (Jury out.)

04:47 14                   THE COURT: Please be seated.

04:47 15                   All right. Is there anything further from  
04:47 16 the Plaintiff?

04:47 17                   MR. CAWLEY: I don't think so, Your Honor.

04:47 18                   THE COURT: Okay. From the Defendant?

04:47 19                   MR. POWERS: No, Your Honor.

04:47 20                   THE COURT: All right. Thank you.

04:47 21                   Let me just congratulate both sides for a  
04:47 22 very well tried case from both sides, and we'll be in  
04:47 23 recess awaiting the jury's verdict.

04:47 24                   COURT SECURITY OFFICER: All rise.

04:47 25                   (Jury deliberations.)

04:47 1 (Jury out.)

05:00 2 COURT SECURITY OFFICER: All rise.

05:00 3 THE COURT: Please be seated.

05:00 4 COURTROOM DEPUTY: Judge, I have them here

05:00 5 somewhere.

05:00 6 THE COURT: Excuse me?

05:00 7 COURTROOM DEPUTY: Your notes, did I put

05:00 8 them on the bench?

05:00 9 THE COURT: Yeah, I've got it here.

05:01 10 All right. I have a note from the jury

05:01 11 that just states, We've selected a fore -- foreman.

05:01 12 I don't know how they did that, but...

05:01 13 We will be leaving tonight at 6:30 p.m.

05:01 14 and reside -- resume -- I guess it says reside. I guess

05:02 15 that means resume tomorrow at 9:00 a.m. Thank you.

05:02 16 Signed Laura Warr, Jury Foreperson.

05:02 17 So I'm going to send a note back to them

05:02 18 that just says, That will be fine. Remember my

05:02 19 instructions. Wait until everyone is in the jury room

05:02 20 before you begin in the morning. Have a nice evening.

05:02 21 Any objections?

05:02 22 MR. CAWLEY: No objection from Plaintiff,

05:02 23 Your Honor.

05:02 24 MR. BOBROW: No objection, Your Honor.

05:02 25 THE COURT: All right. Now, I'm going to

05:02 1 -- I'll send this note back in, but they do plan to  
05:02 2 deliberate for another 30 minutes, and so they will be  
05:02 3 leaving around 6:30.

05:02 4           So I'm going to ask around 6:30, if you're  
05:02 5 here, an attorney or anybody in the audience, either be  
05:02 6 gone home by then or be in the courtroom by then so that  
05:02 7 the jury can exit without encountering anyone.

05:02 8           And the same thing in the morning.  
05:02 9 They're going to start back at 9:00, so they'll probably  
05:02 10 be here by -- you know, start arriving at a quarter  
05:02 11 till. So I'll say if you wish to be here in the  
05:02 12 morning, arrive and come to the courtroom before 8:45 or  
05:03 13 come after 9:10 to just allow the jury unfettered  
05:03 14 access.

05:03 15           So I will be here until 6:30, but we won't  
05:03 16 resume unless the jury has another note between now and  
05:03 17 then.

05:03 18           MR. CAWLEY: Will someone let us know when  
05:03 19 they've left?

05:03 20           THE COURT: We will. We'll let you know  
05:03 21 when they leave.

05:03 22           MR. BOBROW: Thank you.

05:03 23           THE COURT: Very well. Be in recess.

05:03 24           COURT SECURITY OFFICER: All rise.

05:03 25           (Jury deliberations continued.)

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CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/ \_\_\_\_\_  
SUSAN SIMMONS, CSR  
Official Court Reporter  
State of Texas No.: 267  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date

/s/ \_\_\_\_\_  
JUDITH WERLINGER, CSR  
Deputy Official Court Reporter  
State of Texas No.: 731  
Expiration Date: 12/31/10

\_\_\_\_\_  
Date

# EXHIBIT G

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Reexamination of: )  
 Edmund Munger, et al. )  
 )  
 U.S. Patent No.: 7,188,180 )  
 Filed: November 7, 2003 ) Examiner:  
 Issued: March 6, 2007 ) Andrew L. Nalven  
 )  
 For: METHOD FOR ESTABLISHING ) Group Art Unit: 3992  
 SECURE COMMUNICATION LINK )  
 BETWEEN COMPUTERS OF )  
 VIRTUAL PRIVATE NETWORK )  
 )  
 Reexamination Proceeding )  
 Control No.: 95/001,270 )  
 Filed: December 8, 2009 )

CERTIFICATE OF SERVICE

WE HEREBY CERTIFY that the Declaration of Jason Nieh, Ph.D., Pursuant to 37 C.F.R. § 1.132, filed with United States Patent and Trademark Office on April 19, 2010, was served this 19th day of April, 2010 on Requester by causing a true copy of same to be deposited as first-class mail for delivery to:

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**Date: April 19, 2010**



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 )  
 Reexamination Proceeding )  
 Control No.: 95/001,270 )  
 Filed: December 8, 2009 )

**Declaration of Jason Nieh, Ph.D., Pursuant to 37 C.F.R. § 1.132**

Pursuant to 37 C.F.R. § 1.132, I declare that the following statements are true to the best of my knowledge, information, and belief, formed after reasonable inquiry under the circumstances.

**Background**

1. I have over 15 years of experience with operating systems and distributed systems. More specifically, my experience includes remote access, computer networking, and computer security. Examples of my experience are evidenced by my publication of papers in top-tier networking and security conferences, service on programming committees for networking and security conferences, awards for research work, and receipt of research grants in the field of networking and security. My qualifications, including a description of all of this information, may be found in my curriculum vitae, which is attached hereto as Exhibit A.

2. I earned a Bachelor of Science degree from the Massachusetts Institute of Technology in Electrical Engineering in 1989. I earned a Masters of Science degree from Stanford University in Electrical Engineering in 1990. I also received my Ph.D. in Electrical Engineering from Stanford University in 1999.

3. I joined Columbia University as a faculty member in 1999, where I am now a tenured Associate Professor in the Department of Computer Science. I am also currently the director of the Network Computer Laboratory at Columbia University.

4. My research interests include mobile computing, operating systems, distributed systems, thin-client computing, web and multimedia systems, and performance evaluation. I have

supervised a number of Ph.D. students who worked on and completed dissertations in the area of networking and security. I also teach courses in advanced operating systems and mobile computing, both of which involve computer networking and security.

5. I have also served as an expert in various litigations in the fields of computer networking and security, which include virtual private networking.

### **Resources I have Consulted**

6. I have been retained by the Patent Owner, VirnetX, Inc., to offer my opinion of the patentability of claims 1, 10, 12-15, 17, 26, 28-31, and 33 of U.S. Patent No. 7,188,180 (“the ‘180 Patent”) in view of the Office Action dated January 19, 2010 (“the Office Action”) received by the Patent Owner in the reexamination of the ‘180 Patent.

7. In preparing this declaration, I have reviewed the ‘180 Patent. I have also reviewed the Office Action. I have also reviewed the Request for *Inter Partes* Reexamination of Patent (“the Request”) to the extent it is adopted by the Office Action. I have also reviewed Appendices A-H to the Request to the extent that they are adopted in the Office Action. Lastly, I have reviewed the references upon which the rejections in the Office Action are based, namely Aventail Connect v3.1/v2.6 Administrator’s Guide (“Aventail”); Microsoft Windows NT Server, Virtual Private Networking: An Overview (“VPN Overview”); IETF RFC 1035 (“RFC 1035”); Kosiur, “Building and Managing Virtual Private Networks” (“Kosiur”); Kaufman, “Implementing IPsec” (“Kaufman”); James M. Galvin, “Public Key Distribution with Secure DNS” (“Galvin”); “Gauntlet® Firewall for Windows NT Administrator’s Guide Version 5.0 (“Gauntlet”); “Microsoft Windows NT Technical Support Hands-on, Self-Paced Training for Supporting Version 4.0” (“Hands-On”); “Microsoft Windows NT Server, Whitepaper: Installing, Configuring, and Using PPTP with Microsoft Clients and Servers” (“Installing NT”); and “Building a Microsoft VPN: A Comprehensive Collection of Microsoft Resources” (“Microsoft VPN”).

8. A detailed explanation of the basis for my opinions is set forth in the remainder of this declaration.

### **Detailed Basis for My Opinion**

#### Secure Domain Name and Secure Domain Name Service

9. As I stated above, I have read the ‘180 Patent and understand independent claims 1, 17, and 33 recite a secure domain name and a secure domain name service.

10. As I read the Office Action and the Request, those documents rely on the erroneous premise that a secure domain name is a domain name that just happens to correspond to a secure computer. Alternatively, the Request and Office Action rely on the faulty position that a secure domain name corresponds to an address that simply requires authorization. These assertions are in clear contradiction of the specification to the ‘180 Patent, which takes pains to explain that a secure domain name is different from a domain name that just happens to be associated with a secure computer or just happens to be associated with an address requiring authorization, as shown in the ‘180 Patent at column 51, lines 18-32. To illustrate, in various implementations,

the '180 Patent describes that a secure domain name is a "a non-standard domain name." Examples of such non-standard domain names are described in Claim 11: .scom, .snet, .sorg, .sedu, .smil, and .sgov. Dependent claim 2 also differentiates between a secure domain name and a non-secure domain name in reciting the step of "automatically generating a secure domain name corresponding to a non-secure domain name." To further illustrate, the '180 Patent describes, at column 51, lines 28-32, that "a query [with a secure domain name] to a standard domain name service (DNS) will return a message indicating that the universal resource locator (URL) is unknown." Thus, the inventors demonstrated that the secure domain name recited in claims 1, 17, and 33 of the '180 Patent cannot be properly read to be a domain name that just happens to be associated with a secure computer or just happens to be associated with an address requiring authorization. As seen from the previous sentences, a secure domain name is different from a domain name that just happens to be associated with a secure computer or secure computer network address. For example, as pointed above, the domain name that just happens to correspond to a secure computer or a domain name that just happens to correspond to an address requiring authentication can be resolved, for example, by a conventional domain name service; whereas, as noted above, a secure domain name cannot be resolved by a conventional domain name service, for example.

11. Furthermore, even if the recitation "secure domain name" is defined according to the Request to mean a domain name corresponding to a secure computer or a domain name corresponding to an address requiring authorization for access, various of the cited documents still fail to describe or suggest this feature. Specifically, the relied upon portions of the cited documents describe domain names of computers that do not require authorization for access. Instead, the computers (*e.g.*, a VPN tunnel server or a PPTP server) of the cited documents are for securing a connection between a client computer and a target computer. To this end, the computers (*e.g.*, a VPN tunnel server or a PPTP server) themselves do not have a secure computer network address because they do not require authorization for access or authorization for a client computer to communicate with them. Any client computer can, without authorization, communicate with one of these alleged computers (*e.g.* a VPN tunnel server or a PPTP server); it is the target computer that may require authorization for access. Therefore, neither the domain name of the alleged computers (*e.g.*, a VPN tunnel server or a PPTP server) nor their corresponding computer network address is secure – even if this term is defined according to the Request. As such, these cited documents do not teach a secure computer network address or, correspondingly, a secure domain name.

12. Similarly, the Request and Office Action rely on the faulty position that a secure domain name service is nothing more than a conventional DNS server that happens to resolve domain names of secure computers. Alternatively, the Request and Office Action also rely on the faulty position that a secure domain name service is nothing more than a conventional DNS server that happens to resolve domain names of computers that are used to establish a secure connection, such as a VPN tunnel server or a PPTP server. Again, these arguments are belied by the '180 Patent itself. The specification of the '180 Patent, including column 51, lines 29-45 and column 52, lines 4-26, clearly teaches that the claimed secure domain name service of claims 1, 17, and 33 is unlike a conventional domain name service, which the inventors understood as including both DNS and DNS with public key security according to column 40, lines 6-17 of the '180 Patent. To illustrate, the '180 Patent explicitly states that a secure domain name service can resolve addresses for a secure domain name; whereas, a conventional domain name service

cannot resolve addresses for a secure domain name: in an embodiment described at column 51, lines 18-45, the '180 Patent states that "[b]ecause the secure top-level domain name is a non-standard domain name, a query to a standard domain name service (DNS) will return a message indicating that the universal resource locator (URL) is unknown." A secure domain name service is not a domain name service that resolves a domain name query that, unbeknownst to the secure domain name service, happens to be associated with a secure domain name. A secure domain name service of the '180 Patent, instead, recognizes that a query message is requesting a secure computer network address and performs its services accordingly. Furthermore, in various implementations, the '180 Patent describes a secure domain name service as providing additional functionalities not available with a conventional domain name service, as described above in the '180 Patent at column 52, lines 4-26. The '180 Patent, at column 40, lines 6-17, even describes the drawbacks of the conventional scheme of a traditional DNS and public key security:

One conventional scheme that provides secure virtual private networks over the Internet provides the DNS server with the public keys of the machines that the DNS server has the addresses for. This allows hosts to retrieve automatically the public keys of a host that the host is to communicate with so that the host can set up a VPN without having the user enter the public key of the destination host. One implementation of this standard is presently being developed as part of the FreeS/WAN project (RFC 2535).

The conventional scheme suffers from certain drawbacks. For example, any user can perform a DNS request. Moreover, DNS requests resolve to the same value for all users.

Thus, it is my belief that the secure domain name service recited in claims 1, 17, and 33 of the '180 Patent is different from a conventional domain name service that resolves a domain name query that, unbeknownst to the secure domain name service, happens to be requesting resolution of a secure domain name.

13. Given my statements above, I do not believe that the references cited in the Office Action teach or disclose the secure domain name and secure domain name service recited in claims 1, 17, and 33.

#### The Aventail Reference

14. After reviewing the Aventail reference, I understand Aventail to disclose a system and architecture for transmitting data between two computers using the SOCKS protocol. The system according to Aventail routes certain, predefined network traffic from a WinSock (Windows sockets) application to an extranet (SOCKS) server, possibly through successive servers. Upon receipt of the network traffic, the SOCKS server is disclosed to transmit the network traffic to the Internet or external network. Aventail's disclosure is limited to connections created at the socket layer of the network architecture.

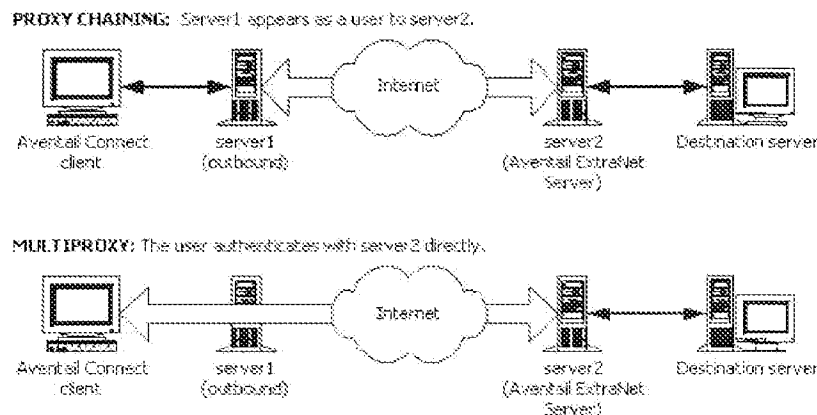
15. I note that pages 9-12 of Aventail discuss the basics of the operation of Aventail Connect, the software necessary to implement the system disclosed in Aventail. According to page 9 of Aventail, a component of the Aventail Connect software described in the reference resides between WinSock and the underlying TCP/IP stack. Accordingly, the Aventail Connect

software is disclosed to intercept all connection requests from the user, and determines whether each request matches local, preset criteria for redirection to a SOCKS server.

16. According to page 12 of Aventail, if redirection is appropriate, then Aventail Connect creates a false DNS entry to return to the requesting application. Aventail discloses that Aventail Connect then forwards the destination hostname identified in the DNS request to the extranet SOCK server over a SOCKS connection.

17. Although Aventail is generally silent on the operation of the SOCKS server, I understand from page 12 that the SOCKS server performs the hostname resolution. Once the hostname is resolved, the user can transmit data over a SOCKS connection to the SOCKS server. The SOCKS server, then, separately relays that transmitted data to the target.

18. Page 12 of the Request, adopted by the Examiner in the Office Action, also cites the “Proxy Chaining” and “MultiProxy” modes disclosed in Aventail at pages 68-73. I have reproduced below a figure taken from page 72 of Aventail depicting these two modes.



19. In the “Proxy Chaining” mode, Aventail discloses that a user can communicate with a target via a number of proxies such that each proxy server acts as a client to the next downstream proxy server. As shown above, in this mode, the user does not communicate directly with the proxy servers other than the one immediately downstream from it.

20. In the “MultiProxy” mode, Aventail discloses that the user, via Aventail Connect, connects through each successive proxy server directly.

21. Regardless of whether one of these modes is enabled, as shown in the figure, an external SOCKS server is necessary and the operation of Aventail Connect, for the purposes of my opinion, does not materially differ based on whether one of these modes is enabled.

22. The Office Action at page 6 asserts that a hostname (*e.g.*, the alleged secure domain name) is secure because this traffic is routed through a SOCKS server and utilizes authentication methods and in some cases encryption. It thus interprets a secure domain name to be a domain name associated with a secure computer. This is incorrect for the reasons I stated in ¶¶ 9-12.

23. The Office Action at page 7 also suggests that a DNS server that can resolve addresses of secure computers corresponds to a secure domain name service. Aventail has not been shown

to teach anything more than a conventional DNS. As I stated in ¶¶ 9-12, however, a secure domain name service cannot be properly read to be a conventional domain name service. A secure domain name service is not a domain name service that resolves a domain name query that, unbeknownst to the secure domain name service, happens to be requesting resolution of a secure domain name.

24. The Request at page 15 also asserts that Aventail discloses two look-up services, alleged to be described on pages 8 and 12 of that reference. On page 8, Aventail discloses the traditional protocol for a computer to connect to a remote host. On page 12, Aventail discloses “forward[ing] the host-name to the extranet (SOCKS) server [where] the SOCKS server performs the hostname resolution.” Here, Aventail has not been shown to disclose anything other than a traditional DNS. As I stated in ¶¶ 9-12, however, a secure domain name service is unlike a conventional domain name service. A secure domain name service is not a domain name service that resolves a domain name query that, unbeknownst to the secure domain name service, happens to be requesting resolution of a secure domain name. As such, Aventail fails to teach a secure domain name and a secure domain name service, as recited in claims 1, 17, and 33.

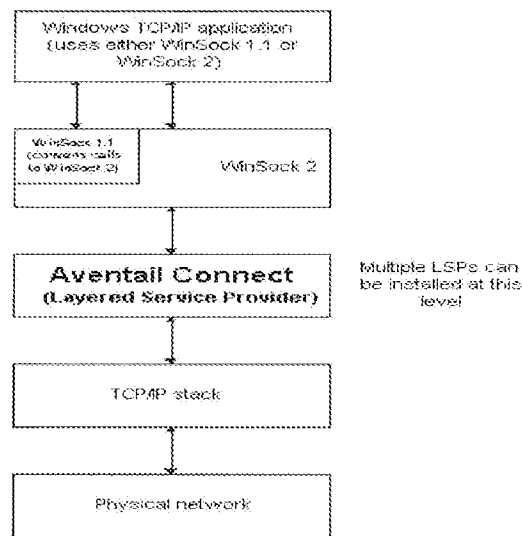
25. Aventail also has not been shown to teach sending an access request message to a secure computer network address using a virtual private network communication link, as recited in claims 1, 17, and 33. The links created by the systems and methods disclosed in Aventail differ from the virtual private network communication link recited in claims 1, 17, and 33. First, Aventail has not been shown to demonstrate that computers connected via the Aventail system are able to communicate with each other as though they were on the same network. Aventail discloses establishing point-to-point SOCKS connections between a client computer and a SOCKS server. The SOCKS server then relays data received to the intended target. Aventail does not disclose a virtual private network, as recited in claims 1, 17, and 33, where data can be addressed to one or more different computers across the network, regardless of the location of the computer.

26. For example, suppose two computers, A and B, reside on a public network. Further, suppose two computers, X and Y, reside on a private network. If A establishes a VPN connection with X and Y’s network to address data to X, and B separately establishes a VPN connection with X and Y’s network to address data to Y, then A would nevertheless be able to address data to B, X, and Y without additional set up. This is true because A, B, X, and Y would all be a part of the same virtual private network.

27. In contrast, suppose, according to Aventail, which only discloses communications at the socket layer, A establishes a SOCKS connection with a SOCKS server for relaying data to X, and B separately establishes a SOCKS connection with the SOCKS server for relaying data to Y. In this situation, not only would A be unable to address data to Y without establishing a separate SOCKS connection (*i.e.* a VPN according to the Office Action), but A would be unable to address data to B over a secure connection. This is one example of how the cited portions of Aventail fail to disclose a virtual private network.

28. Second, according to Aventail, Aventail Connect’s fundamental operation is incompatible with users transmitting data that is sensitive to network information. As stated

above, Aventail discloses that Aventail Connect operates between the WinSock and TCP/IP layers, as depicted on page 9:



Because Aventail discloses that Aventail Connect operates between these layers, it can intercept DNS requests. Aventail discloses that Aventail Connect intercepts certain DNS requests, and returns a false DNS response to the user if the requested hostname matches a hostname on a user-defined list. Accordingly, Aventail discloses that the user will receive false network information from Aventail Connect for these hostnames. If the client computer hopes to transfer to the target data that is sensitive to network information, Aventail Connect's falsification of the network information would prevent the correct transfer of data. Thus, Aventail has not been shown to disclose a VPN, as recited in claims 1, 17, and 33.

29. Third, Aventail has not been shown to disclose a VPN, as recited in claims 1, 17, and 33, because computers connected according to Aventail do not communicate directly with each other. Aventail discloses a system where a client on a public network transmits data to a SOCKS server via a singular, point-to-point SOCKS connection at the socket layer of the network architecture. The SOCKS server then relays that data to a target computer on a private network on which the SOCKS server also resides. All communications between the client and target stop and start at the intermediate SOCKS server. The client cannot open a connection with the target itself. Therefore, one skilled in the art would not have considered the client and target to be virtually on the same private network. Instead, the client computer and target computer are deliberately separated by the intermediate SOCKS server.

#### The VPN Overview and RFC 1035 References

30. According to its abstract, VPN Overview provides an overview of VPNs, describing their basic requirements, and some of key technologies that permit private networking over public networks. For example, referring to FIG. 2 of VPN Overview, which I have reproduced below, a VPN is shown to connect a remote user to a corporate Intranet.

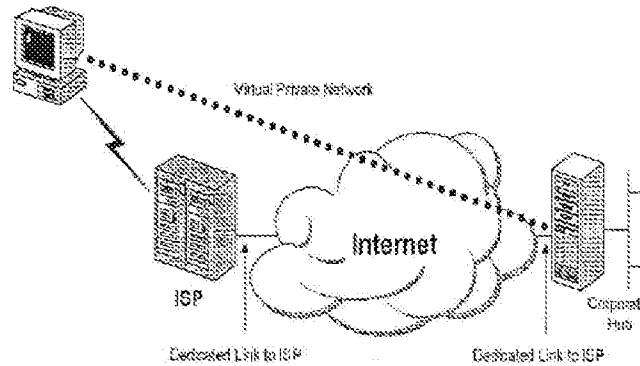


Figure 2: Using a VPN to connect a remote client to a private LAN

To this end, according to page 8 of VPN Overview, a user calls a local ISP and using the connection to the local ISP, the VPN software creates a virtual private network between the dial-up user and the corporate VPN server across the Internet.

31. VPN Overview provides no indication that the client is sending a domain name to the Front End Processor (“FEP”) to establish a connection; instead, the indication is that the client is establishing a dial-up connection to the FEP. At page 22, VPN Overview states “[i]n the Internet example, the client computer places a dial-up call to a tunneling-enabled NAS at the ISP.” Even assuming for the sake of argument that the alleged domain name is sent from the client to the FEP, the VPN Overview provides no evidence that the alleged domain name is a secure domain name in the context of this application. As I stated in ¶¶ 9-12, a secure domain name, as recited in claims 1, 17, and 33 of the ‘180 Patent, is not a domain name that just happens to be associated with a computer used to establish a secure connection. The Request also alleges that VPN Overview describes a secure domain name because the domain name for the VPN tunnel server happens to correspond to a network address allegedly requiring authentication. As I stated in ¶¶ 9-12, however, a secure domain name is not a domain name that so happens to correspond to a network address for a server involved in securing communications.

32. The domain name of the VPN tunnel server is also not a secure domain name, even if this recitation is incorrectly defined according to the Request. The Request asserts that a secure domain name corresponds to a secure computer network address. However, the address of the VPN tunnel server is not a secure computer network address, for the reasons I stated in ¶ 11. Assuming for the sake of argument that the Request correctly interprets a secure computer network address to be associated with a computer which requires authorization for access, then, without authorization for access, a client computer cannot communicate with a secure computer network address. In VPN Overview, however, a client computer may communicate with a VPN tunnel server without pre-authorization to access the hosts protected by the VPN tunnel server. Thus, because the VPN tunnel server of the reference does not require authorization for access, it is not associated with a secure computer network address, and therefore also cannot be associated with a secure domain name.

33. VPN Overview also has not been shown to teach a secure domain name service. VPN Overview, on page 26, describes that redundancy and load balancing is accomplished using round-robin DNS to split requests among a number of VPN tunnel servers that share a common



security perimeter. The round-robin DNS, however, is no different from a conventional DNS. As I stated in ¶¶ 9-12, however, a secure domain name service is not a conventional DNS. Specifically, a secure domain name service is not a domain name service that resolves a domain name query that, unbeknownst to the secure domain name service, happens to be requesting resolution of a secure domain name.

34. The proposed combination of VPN Overview and RFC 1035 has not been shown to describe or suggest a secure domain name and a secure domain name service as recited in claims 1, 17, and 33. RFC 1035, at page 4, describes user programs that interact with the domain name space through resolvers; the format of user queries and user responses is specific to the host and its operating system. User queries will typically be operating system calls, and the resolver and its cache will be part of the host operating system. Resolvers answer user queries with information they acquire via queries to foreign name servers and the local cache.

35. Even assuming for the sake of the argument that this description supports the allegation that the user query corresponds to a domain name and the resolver corresponds to a domain name service, RFC 1035 still fails to describe or suggest a secure domain name and a secure domain name service, as I outlined in ¶¶ 9-12 above. RFC 1035 is not seen to show anything other than a conventional DNS.

36. The Request also points to no evidence that distinguishes the alleged DNS of RFC 1035 from a conventional DNS. Instead, the Request merely states that RFC 1035, on page 22, discloses that the domain name is sent to a domain name service for resolution and then passed back the IP address. As stated above in ¶¶ 9-12, a secure domain name service is unlike a conventional DNS. Specifically, a secure domain name service is not a domain name service that resolves a domain name query that, unbeknownst to the secure domain name service, happens to be requesting resolution of a secure domain name. As such, the proposed addition of subject matter from RFC 1035 fails to remedy the shortcomings of VPN Overview to describe or suggest a secure domain name or secure domain name service, as recited in claims 1, 17, and 33.

37. Furthermore, the proposed combination of the VPN Overview and RFC 1035 also fails to describe or suggest a secure domain name or a secure domain name service even if these recitations are incorrectly defined as suggested by the Request. The Request, at pages 21-22, asserts that the secure domain name corresponds to a secure computer network address, and a secure domain name service corresponds to a lookup service that returns a secure network address for the requested secure domain name. The proposed combination of the VPN Overview and RFC 1035, in fact, does not teach these features.

38. The proposed combination of the VPN Overview and RFC 1035, at best, shows a DNS server that can allegedly receive the domain name of the VPN tunnel server and can allegedly resolve and return the IP address for the domain name of the VPN tunnel server. As noted above, the issue is that the purpose of the VPN tunnel server is to secure a connection to resources behind the VPN tunnel server. To this end, for the reasons I stated in ¶ 11, the VPN tunnel server itself is not secure – that is, it does not require authorization for access. Therefore, neither the domain name of the VPN tunnel server nor its corresponding computer network address is secure – even if this term is defined as proposed by the Request.

39. As such, even under the Request's incorrect claim interpretation, the proposed combination of the VPN Overview and RFC 1035 has not been shown to describe or suggest a secure domain name or a secure domain name service, as recited in claims 1, 17, and 33.

#### The Kosiur Reference

40. Kosiur has not been shown to describe or suggest a secure domain name or a secure domain name service, as recited in claims 1, 17, and 33. At pages 295-96, Kosiur describes protecting external access to a company's intranet by establishing two corporate DNS servers: one external to the firewall and one internal. The external corporate DNS includes a list of hosts that the company permits the public to access, such as, for example, the company's e-mail gateway, public web site, and anonymous FTP server. The internal corporate DNS includes a list of hosts that only the company's internal network users are permitted to access. When an internal host attempts to access an external host, the internal DNS server forwards the DNS request to the external DNS server. In the reverse, however, if an external host attempts to access an internal host, then the external host must connect to the internal DNS server through a VPN.

41. Although Kosiur describes a domain name, it does not describe a secure domain name, as recited in claims 1, 17, and 33. The Request asserts that Kosiur discloses "domain name usage with VPN enabled servers and computers." These domain names, the Request asserts, are "secure" because the domain names correspond to a network address that requires authentication. This is incorrect. Such a reading of a claim is contrary to its meaning and reads out a critical aspect of the invention. For the reasons I stated in ¶¶ 9-12, a secure domain name is not a domain name that just happens to correspond to a network address that requires authentication.

42. Kosiur has also not been shown to disclose a secure domain name service, as recited in claims 1, 17, and 33. The Request alleges that a secure domain name service is a look-up request to a domain name service to resolve a domain name identifying VPN resources. Kosiur describes an internal DNS and an external DNS for resolving addresses of internal hosts and external hosts respectively. Kosiur has not been shown to disclose that either the internal or external DNS is different from a conventional DNS. Further, the Request provides no evidence that the DNS disclosed by Kosiur is different from a conventional DNS. The Request, at page 28 simply states that "Kosiur discloses at pages 293-296 that domain name resolution occurs at DNS servers. The DNS servers pass back the corresponding network address." Thus, Kosiur has not been shown to disclose anything other than a conventional DNS, and, as I stated in ¶¶ 9-12, a secure domain name service is not a conventional domain name service. Specifically, a secure domain name service is not a domain name service that resolves a domain name query that, unbeknownst to the secure domain name service, happens to be requesting resolution of a secure domain name.

43. As such, Kosiur has not been shown to teach a secure domain name or a secure domain name service, as recited in claims 1, 17, and 33.

The Kaufman Reference

44. At page 2, Kaufman discloses the use of IPsec to secure communications through the Internet using authentication and encryption. At page 128, Kaufman also describes a domain name service being an integral part of the Internet and of any normal IP network. At page 243, the domain name service is described as a protocol used to support hierarchical resolution of host names to IP addresses (and vice versa) in the Internet. Kaufman also describes that a layer 2 tunneling protocol allows a host to establish a virtual presence on a corporate network over a remote connection. Because the tunnel is at layer 2 and terminates on a home gateway, the remote host can receive an IP address internal to its home network. The Request alleges that an IPsec connection request over the Internet for a secured resource can use, for example, a DNS server to resolve the request. Even assuming, *arguendo*, this assertion is correct, it falls short of describing a secure domain name or a secure domain name service, as recited in claims 1, 17, and 33.

45. Kaufman has not been shown to teach or disclose a secure domain name, as recited in claims 1, 17, and 33. Similar to previous assertions, the Request suggests that Kaufman describes a secure domain name simply because it describes a domain name corresponding to a network address involving security (*e.g.* a computer protected by a home network). As I stated in ¶¶ 9-12, however, a secure domain name cannot be properly read to be a domain name that just happens to be associated with a computer network address requiring authentication because this interpretation is inconsistent with the meaning adopted by the inventors of the '180 Patent.

46. Kaufman also has not been shown to describe or suggest a secure domain name service, as recited in claims 1, 17, and 33. The Request, at page 32, alleges that a “‘secure domain name service’ includes any lookup service that resolves a secure domain name.” Assuming, for the sake of argument, that Kaufman discloses a secure domain name, Kaufman has not been shown to disclose a secure domain name service because it has only been shown to disclose a conventional DNS. As I provided in ¶¶ 9-12, a secure domain name service is unlike a conventional DNS. Specifically, a secure domain name service is not a conventional DNS that resolves a domain name query that, unbeknownst to the secure domain name service, happens to be requesting resolution of a secure domain name.

47. The Request also seems to allege that Kaufman’s disclosure of DNS Security (“DNSSEC”) is a secure domain name service. To the extent Kaufman even discloses DNSSEC, that protocol merely teaches protecting the integrity of the traditional DNS resolution process. This “conventional scheme” of protecting the integrity of DNS resolution is also explicitly disclosed in column 40, lines 6-14 of the specification of the '180 Patent as being conventional:

One conventional scheme that provides secure virtual private networks over the Internet provides the DNS server with the public keys of the machines that the DNS server has the addresses for. This allows hosts to retrieve automatically the public keys of a host that the host is to communicate with so that the host can set up a VPN without having the user enter the public key of the destination host. One implementation of this standard is presently being developed as part of the FreeS/WAN project (RFC 2535).

As I noted above, the inventors had explicitly contemplated this “conventional scheme” of performing DNS resolution, and nevertheless claimed a secure domain name service as being something different. The addition of security to protect the integrity of a traditional DNS look-up does not teach a secure domain name service for the same reasons as I identified in ¶¶ 9-12.

48. Kaufman has not been shown to describe or suggest a secure domain name or a secure domain name service as recited in claims 1, 17, and 33.

#### The Kaufman and Galvin References

49. I incorporate here my statements made immediately above in ¶¶ 42-46 regarding Kaufman.

50. According to page 38 of the Request, Galvin is cited to teach “a second type of ‘secure domain name service’ that includes digitally signed resource records.” Galvin at §§ 1 and 3.2 discloses using a public key in the DNS resolution process to protect the integrity of the process. This “conventional scheme” protecting the integrity of DNS resolution is also explicitly disclosed in column 40, lines 6-14 of the specification of the ‘180 Patent:

One conventional scheme that provides secure virtual private networks over the Internet provides the DNS server with the public keys of the machines that the DNS server has the addresses for. This allows hosts to retrieve automatically the public keys of a host that the host is to communicate with so that the host can set up a VPN without having the user enter the public key of the destination host. One implementation of this standard is presently being developed as part of the FreeS/WAN project (RFC 2535).

Thus, the inventors had explicitly contemplated this “conventional scheme” of performing DNS resolution, and nevertheless claimed a secure domain name service as being something different.

51. This aspect of Galvin does not teach the secure domain name service recited in claims 1, 17, and 33. The Request assumes that a “secure domain name service” is a conventional domain name service which issues a public key to ensure that the service is trustworthy. As I stated above, however, in ¶¶ 9-12, disclosure of a conventional domain name service does not disclose a secure domain name service. The addition of a public key to ensure the integrity of a DNS look-up does not teach a secure domain name service. As such, Galvin fails to remedy the shortcomings of Kaufman to describe or suggest a secure domain name service as recited in claims 1, 17, and 33.

#### The Gauntlet Reference

52. According to Gauntlet at page 1-1, “[a] firewall is a single point of defense that protects one side from the other. In networking situations, this usually means protecting a company’s private network from other networks to which it is connected.” Gauntlet teaches a system that prohibits all network traffic through the firewall unless it is “expressly permitted.”

53. The disclosed firewall operates as follows, as described on pages 1-6 to 1-8. The firewall necessarily must see the network traffic communicating with the protected side of the wall, *i.e.*, the private network. After receiving a packet, the firewall checks the source and destination address of the packet against its user-defined rules, and then checks the type of request sought. If the requested service is supported and authorized, the appropriate program is called and the request is processed.

54. According to pages 5-1 to 5-2, when determining if access should be permitted or denied, the firewall checks the IP address provided in the packet request against the user-provided rules. The rules can be defined by hostname or by IP address. Because the received packet identifies sources and destinations by IP addresses, if the rule is defined by hostname, additional steps are taken to convert an IP address identified in the packet to a hostname. In other words, “the proxy must use DNS to map the source or destination address (in the packet) into a host name” – the proxy performs a reverse DNS lookup.

55. According to chapter 18 of Gauntlet, the Gauntlet firewall also offers Point-to-Point Tunneling Protocol (“PPTP”) services to permit clients on an untrusted network to establish connection to a PPTP server on the protected network. To allow PPTP connections, however, the administrator of the firewall “must advertise the IP address of the PPTP server” and users “must connect directly to the server IP address.” To “advertise” an IP address, as used in Gauntlet, merely requires that the IP address be accessible to the public.

56. The Request alleges that, since PPTP connections can be identified using domain names, where a domain name corresponds to a PPTP enabled server, its domain name is a secure domain name. As I stated in ¶¶ 9-12, a secure domain name cannot be properly read to be a domain name that just happens to be associated with a server which is used to establish PPTP connections between a client and a target.

57. Similarly, to the extent that Gauntlet describes a conventional DNS, a secure domain name service cannot be properly read to be a conventional DNS. The Request alleges that, since PPTP connections can be identified using domain names, where a domain name corresponds to a PPTP enabled server, its domain name is a secure domain name, and the resolution of that domain name into a network address occurs at a secure domain name service. First, Gauntlet discloses at 18-1 that the administrator of the firewall “must advertise the IP address of the PPTP server” and users “must connect directly to the server IP address.” Gauntlet has not been shown to disclose a DNS resolution for a hostname for a PPTP server. Second, to the extent that Gauntlet describes a DNS, it describes a conventional DNS and not a secure DNS. As noted at the outset of Section I.C., a secure domain name service differs from a conventional DNS, as I demonstrated in ¶¶ 9-12.

58. The Request also alleges that the use of a PPTP service, offered by the Gauntlet firewall software, requires the use of a PPTP server whose network address is a secure computer network address. The Gauntlet firewall offers PPTP services to permit clients on an untrusted network to establish connection to a PPTP server on the protected network. The network address of a PPTP server, however, is not a secure computer network address because it does not require authorization for access, as I stated above in ¶ 11. That is, a client can communicate with the PPTP server without authorization.

The Hands-On and Installing NT References

59. Installing NT is a white paper on the PPTP network protocol. According to pages 20-22, Installing NT discloses the creation of a phonebook entry to dial a PPTP server. The Request refers to Figure 12 in that reference to disclose a domain name for a PPTP server; the Figure is reproduced below:

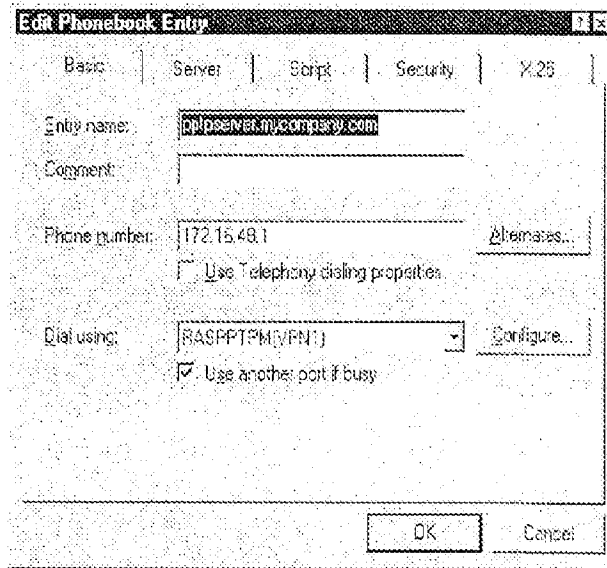


Figure 12 - Example Phonebook entry for PPTP server and a VPN device

The Request, at pages 47-48, refers to this figure to state that “PPTP connections can be identified using domain names” by indicating that the “Entry name” in the Figure is the domain name. This is incorrect. The “Entry name” is simply an arbitrary name to identify the Phonebook entry. It does not *correspond* to a domain name of a PPTP server that would be resolved to via a “traditional DNS server” to the network address of the PPTP server, as asserted on page 48 of the Request.

60. Hands-On is a technical and training manual for Microsoft Windows NT. The Request describes Hands-On as disclosing PPTP, traditional DNS according to RFC 1035, and an AutoDial feature, which I describe below.

61. The Request alleges that Installing NT teaches that a name for a PPTP server is a “secure domain name.” The Request, at page 47, asserts that a PPTP server’s network address is a secure network address and that identifying the PPTP server with a domain name teaches a “secure domain name.” To the contrary, such an arbitrary identification is not a secure domain name. As I demonstrated above in ¶¶ 9-12, a secure domain name cannot be properly read to be a domain name that just happens to be associated with a server which is used to establish PPTP connections between a client and a target. Neither the Office Action nor the Request demonstrate any aspect of Installing NT that teaches or discloses anything other than a domain name that just happens to be associated with a PPTP server.

62. Hands-On similarly has not been shown to describe this feature. Notably, the Request does not rely on this reference to show this feature. Nevertheless, for the reasons I stated in ¶¶ 9-

12, to the extent that Hands-On discloses domain names, such a disclosure does not teach or disclose a secure domain name, as recited in claims 1,17, and 33.

63. The Request also alleges that Hands-On discloses a secure domain name service. The Request asserts that Hands-On discloses two “lookup services” that allegedly disclose the secure domain name service recited in claims 1, 17, and 33. The first one is a “traditional DNS server.” According to the Request, sending a query message to a traditional DNS to resolve the domain name of the PPTP server disclosed in Installing NT (and described above) renders the traditional DNS a secure domain name service. As I stated previously at ¶¶ 9-12, a conventional DNS is not transformed into a secure domain name service by merely resolving a query, that, unbeknownst to the secure domain name service, is requesting the address of a PPTP server.

64. The second “look-up service” disclosed in Hands-On also does not disclose the secure domain name service of claims 1, 17, and 33. This “alternative ‘lookup service’” is called AutoDial. According to Hands-On at 462, AutoDial “maps and maintains network addresses to phonebook entries” such that, when an application or command requests access to an IP address, the client computer will match that network address to the phonebook entry and dial the phone number associated with that network address. Although an AutoDial database can include IP addresses and Internet host names, these addresses are each associated with a phonebook entry, which provides a phone number to be dialed for connecting with said IP addresses and Internet host names. Thus, AutoDial is not disclosed to resolve domain names to IP addresses, much less to resolve a secure domain name into a secure computer network address. Nevertheless, even assuming for the sake of argument that AutoDial were shown to teach a conventional DNS, a conventional DNS does not teach a secure domain name service, as I described in ¶¶ 9-12 above.

65. The Request also alleges that, because a PPTP server, which enables a PPTP connection between a client and a target, may be referenced by a domain name, its domain name is a “secure domain name” and its network address is a “secure computer network address.” The network address for a PPTP server is not a secure network address because a client can communicate with the PPTP server without authorization, as I stated above in ¶ 11.

#### The Microsoft VPN Reference

66. Microsoft VPN is a compilation of various Microsoft documents. As identified by the Request at page 52, Microsoft VPN discloses PPTP connections for remote users to access a corporate network. Microsoft VPN discloses at page 32, creating an IP address or host name of a corporate office “VPN” server. Microsoft VPN also discloses a conventional DNS structure at pages 64-66. Microsoft VPN, however, has not been shown to teach or disclose a secure domain name or a secure domain name service, as recited in claims 1, 17, and 33.

67. The Request asserts that the hostname associated with a PPTP server, which is used to establish PPTP connections between a client and a target computer is a secure domain name. This is incorrect. A secure domain name cannot be properly read to be a domain name that just happens to be associated with a server which is used to establish PPTP connections between a client and target, as I stated above in ¶¶ 9-12.

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68. The Request, at page 54, also alleges that, since Microsoft VPN discloses a conventional DNS, which resolves domain names, a DNS request for the IP address for a PPTP server renders the traditional DNS a secure domain name service. A conventional DNS is not transformed into a secure domain name service merely by resolving a request for the IP address of a server which is used to establish PPTP connections. As I stated in ¶¶ 9-12, above, disclosure of a conventional DNS does not disclose a secure domain name service, as recited in claims 1, 17, and 33.

69. The Request, at page 54, also alleges that the network address of a PPTP server, which enables a PPTP connection between a client and a target, is a "secure computer network address." The network address for a PPTP server is not a secure network address because a client can communicate with the PPTP server without authorization, as I stated above in ¶ 11. Further, because it does not have a secure computer network address, its domain name cannot be secure domain name.

#### **Truth and Accuracy of Statements**

70. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that willful false statements or the like may jeopardize the validity of the application or any patent issuing thereon.

Signed at New York, New York this 19 th day of April, 2010.

  
\_\_\_\_\_  
Jason Nieh, Ph.D.

BST99 1647647-6.077580.0090



# EXHIBIT A

# Jason Nieh - Curriculum Vitae

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## RESEARCH INTERESTS

Mobile computing, operating systems, distributed systems, thin-client computing, web and multimedia systems, and performance evaluation.

## EDUCATION

Ph.D. Electrical Engineering, **Stanford University**, Stanford, CA, June 1999. Dissertation: "The Design, Implementation, and Evaluation of SMART: A Scheduler for Multimedia Applications", advisor Monica S. Lam.

M.S. Electrical Engineering, **Stanford University**, Stanford, CA, June 1990.

B.S. Electrical Engineering, **Massachusetts Institute of Technology**, Cambridge, MA, June 1989. Dissertation: "Using Special-Purpose Computing to Examine Chaotic Behavior in Nonlinear Mappings", advisor Gerald J. Sussman.

## HONORS

*IBM Faculty Award*, 2004, 2006, 2008.

*LISA Best Student Paper Award*, 2005.

*Sigma Xi Young Investigator Award*, 2004. Awarded biennially to one individual for scientific achievement in the physical sciences and engineering. First computer scientist to receive this national award.

*ACM MobiCom Best Student Paper Award*, 2004.

*Distinguished Faculty Teaching Award, Columbia Engineering School Alumni Association*, 2004. Awarded to the top two instructors in the School of Engineering and Applied Science at Columbia University.

*IBM Shared University Research (SUR) Award*, 2000, 2004.

*IBM Performance Modeling and Analysis PIC Best Paper Award*, 2004.

*Department of Energy Early Career Principal Investigator Award*, 2003.

*National Science Foundation Faculty Early Career Development (CAREER) Award*, 2001.

*Sun Microsystems SAM Award*, 1994.

*GE Foundation Fellowship*, 1989.

*California Microelectronics Fellowship*, 1989 (declined).

*AT&T Engineering Scholarship*, 1986-1989.

*Member, Eta Kappa Nu*, 1988.

*Member, Sigma Xi*, 1988.

*Member, Tau Beta Pi*, 1988.

## PROFESSIONAL EXPERIENCE

Associate Professor of Computer Science, **Columbia University**, New York, NY, 2003 - present.

Director, Network Computing Laboratory, **Columbia University**, New York, NY, 2000 - present.

Founder, **Guitar Notes, Inc.**, New York, NY, 1996 - present.

Expert Witness, *01 Communique Laboratory v. Citrix Systems*, **Goodwin Procter**, Boston, MA, 2006 - 2008.

Chief Scientist, **DeskTone**, Chelmsford, MA, 2006 - 2007.

1<sup>st</sup> Scholar in Residence, **VMware**, Palo Alto, CA, 2006 - 2007.

Consultant, *Rothschild Trust v. Citrix Systems*, **Goodwin Procter**, Boston, MA, 2006.

Technical Advisor, *Microsoft Consent Decree*, **States of NY, OH, IL, KY, LA, MD, MI, NC, and WI**, 2003 - 2006.

Expert Witness, *Cox v. Microsoft*, **Milberg Weiss Bershad and Schulman**, New York, NY, 2005 - 2006.

Assistant Professor of Computer Science, **Columbia University**, New York, NY, 1999 - 2003.

Chairman of Technology Office and Director, **TrueMetrix**, New York, NY, 1999 - 2000.

Technical Consultant, **Vertex Management**, Redwood Shores, CA, 1996 - 1997.

Academic Consultant, **Sun Microsystems Laboratories**, Mountain View, CA, 1993 - 1998.

Research Assistant, Dept. of Electrical Engineering, **Stanford University**, Stanford, CA, 1990 - 1998.

Summer Institute in Parallel Computing, **Argonne National Laboratories**, Argonne, IL, 1991.

Undergraduate Researcher, **Massachusetts Institute of Technology**, Cambridge, MA, 1987 - 1989.

Summer Intern, **AT&T Bell Laboratories**, Lincroft, Middletown, and Murray Hill, NJ, 1986 - 1988.

**RESEARCH SUPPORT** (all co-principal investigators at Columbia University unless otherwise noted)

1. Principal Investigator, "TC:Small: Exploiting Software Elasticity for Automatic Software Self-Healing", Trustworthy Computing Program, **National Science Foundation**, CNS-0914845, \$450,000, Sept. 1, 2009 - Aug. 31, 2012, with Angelos D. Keromytis.
2. Co-Principal Investigator, "CSR: Medium: Guanyin: a Thousand hands with a Thousand eyes for Distributed Software Checking", Computer Systems Research Program, **National Science Foundation**, CNS-0905246, \$1,102,000, Sept. 1, 2009 - Aug. 31, 2013, with Junfeng Yang and Gail E. Kaiser.
3. Principal Investigator, "Google Desktop Meets DejaView: Display-Centric Desktop Search", Google Research Award, **Google**, \$70,000, Sept. 1, 2009 - Aug. 31, 2010, with Luis Gravano.
4. Principal Investigator, "Android G1 Dev Phone Equipment Grant", **Google**, \$23,940, Sept. 2009.
5. Principal Investigator, "DejaView / Android Development", Center for Advanced Technology in Telecommunications (CATT), **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$20,000, Sept. 1, 2009 - Feb. 28, 2010.
6. Principal Investigator, "GOALI Supplement to CSR-VSM: Autonomic Mechanisms for Reducing System Downtime due to Maintenance and Upgrades", Grant Opportunities for Academic Liaison with Industry Program, **National Science Foundation**, CNS-0950434, \$66,675, Sept. 1, 2009 - Aug. 31, 2010.
7. Principal Investigator, "CIFellow: Michael Hines", Subaward through Computing Community Consortium and Computing Research Association, **National Science Foundation**, CNS-0937060, \$140,000, Sept. 1, 2009 - Aug. 31, 2010.
8. Principal Investigator, "An Open Standard for Advanced Display and Application Remoting", IBM Faculty Award, **IBM Research**, \$20,000, July 1, 2008 - June 30, 2009.
9. Principal Investigator, "Remote 3D Gaming Research", **Deutsche Telekom AG, Laboratories**, \$70,930, Sept. 1, 2007 - Aug. 31, 2008.
10. Principal Investigator, "Virtualization Mechanisms for Security", Center for Advanced Technology in Telecommunications (CATT), **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$38,559, July 1, 2007 - June 30, 2008.
11. Principal Investigator, "Virtualization Curriculum Equipment Grant", **VMware**, \$40,000, Sept. 2007.
12. Co-Principal Investigator, "CSR-VSM: Autonomic Mechanisms for Reducing System Downtime due to Maintenance and Upgrades", Computer Systems Research Program, **National Science Foundation**, CNS-0717544, \$350,000, Aug. 1, 2007 - July 31, 2009, with Gail E. Kaiser.

13. Co-Principal Investigator, "Autonomic Recovery of Enterprise-Wide Systems After Attack or Failure with Forward Correction", Multidisciplinary University Research Initiative (MURI), **Air Force Office of Scientific Research (AFOSR)**, USAF/AFRL FA9550-07-1-0527, \$4,826,940, May 1, 2007 - Apr. 30, 2012, with Anup K. Ghosh (George Mason University), Sushil Jajodia, (George Mason University), Angelos D. Keromytis, Salvatore J. Stolfo, and Peng Liu (Pennsylvania State University).
14. Principal Investigator, "Thin-Client Computing Research", **Advanced Micro Devices**, \$50,000, Jan. 1, 2007 - Dec. 31, 2007.
15. Principal Investigator, "Secure Isolation Mechanisms for Untrusted Network Applications", Center for Advanced Technology in Telecommunications (CATT), **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$10,000, July 1, 2006 - June 30, 2007.
16. Co-Principal Investigator, "Security Escorts For Not-Yet Trusted Software", Small Business Technology Transfer Research Program (STTR), **Office of the Secretary of Defense**, O064-SP2-1001, \$99,981, Aug. 15, 2006 - May 15, 2007, with Charles Earl (Stottler Henke Associates).
17. Principal Investigator, "Virtualization Mechanisms for Security", Center for Advanced Technology in Telecommunications (CATT), **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$38,559, July 1, 2006 - June 30, 2007.
18. Principal Investigator, "An Application Streaming Service for Ubiquitous Computing Access", IBM Faculty Award, **IBM Research**, \$20,000, July 1, 2006 - June 30, 2007.
19. Principal Investigator, "BPC Supplement to ITR: Secure Remote Computing Services", Broadening Participation in Computing Program, **National Science Foundation**, CNS-0543869, \$133,565, Sept. 15, 2005 - Sept. 14, 2007.
20. Principal Investigator, "US-Japan Cyber Trust Supplement to ITR: Secure Remote Computing Services", Cyber Trust Program, **National Science Foundation**, CNS-0535343, \$77,280, July 1, 2005 - June 30, 2007.
21. Principal Investigator, "Secure Isolation Mechanisms for Untrusted Network Applications", Center for Advanced Technology in Telecommunications (CATT), **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$12,500, July 1, 2005 - June 30, 2006.
22. Principal Investigator, "Sun Ray Software Performance", Collaborative Research Program, **Sun Microsystems**, \$45,142, Feb. 2005.
23. Principal Investigator, "ITR: Secure Remote Computing Services", Information Technology Research (ITR) for National Priorities Program, **National Science Foundation**, CNS-0426623, \$1,200,000, Sept. 15, 2004 - Aug. 31, 2009, with Gail E. Kaiser and Angelos D. Keromytis.
24. Principal Investigator, "Secure Isolation Mechanisms for Untrusted Network Applications", Center for Advanced Technology in Telecommunications (CATT), **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$12,500, July 1, 2004 - June 30, 2005.
25. Principal Investigator, "Secure Isolation and Transparent Migration of Legacy Applications", IBM Faculty Award, **IBM Research**, \$40,000, July 1, 2004 - June 30, 2005.
26. Principal Investigator, "Secure Isolation and Migration of Linux Applications", Center for Advanced Technology (CAT) in Information Management, **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$70,000, Apr. 19, 2004 - June 30, 2004.
27. Principal Investigator, "Linux Virtualization Phase I", IBM Shared University Research (SUR) Award, **IBM Research**, \$503,027, Mar. 2004.
28. Principal Investigator, "Migration Mechanisms for Large-Scale Parallel Applications", Early Career Principal Investigator Program in Applied Mathematics, Collaboratory Research, Computer Science, and High-Performance Networks, Office of Science, **US Department of Energy**, \$299,589, Aug. 15, 2003 - Aug. 14, 2007.
29. Principal Investigator, "Sun Microsystems Equipment Grant", Collaborative Research Program, **Sun Microsystems**, \$6,195, July 2003.
30. Principal Investigator, "Network Virtualization Mechanisms for Mobile Communication", Networking Research Program, **National Science Foundation**, ANI-0240525, \$249,999, June 1, 2003 - May 31, 2007.

31. Principal Investigator, "Apple Computer Powerbook Award", Apple Developer Connection and Hardware Seed Program, **Apple Computer**, \$7,433, May 2003.
32. Principal Investigator, "ITR: An Experimental Study of Thin-Client Computing Architectures", Information Technology Research (ITR) Program, **National Science Foundation**, CCR-0219943, \$250,000, Sept. 1, 2002 - July 31, 2007.
33. Senior Personnel, "Pervasive Pixels", CISE Research Infrastructure Program, **National Science Foundation**, EIA-0202063, \$1,485,098, Sept. 1, 2002 - Aug. 31, 2007, with Henning Schulzrinne, Steven K. Feiner, Gail E. Kaiser, John R. Kender, Kathleen R. McKeown, Peter K. Allen, Angelos D. Keromytis, Shree K. Nayar, William Noble, Steven M. Nowick, and Kenneth A. Ross.
34. Principal Investigator, "Migration Mechanisms for Autonomic Computing", Center for Advanced Technology (CAT) in Information Management, **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$70,000, July 1, 2002 - June 30, 2003.
35. Principal Investigator, "Inferring Mean Client Response Time at the Web Server", Center for Advanced Technology (CAT) in Information Management, **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$25,000, Apr. 1, 2002 - June 30, 2002.
36. Co-Principal Investigator, "The Columbia Hot Spot Rescue Service", Advanced Networking Infrastructure and Research (ANIR) Special Projects in Networking Program, **National Science Foundation**, ANI-0117738, \$1,399,999, Sept. 15, 2001 - Aug. 30, 2006, with Edward G. Coffman, Predrag R. Jelenkovic, Dan Rubenstein, and Henning Schulzrinne.
37. Principal Investigator, "Scalability Issues in Linux", Collaborative Research Program, **IBM Linux Technology Center**, \$33,029, July 1, 2001 - June 30, 2002.
38. Principal Investigator, "Thin-Client Benchmarking", **National Semiconductor**, \$25,000, July 1, 2001 - June 30, 2002.
39. Principal Investigator, "Server-Based Computing Technologies for Application Service Providers", Center for Advanced Technology (CAT) in Information Management, **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$75,000, July 1, 2001 - June 30, 2002.
40. Principal Investigator, "Scalable Linux Cluster Utilities", Center for Advanced Technology (CAT) in Information Management, **New York State Office of Science, Technology, and Academic Research (NYSTAR)**, \$50,000, Apr. 16, 2001 - June 30, 2001.
41. Principal Investigator, "CAREER: Delivering Computational Services over the Internet", Faculty Early Career Development (CAREER) Award, Operating Systems and Compilers Program, **National Science Foundation**, CCR-0093047, \$250,000, Feb. 15, 2001 - Feb. 28, 2007.
42. Principal Investigator, "Scalable Linux Cluster Computer Utilities", IBM Shared University Research (SUR) Award, **IBM Research**, \$128,162, Dec. 2000.
43. Co-Principal Investigator, "Adaptive Internet Interactive Team Video", Experimental Systems Program, **National Science Foundation**, EIA-0071954, \$1,590,000, Sept. 15, 2000 - Sept. 30, 2004, with John R. Kender and Gail E. Kaiser.
44. Principal Investigator, "Columbia University Computer Utility", Collaborative Research Program, **Sun Microsystems**, \$51,178, Sept. 1, 2000 - Oct. 31, 2001.
45. Principal Investigator, "Lucent Grant in Science and Engineering", University Program, **Lucent Technologies**, \$20,000, July 2000.
46. Principal Investigator, "Sun Microsystems Equipment Grant", Collaborative Research Program, **Sun Microsystems**, \$83,562, Dec. 1999.
47. Co-Principal Investigator, "Microsoft Research and Education Grant", Microsoft University Program, **Microsoft Research**, \$1,208,163, July 1, 1999 - June 30, 2001, with Kathleen R. McKeown, Luis Gravano, John R. Kender, Andrew Kosoresow, Shree K. Nayar, and Henning Schulzrinne.

## PUBLICATIONS

Most of these papers are available online at <http://www.ncl.cs.columbia.edu/publications>.

### REFEREED JOURNAL ARTICLES

1. Albert M. Lai, Justin B. Starren, David R. Kaufman, Eneida A. Mendonca, Walter Palmas, Jason Nieh, and Steven Shea, "The Remote Patient Education in a Telemedicine Environment Architecture (REPETE)", *Telemedicine and e-Health*, 14(5), May 2008, pp. 355-361.
2. Albert Lai and Jason Nieh, "On the Performance of Wide-Area Thin-Client Computing", *ACM Transactions on Computer Systems (TOCS)*, 24(2), May 2006, pp. 175-209.
3. David P. Olshefski, Jason Nieh, and Dakshi Agarwal, "Using Certes to Infer Client Response Times at the Web Server", *ACM Transactions on Computer Systems (TOCS)*, 22(1), Feb. 2004, pp. 49-93. (2004 Best Paper, Performance Modeling and Analysis PIC, IBM Research; nominated for the 2004 Pat Goldberg Memorial Best Paper Awards in Computer Science, Electrical Engineering and Mathematics)
4. Jason Nieh and Monica S. Lam, "A SMART Scheduler for Multimedia Applications", *ACM Transactions on Computer Systems (TOCS)*, 21(2), May 2003, pp. 117-163.
5. Jason Nieh, S. Jae Yang, and Naomi Novik, "Measuring Thin-Client Performance Using Slow-Motion Benchmarking", *ACM Transactions on Computer Systems (TOCS)*, 21(1), Feb. 2003, pp. 87-115.

### REFEREED CONFERENCE PAPERS

6. Shaya Potter and Jason Nieh, "Apiary: Easy-to-use Desktop Application Fault Containment on Commodity Operating Systems", *Proceedings of the 2010 USENIX Annual Technical Conference (USENIX 2010)*, Boston, MA, June 23-25, 2010. (17% accepted, 24/141)
7. Oren Laadan, Nicolas Viennot, and Jason Nieh, "Transparent, Lightweight Application Execution Replay on Commodity Multiprocessor Operating Systems", *Proceedings of the ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2010)*, New York, NY, June 14-18, 2010. (16% accepted, 29/184)
8. Haoqiang Zheng and Jason Nieh, "RSIO: Automatic User Interaction Detection and Scheduling", *Proceedings of the ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2010)*, New York, NY, June 14-18, 2010. (16% accepted, 29/184)
9. Oren Laadan, Dan Phung, and Jason Nieh, "Operating System Virtualization: Practice and Experience", *Proceedings of the 3rd Annual Haifa Experimental Systems Conference (SYSTOR 2010)*, Haifa, Israel, May 24-26, 2010. (58% accepted, 18/31)
10. Oren Laadan, Jason Nieh, and Nicolas Viennot, "Teaching Operating Systems Using Virtual Appliances and Distributed Version Control", *Proceedings of the 41st ACM Technical Symposium on Computer Science Education (SIGCSE 2010)*, Milwaukee, WI, Mar. 10-13, 2010, pp. 480-484. (34% accepted, 103/303)
11. Shaya Potter, Ricardo Baratto, Oren Laadan, Leonard Kim, and Jason Nieh, "MediaPod: A Personalized Multimedia Desktop In Your Pocket", *Proceedings of the 11th IEEE International Symposium on Multimedia (ISM 2009)*, San Diego, CA, Dec. 14-16, 2009, pp. 219-226. (20% accepted, 30/153)
12. Alex Sherman, Jason Nieh, and Clifford Stein, "FairTorrent: Bringing Fairness to Peer-to-Peer Systems", *Proceedings of the 5th ACM Conference on emerging Networking EXperiments and Technologies (CoNEXT 2009)*, Rome, Italy, Dec. 1-4, 2009, pp. 133-144. (17% accepted, 29/170, one of the top three papers submitted, fast tracked to *IEEE/ACM Transactions on Networking*)
13. Shaya Potter, Steven M. Bellovin, and Jason Nieh, "Two-Person Control Administration: Preventing Administration Faults Through Duplication", *Proceedings of the 23rd Large Installation System Administration Conference (LISA 2009)*, Baltimore, MD, Nov. 1-6, 2009, pp. 15-27. (32% accepted, 12/38)
14. Shaya Potter, Ricardo Baratto, Oren Laadan, and Jason Nieh, "GamePod: Persistent Gaming Sessions on Pocketable Storage Devices", *Proceedings of the 3rd International Conference on Mobile Ubiquitous Computing, Systems, Services, and Technologies (UBICOMM 2009)*, Sliema, Malta, Oct. 11-16, 2009. (32% accepted)

15. Angelos Stavrou, Ricardo Baratto, Angelos Keromytis, and Jason Nieh, "A2M: Access-Assured Mobile Desktop Computing", *Proceedings of the 12th Information Security Conference (ISC 2009)*, Pisa, Italy, Sept. 7-9, 2009, pp. 186-201. (28% accepted, 29/105)
16. Alex Sherman, Angelos Stavrou, Jason Nieh, Angelos Keromytis, and Clifford Stein, "Adding Trust to P2P Distribution of Paid Content", *Proceedings of the 12th Information Security Conference (ISC 2009)*, Pisa, Italy, Sept. 7-9, 2009, pp. 459-474. (28% accepted, 29/105)
17. Haoqiang Zheng and Jason Nieh, "WARP: Enabling Fast CPU Scheduler Development and Evaluation", *Proceedings of the 2009 IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS 2009)*, Boston, MA, Apr. 19-21, 2009, pp. 101-112. (28% accepted, 24/86)
18. Stelios Sidiroglou, Oren Laadan, Carlos R. Pérez, Nicolas Viennot, Jason Nieh, and Angelos D. Keromytis, "ASSURE: Automatic Software Self-healing Using REscue points", *Proceedings of the 14th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS 2009)*, Washington, DC, Mar. 7-11, 2009, pp. 37-48. (26% accepted, 29/113)
19. Shaya Potter, Jason Nieh, and Matthew Selsky, "Secure Isolation of Untrusted Legacy Applications", *Proceedings of the 21st Large Installation System Administration Conference (LISA 2007)*, Dallas, TX, Nov. 11-16, 2007, pp. 117-130. (40% accepted, 22/55)
20. Albert Lai, Jason Nieh, and Justin Starren, "REPETE2: A Next Generation Home Telemedicine Architecture", *Proceedings of the American Medical Informatics Association (AMIA) 2007 Annual Symposium*, Chicago, IL, Nov. 10-14, 2007, p. 1020. (poster paper)
21. Oren Laadan, Ricardo Baratto, Shaya Potter, Dan Phung, and Jason Nieh, "DejaView: A Personal Virtual Computer Recorder", *Proceedings of the 21st ACM Symposium on Operating Systems Principles (SOSP 2007)*, Stevenson, WA, Oct. 14-17, 2007, pp. 279-292. (19% accepted, 25/130)
22. Oren Laadan and Jason Nieh, "Transparent Checkpoint/Restart of Multiple Processes on Commodity Operating Systems", *Proceedings of the 2007 USENIX Annual Technical Conference (USENIX 2007)*, Santa Clara, CA, June 17-22, 2007, pp. 323-336. (21% accepted, 24/117)
23. Stelios Sidiroglou, Oren Laadan, Angelos D. Keromytis, and Jason Nieh, "Using Rescue Points to Navigate Software Recovery (Short Paper)", *Proceedings of the 2007 IEEE Symposium on Security and Privacy (SP 2007)*, Oakland, CA, May 20-23, 2007, pp. 273-280. (short paper, 12% accepted, 28/243, 8 short papers, 20 full papers)
24. Joeng Kim, Ricardo Baratto, and Jason Nieh, "An Application Streaming Service for Mobile Handheld Devices", *Proceedings of the IEEE International Conference on Services Computing (SCC 2006)*, Chicago, IL, Sept. 18-22, 2006, pp. 323-326. (short paper, 13% accepted, 22 short papers, 29 full papers)
25. Shaya Potter and Jason Nieh, "Highly Reliable Mobile Desktop Computing in Your Pocket", *Proceedings of the IEEE Computer Society Signature Conference on Software Technology and Applications (COMPSAC 2006)*, Chicago, IL, Sept. 18-21, 2006, pp. 247-254. (29% accepted, 54/184)
26. Bogdan Caprita, Jason Nieh, and Clifford Stein, "Grouped Distributed Queues: Distributed Queue, Proportional Share Multiprocessor Scheduling", *Proceedings of the 25th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC 2006)*, Denver, CO, July 23-26, 2006, pp. 72-81. (22% accepted, 30/136)
27. David P. Olshefski and Jason Nieh, "Understanding the Management of Client Perceived Pageview Response Time", *Proceedings of the Joint International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS/Performance 2006)*, St. Malo, France, June 26-30, 2006, pp. 240-251. (14% accepted, 30/217)
28. Joeng Kim, Ricardo Baratto, and Jason Nieh, "pTHINC: A Thin-Client Architecture for Mobile Wireless Web", *Proceedings of the 15th International World Wide Web Conference (WWW2006)*, Edinburgh, Scotland, May 23-26, 2006, pp. 143-152. (10% accepted, 70/673)
29. Shaya Potter and Jason Nieh, "Reducing Downtime Due to System Maintenance and Upgrades", *Proceedings of the 19th Large Installation System Administration Conference (LISA 2005)*, San Diego, CA, Dec. 4-9, 2005, pp. 47-62. (46% accepted, 24/52, Best Student Paper Award)
30. Bogdan Caprita, Jason Nieh, and Wong Chun Chan, "Group Round Robin: Improving the Fairness and Complexity of Packet Scheduling", *Proceedings of the 1st ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS 2005)*, Princeton, NJ, Oct. 26-28, 2005, pp. 29-40. (32% accepted, 23/71)

31. Ricardo Baratto, Leonard Kim, and Jason Nieh, "THINC: A Virtual Display Architecture for Thin-Client Computing", *Proceedings of the 20th ACM Symposium on Operating Systems Principles (SOSP 2005)*, Brighton, United Kingdom, Oct. 23-26, 2005, pp. 277-290. (13% accepted, 20/155)
32. Oren Laadan, Dan Phung, and Jason Nieh, "Transparent Checkpoint-Restart of Distributed Applications on Commodity Clusters", *Proceedings of the 2005 IEEE International Conference on Cluster Computing (Cluster 2005)*, Boston, MA, Sept. 27-30, 2005, 13 pages. (35% accepted, 45/130)
33. Shaya Potter and Jason Nieh, "AutoPod: Unscheduled System Updates with Zero Data Loss", *Proceedings of the 2nd IEEE International Conference on Autonomic Computing (ICAC 2005)*, Seattle, WA, June 13-16, 2005, pp. 367-368. (poster paper, 38% accepted, 64/170, 39 poster papers, 25 full papers)
34. Shaya Potter and Jason Nieh, "WebPod: Persistent Web Browsing Sessions with Pocketable Storage Devices", *Proceedings of the 14th International World Wide Web Conference (WWW2005)*, Chiba, Japan, May 10-14, 2005, pp. 603-612. (14% accepted, 77/550, nominated for Best Presentation Award)
35. Bogdan Caprita, Wong Chun Chan, Jason Nieh, Clifford Stein, and Haoqiang Zheng, "Group Ratio Round Robin: O(1) Proportional Share Scheduling for Uniprocessor and Multiprocessor Systems", *Proceedings of the 2005 USENIX Annual Technical Conference (USENIX 2005)*, Anaheim, CA, Apr. 10-15, 2005, pp. 337-352. (20% accepted, 24/118)
36. Jason Nieh and Chris Vaill, "Experiences Teaching Operating Systems Using Virtual Platforms and Linux", *Proceedings of the 36th ACM Technical Symposium on Computer Science Education (SIGCSE 2005)*, St. Louis, MO, Feb. 23-27, 2005, pp. 520-524. (32% accepted, 104/330)
37. Angelos Stavrou, Angelos D. Keromytis, Jason Nieh, Vishal Misra, and Dan Rubenstein, "MOVE: An End-to-End Solution To Network Denial of Service", *Proceedings of the 12th Annual Network and Distributed System Security Symposium (NDSS 2005)*, San Diego, CA, Feb. 2-4, 2005, pp. 81-96. (13% accepted, 16/124)
38. David P. Olshefski, Jason Nieh, and Erich Nahum, "ksniffer: Determining the Remote Client Perceived Response Time from Live Packet Streams", *Proceedings of the 6th Symposium on Operating System Design and Implementation (OSDI 2004)*, San Francisco, CA, Dec. 6-8, 2004, pp. 333-346. (14% accepted, 27/193)
39. Ricardo Baratto, Shaya Potter, Gong Su, and Jason Nieh, "MobiDesk: Mobile Virtual Desktop Computing", *Proceedings of the 10th International Conference on Mobile Computing and Networking (MobiCom 2004)*, Philadelphia, PA, Sept. 29-Oct. 1, 2004, pp. 1-15. (8% accepted, 26/327, Best Student Paper Award)
40. Albert Lai, Jason Nieh, Andrew Laine, and Justin Starren, "Remote Display Performance for Wireless Healthcare Computing", *Proceedings of the 11th World Conference on Medical Informatics (Medinfo 2004)*, San Francisco, CA, Sept. 7-11, 2004, pp. 1438-1442. (42% accepted, 300/711)
41. Albert Lai, Jason Nieh, Bhagyashree Bohra, Vijayarka Nandikonda, Abhishek P. Surana, and Suchita Varshneya, "Improving Web Browsing on Wireless PDAs Using Thin-Client Computing", *Proceedings of the 13th International World Wide Web Conference (WWW2004)*, New York, NY, May 17-22, 2004, pp. 143-154. (15% accepted, 74/506)
42. Erez Zadok, Jeffrey Osborn, Ariye Shater, Charles Wright, Kiran-Kumar Muniswamy-Reddy, and Jason Nieh, "Reducing Storage Management Costs via Informed User-Based Policies", *Proceedings of the 12th NASA / Twenty-first IEEE Conference on Mass Storage Systems and Technologies (MSST)*, College Park, MD, Apr. 13-16, 2004, pp. 193-198. (short paper, 43% accepted, 32/75, 14 short papers, 18 full papers)
43. Haoqiang Zheng and Jason Nieh, "SWAP: A Scheduler with Automatic Process Dependency Detection", *Proceedings of the 1st USENIX/ACM Symposium on Networked Systems Design and Implementation (NSDI 2004)*, San Francisco, CA, Mar. 29-31, 2004, pp. 183-196. (< 23% accepted, 27/120+)
44. Albert Lai, Jason Nieh, Andrew Laine, and Justin Starren, "Thin Client Performance for Remote 3-D Image Display", *Proceedings of the American Medical Informatics Association (AMIA) 2003 Annual Symposium*, Washington, DC, Nov. 8-12, 2003, p. 904. (poster paper)
45. S. Jae Yang, Jason Nieh, Shilpa Krishnappa, Aparna Mohla, and Mahdi Sajjadpour, "Web Browsing Performance of Wireless Thin-Client Computing", *Proceedings of the 12th International World Wide Web Conference (WWW2003)*, Budapest, Hungary, May 20-24, 2003, pp. 68-79. (< 13% accepted, 77/600+)
46. Steven Osman, Dinesh Subhraveti, Gong Su, and Jason Nieh, "The Design and Implementation of Zap: A System for Migrating Computing Environments", *Proceedings of the 5th Symposium on Operating System Design and Implementation (OSDI 2002)*, Boston, MA, Dec. 9-11, 2002, pp. 361-376. (18% accepted, 27/150)



47. Albert Lai and Jason Nieh, "Limits of Wide-Area Thin-Client Computing", *Proceedings of the ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2002)*, Marina del Rey, CA, June 15-19, 2002, pp. 228-239. (13% accepted, 23/170)
48. David P. Olshefski, Jason Nieh, and Dakshi Agarwal, "Inferring Client Response Times at the Web Server", *Proceedings of the ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2002)*, Marina del Rey, CA, June 15-19, 2002, pp. 160-171. (13% accepted, 23/170)
49. S. Jae Yang, Jason Nieh, Matthew Selsky, and Nikhil Tiwari, "The Performance of Remote Display Mechanisms for Thin-Client Computing", *Proceedings of the 2002 USENIX Annual Technical Conference (USENIX 2002)*, Monterey, CA, June 10-15, 2002, pp. 131-146. (23% accepted, 25/107)
50. Fei Li and Jason Nieh, "Optimal Linear Interpolation Coding for Server-Based Computing", *Proceedings of the IEEE International Conference on Communications (ICC) 2002*, New York, NY, Apr. 28-May 2, 2002, pp. 2542-2546. (42% accepted, 655/1568)
51. Fei Li and Jason Nieh, "Low-complexity Interpolation Coding for Server-Based Computing", *Proceedings of the Data Compression Conference (DCC) 2002*, Snowbird, UT, Apr. 2-4, 2002, p. 461. (poster paper)
52. Jason Nieh, Chris Vaill, and Hua Zhong, "Virtual-Time Round-Robin: An O(1) Proportional Share Scheduler", *Proceedings of the 2001 USENIX Annual Technical Conference (USENIX 2001)*, Boston, MA, June 25-30, 2001, pp. 245-259. (29% accepted, 24/82, nominated for Best Paper Award)
53. S. Jae Yang, Jason Nieh, and Naomi Novik, "Measuring Thin-Client Performance Using Slow-Motion Benchmarking", *Proceedings of the 2001 USENIX Annual Technical Conference (USENIX 2001)*, Boston, MA, June 25-30, 2001, pp. 35-49. (29% accepted, 24/82)
54. Erez Zadok, Johan M. Andersen, Ion Badulescu, and Jason Nieh, "Fast Indexing: Support for Size-Changing Algorithms in Stackable File Systems", *Proceedings of the 2001 USENIX Annual Technical Conference (USENIX 2001)*, Boston, MA, June 25-30, 2001, pp. 289-304. (29% accepted, 24/82)
55. Erez Zadok and Jason Nieh, "FiST: A Language for Stackable File Systems", *Proceedings of the 2000 USENIX Annual Technical Conference (USENIX 2000)*, San Diego, CA, June 18-23, 2000, pp. 55-70. (30% accepted; 27/90)
56. Jason Nieh and Monica S. Lam, "The Design, Implementation and Evaluation of SMART: A Scheduler for Multimedia Applications", *Proceedings of the 16th ACM Symposium on Operating Systems Principles (SOSP 1997)*, St. Malo, France, Oct. 5-8, 1997, pp. 184-197. (< 20% accepted, 23/110+)
57. Jason Nieh and Monica S. Lam, "SMART UNIX SVR4 Support for Multimedia Applications", *Proceedings of the IEEE International Conference on Multimedia Computing and Systems (ICMCS 1997)*, Ottawa, Ontario, Canada, June 3-6, 1997, pp. 404-414. (~35% accepted)
58. Jason Nieh and Monica S. Lam, "SMART: A Processor Scheduler for Multimedia Applications", *Proceedings of the 15th Symposium on Operating Systems Principles (SOSP 1995)*, Copper Mountain Resort, CO, Dec. 3-5, 1995, p. 233. (poster paper, 40% accepted, 33/82, 11 poster papers, 22 full papers)

#### **REFEREED WORKSHOP PUBLICATIONS**

59. Alex Sherman, Jason Nieh, and Clifford Stein, "Fair Distributed Scheduling Algorithm for a P2P System", *9th Workshop on Models and Algorithms for Planning and Scheduling Problems (MAPSP 2009)*, Abbey Rolduc, The Netherlands, June 29-July 3, 2009.
60. Alfred Aho, Angelos D. Keromytis, Vishal Misra, Jason Nieh, Kenneth A. Ross, and Yechiam Yemini, "FlowPuter: A Cluster Architecture Unifying Switch, Server and Storage Processing", *Proceedings of the 1st International Workshop on Data Processing and Storage Networking: Towards Grid Computing (DPSN 2004)*, Athens, Greece, May 14, 2004, pp. 2/1-2/7 (60% accepted, 6/10).
61. Angelos D. Keromytis, Janak Parekh, Philip N. Gross, Gail Kaiser, Vishal Misra, Jason Nieh, Dan Rubenstein, and Sal Stolfo, "A Holistic Approach to Service Survivability", *Proceedings of the 2003 ACM Workshop on Survivable and Self-Regenerative Systems*, Fairfax, VA, Oct. 31, 2003, pp. 11-22. (38% accepted, 10/26)
62. Ed Coffman, Predrag Jelenkovic, Jason Nieh, Dan Rubenstein, and Henning Schulzrinne, "The Columbia Hotspot Rescue Service", *Internet2 Network Research Workshop Spring 2001*, Chicago, IL, Apr. 18-19, 2001.

63. Jason Nieh and S. Jae Yang, "Measuring the Multimedia Performance of Server-Based Computing", *Proceedings of the 10th Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV 2000)*, Chapel Hill, NC, June 26-28, 2000, pp. 55-64. (45% accepted, 32/70)
64. Jason Nieh and Monica S. Lam, "Multimedia on Multiprocessors: Where's the OS When You Really Need It?", *Proceedings of the 8th Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV 1998)*, Cambridge, UK, July 8-10, 1998, pp. 103-106. (45% accepted, 36/80)
65. Jason Nieh and Monica S. Lam, "Integrated Processor Scheduling for Multimedia", *Proceedings of the 5th Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV 1995)*, Durham, NH, Apr. 18-22, 1995, *Lecture Notes in Computer Science*, 1018, Springer-Verlag, pp. 215-218. (40% accepted, 40/101)
66. Jason Nieh, James G. Hanko, J. Duane Northcutt, and Gerard A. Wall, "SVR4 UNIX Scheduler Unacceptable for Multimedia Applications", *Proceedings of the 4th Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV 1993)*, Lancaster, United Kingdom, Nov. 3-5, 1993, *Lecture Notes in Computer Science*, 846, Springer-Verlag, pp. 35-48. (24% accepted, 24/100)
67. Jason Nieh and Marc Levoy, "Volume Rendering on Scalable Shared-Memory MIMD Architectures", *Proceedings of the Boston Workshop on Volume Visualization*, Boston, MA, Oct. 19-20, 1992, pp. 17-24.

#### **INVITED BOOK CHAPTERS AND CONTRIBUTIONS**

68. Albert Lai and Jason Nieh, "Web Content Delivery Using Thin-Client Computing", *Web Content Delivery*, ed. Samuel Chanson, Xueyan Tang, and Jianliang Xu, Springer, 2005, pp. 325-345.
69. Jason Nieh and Monica S. Lam, "The Design, Implementation and Evaluation of SMART: A Scheduler for Multimedia Applications", *Readings in Multimedia Computing and Networking*, ed. Kevin Jeffay and HongJiang Zhang, Morgan Kaufmann Publishers, 2002, pp. 506-519.

#### **INVITED MAGAZINE ARTICLES**

70. Shaya Potter and Jason Nieh, "Breaking the Ties that Bind: Process Isolation and Migration", *login*, USENIX Association, 30(6), Dec. 2005, pp. 14-17.
71. S. Jae Yang and Jason Nieh, "MetaFrame XP Extends the Citrix Platform", *PC Magazine*, Ziff-Davis Media, 21(9), May 7, 2002, p. 48.
72. Jason Nieh and Ozgur C. Leonard, "Examining VMware", *Dr. Dobb's Journal*, 315, Miller Freeman, San Mateo, CA, Aug. 2000, pp. 70-76.
73. S. Jae Yang and Jason Nieh, "Thin Is In", *PC Magazine*, 19(13), Ziff-Davis Media, July 1, 2000, p. 68.

#### **INVITED CONFERENCE PAPERS**

74. Kenneth Ocheltree, Steven Millman, David Hobbs, Martin McDonnell, Jason Nieh, and Ricardo Baratto, "Net2Display: A Proposed VESA Standard for Remoting Displays and I/O Devices over Networks", *Proceedings of the 2006 Americas Display Engineering and Applications Conference (ADEAC 2006)*, Atlanta, Georgia, Oct. 23-26, 2006.

#### **OTHER PUBLICATIONS**

75. Dinesh Subhraveti and Jason Nieh, "Record and Transplay: Partial Checkpointing for Replay Debugging", Technical Report CUCS-050-09, Dept. of Computer Science, Columbia University, Nov. 2009.
76. Shaya Potter and Jason Nieh, "Apiary: Easy-to-use Desktop Application Fault Containment on Commodity Operating Systems", Technical Report CUCS-034-09, Dept. of Computer Science, Columbia University, Aug. 2009.
77. Alex Sherman and Jason Nieh, "FairStream: Improving Peer-to-Peer Streaming Performance through Fairness", Technical Report CUCS-018-09, Dept. of Computer Science, Columbia University, Apr. 2009.
78. Nicolas Viennot, Oren Laadan, and Jason Nieh, "Transparent, Lightweight Application Execution Replay on Commodity Multiprocessor Operating Systems", Technical Report CUCS-017-09, Dept. of Computer Science, Columbia University, Apr. 2009.
79. Alex Sherman, Jason Nieh, and Cliff Stein, "FairTorrent: Bringing Fairness to Peer-to-Peer Systems", Technical Report CUCS-011-09, Dept. of Computer Science, Columbia University, Mar. 2009.

80. Shaya Potter and Jason Nieh, "Improving Virtual Appliance Management through Virtual Layered File Systems", Technical Report CUCS-008-08, Dept. of Computer Science, Columbia University, Jan. 2009.
81. Oren Laadan and Jason Nieh, "Operating System Virtualization: Practice and Experience", Technical Report CUCS-058-08, Dept. of Computer Science, Columbia University, Dec. 2008.
82. Leon L. Wu, Gail E. Kaiser, Jason Nieh, and Christian Murphy, "Deux: Autonomic Testing System for Operating System Upgrades", Technical Report CUCS-037-08, Dept. of Computer Science, Columbia University, Aug. 2008.
83. Alex Sherman, Jason Nieh, and Clifford Stein, "FairTorrent: Bringing Fairness to Peer-to-Peer Systems", Technical Report CUCS-029-08, Dept. of Computer Science, Columbia University, May 2008.
84. Haoqiang Zheng and Jason Nieh, "Automatic User Interaction Detection and Scheduling with RSIO", Technical Report CUCS-028-08, Dept. of Computer Science, Columbia University, May 2008.
85. Alex Sherman, Angelos Stavrou, Jason Nieh, and Clifford Stein, "Mitigating the Effect of Free-Riders in BitTorrent using Trusted Agents", Technical Report CUCS-005-08, Dept. of Computer Science, Columbia University, Jan. 2008.
86. Alex Sherman, Angelos Stavrou, Jason Nieh, Clifford Stein, and Angelos D. Keromytis, "Can P2P Replace Direct Download for Content Distribution?", Technical Report CUCS-020-07, Dept. of Computer Science, Columbia University, Mar. 2007.
87. Alex Sherman, Japinder Chawla, Jason Nieh, Clifford Stein, and Justin Sarma, "Aequitas: A Trusted P2P System for Paid Content Delivery", Technical Report CUCS-019-07, Dept. of Computer Science, Columbia University, Mar. 2007.
88. Shaya Potter and Jason Nieh, "Improving Virtual Appliances through Virtual Layered File Systems", Technical Report CUCS-003-07, Dept. of Computer Science, Columbia University, Jan. 2007.
89. Alex Sherman, Angelos Stavrou, Jason Nieh, Clifford Stein, and Angelos D. Keromytis, "A Case for P2P Delivery of Paid Content", Technical Report CUCS-042-06, Dept. of Computer Science, Columbia University, Nov. 2006.
90. Alex Sherman, Jason Nieh, and Yoav Freund, "Feasibility of Voice over IP on the Internet", Technical Report CUCS-027-06, Dept. of Computer Science, Columbia University, June 2006.
91. Jason Nieh and Chris Vaill, "Experiences Teaching Operating Systems Using Virtual Platforms and Linux", *ACM Operating Systems Review (OSR)*, 40(2), Apr. 2006, pp. 100-104. (Reprint from *Proceedings of the 36th ACM Technical Symposium on Computer Science Education*, Feb. 2005.)
92. Bogdan Caprita, Jason Nieh, and Clifford Stein, "Grouped Distributed Queues: Distributed Queue, Proportional Share Multiprocessor Scheduling", Technical Report CUCS-004-06, Dept. of Computer Science, Columbia University, Feb. 2006.
93. Jonathan Lennox, Henning Schulzrinne, Jason Nieh, and Ricardo A. Baratto, "Protocols for Application and Desktop Sharing", Internet Draft draft-lennox-avt-app-sharing, IETF, Dec. 2004. Work in progress.
94. Henning Schulzrinne, Jonathan Lennox, Jason Nieh, and Ricardo A. Baratto, "Sharing and Remote Access to Applications", Internet Draft draft-schulzrinne-mmusic-sharing, IETF, Sept. 2004. Work in progress.
95. Shaya Potter and Jason Nieh, "WebPod: Persistent Web Browsing Sessions with Pocketable Storage Devices", Technical Report CUCS-047-04, Dept. of Computer Science, Columbia University, Nov. 2004.
96. Bogdan Caprita, Wong Chun Chan, Jason Nieh, Clifford Stein, and Haoqiang Zheng, "Group Ratio Round Robin: O(1) Proportional Share Scheduling for Uniprocessor and Multiprocessor Systems", Technical Report CUCS-028-04, Dept. of Computer Science, Columbia University, July 2004.
97. Ricardo Baratto, Jason Nieh, and Leo Kim, "THINC: A Remote Display Architecture for Thin-Client Computing", Technical Report CUCS-027-04, Dept. of Computer Science, Columbia University, July 2004.
98. Ricardo Baratto, Shaya Potter, Gong Su, and Jason Nieh, "MobiDesk: Mobile Virtual Desktop Computing", Technical Report CUCS-014-04, Dept. of Computer Science, Columbia University, Mar. 2004.
99. Shaya Potter, Jason Nieh, and Dinesh Subhraveti, "Secure Isolation and Migration of Untrusted Legacy Applications", Technical Report CUCS-005-04, Dept. of Computer Science, Columbia University, Jan. 2004.
100. Angelos D. Keromytis, Janak Parekh, Philip N. Gross, Gail Kaiser, Vishal Misra, Jason Nieh, Dan Rubenstein, and Sal Stolfo, "A Holistic Approach to Service Survivability", Technical Report CUCS-021-03, Dept. of Computer Science, Columbia University, July 2003.

101. Bogdan Caprita, Wong Chun Chan, and Jason Nieh, "Group Round Robin: Improving the Fairness and Complexity of Packet Scheduling", Technical Report CUCS-018-03, Dept. of Computer Science, Columbia University, June 2003.
102. Wong Chun Chan and Jason Nieh, "Group Ratio Round-Robin: An O(1) Proportional Share Scheduler", Technical Report CUCS-012-03, Dept. of Computer Science, Columbia University, Apr. 2003.
103. Haoqiang Zheng and Jason Nieh, "SWAP: A Scheduler With Automatic Process Dependency Detection", Technical Report CUCS-005-03, Dept. of Computer Science, Columbia University, Apr. 2003.
104. Erez Zadok, Jeffrey Osborn, Ariye Shater, Charles Wright, Kiran-Kumar Muniswamy-Reddy, and Jason Nieh, "Reducing Storage Management Costs via Informed User-Based Policies", Technical Report FSL-03-01, Dept. of Computer Science, Stony Brook University, Mar. 2003.
105. Ozgur Can Leonard, Jason Nieh, Erez Zadok, Jeffrey Osborn, Ariye Shater, and Charles Wright, "The Design and Implementation of Elastic Quotas: A System for Flexible File System Management", Technical Report CUCS-014-02, Dept. of Computer Science, Columbia University, June 2002.
106. Ed Coffman, Predrag Jelenkovic, Jason Nieh, and Dan Rubenstein, "The Columbia Hot Spot Rescue Service: A Research Plan", Technical Report EE2002-005-131, Dept. of Electrical Engineering, Columbia University, May 2002.
107. Gong Su and Jason Nieh, "Mobile Communication with Virtual Network Address Translation", Technical Report CUCS-003-02, Dept. of Computer Science, Columbia University, Feb. 2002.
108. Hua Zhong and Jason Nieh, "CRAK: Linux Checkpoint / Restart As a Kernel Module", Technical Report CUCS-014-01, Dept. of Computer Science, Columbia University, Nov. 2001.
109. Erez Zadok, Johan M. Andersen, Ion Badulescu, and Jason Nieh, "Performance of Size-Changing Algorithms in Stackable File Systems", Technical Report CUCS-023-00, Dept. of Computer Science, Columbia University, Nov. 2000.
110. Jason Nieh, S. Jae Yang and Naomi Novik, "A Comparison of Thin-Client Computing Architectures", Technical Report CUCS-022-00, Dept. of Computer Science, Columbia University, Nov. 2000.
111. Erez Zadok and Jason Nieh, "FiST: A Language for Stackable File Systems", Technical Report CUCS-034-99, Dept. of Computer Science, Columbia University, Dec. 1999.
112. Jason Nieh, "The Design, Implementation, and Evaluation of SMART: A Scheduler for Multimedia Applications", Ph.D. Thesis, Dept. of Electrical Engineering, Stanford University, June 1999.
113. Jason Nieh and Monica S. Lam, "The Design, Implementation and Evaluation of SMART: A Scheduler for Multimedia Applications", Technical Report CSL-TR-97-721, Computer Systems Laboratory, Stanford University, Apr. 1997.
114. Jason Nieh and Monica S. Lam, "The SMART Scheduler", Project Technical Report SML-96-0213, Sun Microsystems Laboratories, July 1996.
115. Jason Nieh and Monica S. Lam, "The Design of SMART: A Scheduler for Multimedia Applications", Technical Report CSL-TR-96-697, Computer Systems Laboratory, Stanford University, June 1996.
116. Jason Nieh, Monica S. Lam, and J. Duane Northcutt, "A Practical Unified Approach to Processor Scheduling", Project Technical Report SML-94-0488, Sun Microsystems Laboratories, Dec. 1994.
117. Jason Nieh and Marc Levoy, "Volume Rendering on Scalable Shared-Memory MIMD Architectures", Technical Report CSL-TR-92-537, Computer Systems Laboratory, Stanford University, Aug. 1992.
118. Brian LaMacchia and Jason Nieh, "The Standard Map Machine", AI Memo 1165, AI Laboratory, Massachusetts Institute of Technology, Sept. 1989.
119. Jason Nieh, "Using Special-Purpose Computing to Examine Chaotic Behavior in Nonlinear Mappings", AI Technical Report 1139, AI Laboratory, Massachusetts Institute of Technology, Sept. 1989.
120. Jason Nieh, "DMI Mode 3 Throughput Analysis", Technical Memorandum, AT&T Information Systems, Dec. 1987.
121. Jason Nieh, "Delay and Throughput", Memorandum for File, AT&T Information Systems, Oct. 1986.

#### **SELECTED INVITED TALKS**

*Distinguished Lecture, School of Computing and Information Sciences, Florida International University, Miami, FL, Feb. 2009.*

*Keynote Speaker, VMAP Summit, VMworld 2008*, Las Vegas, NV, Sept. 2008.

*Invited External Speaker, IBM System Software Day, IBM Watson Research Center*, Yorktown Heights, NY, Sept. 2008.

*Bell Laboratories, Alcatel-Lucent*, Murray Hill, NJ, Nov. 2007.

*Keynote Panel, VMworld 2006*, Los Angeles, CA, Nov. 2006.

*ITL Colloquium, National Institute of Standards and Technology (NIST)*, Washington, DC, June 2005.

*DARPA ISAT Meeting*, Washington, DC, June 2005.

*CERCS Colloquium, Georgia Institute of Technology*, Atlanta, GA, May 2005.

*Invited Talk, 2005 USENIX Annual Technical Conference*, Anaheim, CA, Apr. 2005.

*DCS Colloquium, Rutgers University*, Rutgers, NJ, Feb. 2005.

*Young Investigator Lecture, 2004 Sigma Xi Annual Meeting*, Montreal, Quebec Canada, Nov. 2004.

*URCS Seminar, University of Rochester*, Rochester, NY, Nov. 2004.

*Systems Design and Implementation / Laboratory for Computer Systems (SDI/LCS) Seminar, Carnegie Mellon University*, Pittsburgh, PA, Oct. 2004.

*OS-PIC, IBM Watson Research Center*, Yorktown Heights, NY, Oct. 2003.

*MIT Workshop on Streaming Systems*, Dedham, MA, Aug. 2003.

*Hewlett-Packard Laboratories*, Palo Alto, CA, June 2002.

*Panasonic Information and Networking Technologies Laboratory*, Princeton, NJ, May 2001.

*OS-PIC, IBM Watson Research Center*, Yorktown Heights, NY, April 2001.

*Telcordia*, Morristown, NJ, Nov. 2000.

*OS-PIC, IBM Watson Research Center*, Yorktown Heights, NY, May 2000.

*Digital Equipment Systems Research Center*, Palo Alto, CA, May 1998.

*Division of Engineering and Applied Sciences, Harvard University*, Cambridge, MA, May 1998.

*Dept. of Computer Science, Yale University*, New Haven, CT, Apr. 1998.

*Dept. of Computer Science, Brown University*, Providence, RI, Apr. 1998.

*Dept. of Computer Science, University of Illinois at Urbana-Champaign*, Urbana, IL, Apr. 1998.

*Dept. of Computer and Information Science, University of Pennsylvania*, Philadelphia, PA, Apr. 1998.

*Dept. of Computer Science, University of Toronto*, Toronto, Ontario, Canada, Apr. 1998.

*Dept. of Computer Science, New York University*, New York, NY, Mar. 1998.

*Dept. of Computer Science, Northwestern University*, Evanston, IL, Mar. 1998.

*Hewlett-Packard Laboratories*, Palo Alto, CA, June 1997.

*Computer Forum Annual Meeting, Stanford University*, Stanford, CA, Mar. 1997.

*Computer Science Colloquium, University of California at Santa Barbara*, Santa Barbara, CA, Mar. 1997.

*IEEE RTSS Workshop on Resource Allocation Problems in Multimedia Systems*, Washington, DC, Dec. 1996.

*Distributed Systems Seminar, Stanford University*, Stanford, CA, Apr. 1994.

*Sun Microsystems Laboratories*, Mountain View, CA, Oct. 1993.

*Hewlett-Packard Laboratories*, Palo Alto, CA, Oct. 1992.

*Scientific Visualization Seminar, NASA Ames Research Center*, Mountain View, CA, Sept. 1992.

## PROFESSIONAL ACTIVITIES

### EDITORIAL BOARDS

- Member, Editorial Board, *IEEE Internet Computing*, 2008 - present.
- Guest Editor, Special Issue on Virtual Machines, *IEEE Pervasive Computing*, Oct.-Dec. 2009.
- Member, Editorial Board, *Computer Networks Journal (COMNET)*, 2006 - 2008.

### CONFERENCE PROGRAM COMMITTEES

- Member, Program Committee, *30th Annual IEEE Conference on Computer Communications (Infocom 2011)*, Shanghai, China, Apr. 10-15, 2011.
- Member, Program Committee, *16th International Conference on Mobile Computing and Networking (MobiCom 2010)*, Chicago, IL, Sept. 20-24, 2010.
- Member, Program Committee, *International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2010)*, New York, NY, June 14-18, 2010.
- Member, Program Committee, *3rd Annual Haifa Experimental Systems Conference (SYSTOR 2010)*, Haifa, Israel, May 24-26, 2010.
- Member, Program Committee, *29th Annual IEEE Conference on Computer Communications (Infocom 2010)*, San Diego, CA, Mar. 15-19, 2010.
- Member, Program Committee, *8th USENIX Conference on File and Storage Technologies (FAST 2010)*, San Jose, CA, Feb. 23-26, 2010.
- Member, Program Committee, *2nd Workshop on Hot Topics in Software Upgrades (HotSWUp 2009)*, Orlando, FL, Oct. 2009.
- Member, Program Committee, *1st Workshop on Networking, Systems, and Applications for Mobile Handhelds (MobiHeld 2009)*, Barcelona, Spain, Aug. 17, 2009.
- Member, Program Committee, *2nd Workshop on Mobile Computing and Virtualization (MobiVirt 2009)*, Kraków, Poland, June 22, 2009.
- Co-Chair, Program Committee, *Joint International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS / Performance 2009)*, Seattle, WA, June 15-19, 2009.
- Member, Program Committee, *28th Annual IEEE Conference on Computer Communications (Infocom 2009)*, Rio de Janeiro, Brazil, Apr. 19-25, 2009.
- Member, Program Committee, *2009 ACM SIGPLAN/SIGOPS International Conference on Virtual Execution Environments (VEE 2009)*, Washington, DC, Mar. 11-13, 2009.
- Co-Chair, Program Committee, *1st ACM Workshop on Virtual Machine Security (VMSec 2008)*, Fairfax, VA, Oct. 31, 2008.
- Member, Program Committee, *5th Annual International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (MobiQuitous 2008)*, Dublin, Ireland, July 21-25, 2008.
- Member, Program Committee, *1st Workshop on Mobile Computing and Virtualization (MobiVirt 2008)*, Breckenridge, CO, June 17, 2008.
- Member, Program Committee, *International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2008)*, Annapolis, MD, June 2-6, 2008.
- Member, Program Committee, *27th Annual IEEE Conference on Computer Communications (Infocom 2008)*, Phoenix, AZ, Apr. 13-18, 2008.
- Member, Program Committee, *VMworld 2007*, San Francisco, Sept. 11-13, 2007.
- Member, Program Committee, *13th International Conference on Mobile Computing and Networking (MobiCom 2007)*, Montreal, Quebec, Canada, Sept. 9-14, 2007.

Member, Program Committee, *2007 USENIX Annual Technical Conference (USENIX 2007)*, Santa Clara, CA, June 17-22, 2007.

Member, Program Committee, *International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2007)*, San Diego, CA, June 12-16, 2007.

Member, Program Committee, *2007 ACM/USENIX International Conference on Mobile Systems, Applications, and Services (MobiSys 2007)*, Puerto Rico, June 11-14, 2007.

Vice Chair, Program Committee, *16th International World Wide Web Conference (WWW2007)*, Banff, Alberta, Canada, May 8-12, 2007.

Member, Program Committee, *12th International Conference on Mobile Computing and Networking (MobiCom 2006)*, Los Angeles, CA, Sept. 24-29, 2006.

Member, Program Committee, *2006 IEEE International Conference on Cluster Computing (Cluster 2006)*, Barcelona, Spain, Sept. 25-27, 2006.

Member, Program Committee, *2006 USENIX Annual Technical Conference (USENIX 2006)*, Boston, MA, May 30-June 3, 2006.

Deputy Vice Chair, Program Committee, *15th International World Wide Web Conference (WWW2006)*, Edinburgh, UK, May 22-26, 2006.

Member, Program Committee, *International Conference on E-business and Telecommunication Networks (ICETE 2005)*, Reading, UK, Oct. 3-7, 2005.

Member, Program Committee, *International Work Conference on Next Generation Web Services Practices (NWeSP 2005)*, Seoul, Korea, Aug. 23-26, 2005.

Member, Program Committee, *IASTED International Conference on Web Technologies, Applications and Services (WTAS 2005)*, Calgary, Canada, July 4-6, 2005.

Member, Program Committee, *International Conference on Communications, Circuits and Systems (ICCCAS 2005)*, Hong Kong, China, May 27-30, 2005.

Member, Program Committee, *2005 USENIX Annual Technical Conference (USENIX 2005)*, Anaheim, CA, Apr. 10-15, 2005.

Member and WiPs Chair, Program Committee, *6th Symposium on Operating System Design and Implementation (OSDI 2004)*, San Francisco, CA, Dec. 6-8, 2004.

Member, Program Committee, *Multimedia Interactive Protocols and Systems (MIPS 2004)*, Grenoble, France, Nov. 16-19, 2004.

Member, Program Committee, *2nd International Conference on Service Oriented Computing (ICSOC 2004)*, New York, NY, Nov. 15-19, 2004.

Co-Chair, Program Committee, *1st ACM Workshop on Operating System and Architectural Support for the On Demand IT Infrastructure (OASIS 2004)*, Boston, MA, Oct. 9, 2004.

Member, Program Committee, *33rd International Conference on Parallel Processing (ICPP 2004)*, Montreal, Canada, Aug. 13-19, 2004.

Member, Program Committee, *International Conference on Communications, Circuits and Systems (ICCCAS 2004)*, Chengdu, China, June 27-29, 2004.

Member, Program Committee, *Joint International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS / PERFORMANCE 2004)*, New York, NY, June 12-16, 2004.

Deputy Vice Chair, Program Committee, *13th International World Wide Web Conference (WWW2004)*, New York, New York, May 17-22, 2004.

Member, Program Committee, *Multimedia Interactive Protocols and Systems (MIPS 2003)*, Napoli, Italy, Nov. 18-21, 2003.

Member, Program Committee, *13th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2003)*, Monterey, CA, June 1-3, 2003.

Member, Program Committee, *12th International World Wide Web Conference (WWW2003)*, Budapest, Hungary, May 20-24, 2003.

Member, Program Committee, *Joint International Workshop on Interactive Distributed Multimedia Systems / Protocols for Multimedia Systems (IDMS / PROMS 2002)*, Coimbra, Portugal, Nov. 26-29, 2002.

Member, Program Committee, *16th International Conference on Supercomputing (ICS 2002)*, New York, NY, June 22-26, 2002.

Member, Program Committee, *1st Workshop on Self-Healing, Adaptive and Self-MANaged Systems (SHAMAN 2002)*, New York, NY, June 23, 2002.

Member, Program Committee, *2002 USENIX Annual Technical Conference (USENIX 2002)*, Monterey, CA, June 9-14, 2002.

Member, Program Committee, *12th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2002)*, Miami Beach, FL, May 12-14, 2002.

Member, Program Committee, *8th International Workshop on Interactive Distributed Multimedia Systems (IDMS 2001)*, Lancaster, UK, Sept. 4-7, 2001.

Co-Chair, Program Committee, *11th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2001)*, New York, NY, June 25-26, 2001.

Member, Program Committee, *1st New York Metro Area Networking Workshop (NYMAN 2001)*, Hawthorne, NY, Mar. 12, 2001.

Member, Program Committee, *10th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2000)*, Chapel Hill, NC, June 26-28, 2000.

Member, Program Committee, *9th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 1999)*, Basking Ridge, NJ, June 23-25, 1999.

#### **CONFERENCE STEERING AND ORGANIZING COMMITTEES**

Member, Steering Committee, *15th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2005)*, Skamania, WA, June 12-14, 2005.

Local Organization Co-Chair, Organizing Committee, *2nd International Conference on Service Oriented Computing (ICSOC 2004)*, New York, NY, Nov. 15-19, 2004.

Co-Chair, Organizing Committee, *1st ACM Workshop on Operating System and Architectural Support for the On Demand IT Infrastructure (OASIS 2004)*, Boston, MA, Oct. 9, 2004.

Member, Steering Committee, *14th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2004)*, Cork, Ireland, June 16-18, 2004.

Publicity Chair, Organizing Committee, *Joint International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS / PERFORMANCE 2004)*, New York, NY, June 12-16, 2004.

Member, Steering Committee, *13th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2003)*, Monterey, CA, June 1-3, 2003.

University Liaison, Organizing Committee, *16th International Conference on Supercomputing (ICS 2002)*, New York, NY, June 22-26, 2002.

Member, Steering Committee, *12th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2002)*, Miami Beach, FL, May 12-14, 2002.

Co-Chair, Organizing Committee, *11th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2001)*, New York, NY, June 25-26, 2001.

#### **JOURNAL AND CONFERENCE REFEREEING** (in addition to conference program committees)

*ACM Computing Surveys.*

*ACM Computer Communication Journal.*

*ACM Multimedia Conference.*



*ACM Multimedia Systems Journal.*  
*ACM SIGGRAPH.*  
*ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI).*  
*ACM Symposium on Operating Systems Principles (SOSP).*  
*ACM Symposium on Parallelism in Algorithms and Architectures (SPAA).*  
*ACM Transactions on Computer Systems (TOCS).*  
*ACM Transactions on Multimedia Computing, Communication, and Applications (TOMCCAP).*  
*ACM Transactions on Internet Technology (TOIT).*  
*The Computer Journal.*  
*International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS).*  
*IEEE GLOBECOM Technical Conference.*  
*IEEE International Parallel and Distributed Processing Symposium (IPDPS).*  
*IEEE Internet Computing.*  
*IEEE Journal of Selected Areas in Communications.*  
*IEEE Multimedia.*  
*IEEE Transactions on Computers.*  
*IEEE Transactions on Circuits and Systems for Video Technology.*  
*IEEE Transactions on Mobile Computing.*  
*IEEE Transactions on Multimedia.*  
*IEEE Transactions on Parallel and Distributed Systems.*  
*IEEE/ACM Transactions on Networking.*  
*IEEE Transactions on Knowledge and Data Engineering.*  
*IEEE Transactions on Software Engineering.*  
*IEEE Wireless Communications and Networking Conference (WCNC).*  
*International Conference on Dependable Systems and Networks (DSN).*  
*International Workshop on Volume Visualization.*  
*Journal of Parallel and Distributed Computing.*  
*The Journal of Systems and Software.*  
*Software Practice and Experience.*  
*USENIX Annual Technical Conference.*  
*USENIX Annual Technical Conference, FREENIX Track.*  
*USENIX Conference on File and Storage Technologies (FAST).*  
*USENIX Symposium on Networked Systems Design and Implementation (NSDI).*  
*USENIX Security Symposium.*

#### **FUNDING AGENCIES**

Participant, *NSF Cyber Trust PI Workshop*, New Haven, CT, 2008.  
Participant, *NSF CISE PI Workshop*, Urbana, IL, 2005.  
Participant, *NSF Cyber Trust PI Workshop*, Newport Beach, CA, 2005.  
Participant, *DARPA ISAT "Law of Large Numbers System Design" Study Group*, 2005.  
Grant Review Panelist, *National Science Foundation*, Arlington, VA, 2000 - 2005, 2009.

Participant, *NSF CISE PI Workshop*, Las Cruces, NM, 1999.

#### **STANDARDIZATION COMMITTEES**

Member, Net2Display Task Group, *Video Electronics Standards Association (VESA)*, 2005 - 2009.

Member, DPVL Task Group, *Video Electronics Standards Association (VESA)*, 2005 - 2006.

#### **OUTREACH ACTIVITIES**

Member, *VMAP Advisory Board*, VMware, 2009 - present.

Member, Executive Advisory Committee, *Harlem Children Society*, 2007 - present.

Mentor, Computing Innovation Fellows Project, 2009 - 2010.

Advisor, Online Membership Services Strategy, *Association for Computing Machinery*, 2007 - 2008.

Invitee, Infoscape Charrette, *Lincoln Center for the Performing Arts*, 2007.

Board Member, Membership Services Board, *Association for Computing Machinery*, 2004 - 2007.

Managing Group Member, Security and Infrastructure Standing Committee, *Financial Services Technology Consortium (FSTC)*, 2006 - 2007.

Examiner, Graduate Record Examinations (GRE) Computer Science Test, *Educational Testing Service*, 2004 - 2005.

Judge, New York City Science and Engineering Fair (NYCSEF), *New York Academy of Sciences*, 2004.

Mentor, Harlem Children Society Internship Program, *Harlem Children Society*, 2006.

Mentor, Science Research Training Program, *New York Academy of Sciences*, 2001 - 2003, 2006.

Faculty Mentor, Summer Research Program for Historically Underrepresented Groups, *Leadership Alliance*, 2000.

#### **PROFESSIONAL SOCIETIES**

Member, Association for Computing Machinery (ACM).

Senior Member, Institute of Electrical and Electronic Engineers (IEEE).

Member, New York Academy of Sciences.

Member, USENIX Association.

## UNIVERSITY ACTIVITIES

(all activities at Columbia University unless otherwise noted)

### DOCTORAL DISSERTATIONS SUPERVISED

1. Nicolas Viennot, Sept. 2010 - present.
2. Jeremy Andrus, Sept. 2010 - present.
3. Dan Phung, June 2004 - present.
4. Oren Laadan, Sept. 2003 - present (SEAS Presidential Fellow 2003-2007).
5. Dinesh Subhraveti, Sept. 2001 - present.
6. Alexander Sherman, "Guaranteeing Performance through Fairness in Peer-to-Peer File Sharing and Streaming Systems", Ph.D. Computer Science, defended Oct. 2009.
7. Shaya Potter, "Virtualization Mechanisms for Mobility, Security, and System Administration", Ph.D. Computer Science, May 2010, currently Postdoctoral Scholar, IBM T.J. Watson Research Center.
8. Haoqiang Zheng, "CPU Scheduling with Automatic Interactivity and Dependency Detection", Ph.D. Computer Science, defended July 2009, currently Senior Staff Engineer, VMware.
9. Ricardo Baratto, "THINC: A Virtual and Remote Display Architecture for Desktop Computing", Ph.D. Computer Science, defended Oct. 2007 (with distinction), currently Senior Software Engineer, Calista Technologies.
10. Albert M. Lai, "A Remote Training Approach for Teaching Seniors to Use a Telehealth System", Ph.D. Biomedical Informatics, Feb. 2007 (with distinction, co-advised with Justin Starren), currently Assistant Professor, Department of Biomedical Informatics, Ohio State University.
11. David P. Olshefski, "Measuring and Managing the Remote Client Perceived Response Time for Web Transactions using Server-side Techniques", Ph.D. Computer Science, Oct. 2006 (with distinction), currently Research Staff Member, IBM T.J. Watson Research Center.
12. Gong Su, "MOVE: Mobility with Persistent Network Connections", Ph.D. Computer Science, Oct. 2004, currently Research Staff Member, IBM T.J. Watson Research Center.
13. Erez Zadok, "FiST: A System for File System Code Generation", Ph.D. Computer Science, May 2001, currently Associate Professor, Department of Computer Science, Stony Brook University.

### OTHER DOCTORAL DISSERTATION COMMITTEES

1. Rean Griffith, "Evaluating Software Systems via Runtime Fault-Injection and Reliability, Availability and Serviceability (RAS) Metrics and Models", Ph.D. Computer Science, Oct. 2008.
2. Stelios Sidiroglou, "Software Self-Healing Using Error Virtualization", Ph.D. Computer Science, May 2008.
3. Jacob Gorm Hansen, "Virtual Machine Mobility with Self-Migration", Ph.D. Computer Science, University of Copenhagen, Feb. 2008.
4. Hanhua Feng, "Scheduling: From Optimality to Configurability", Ph.D. Computer Science, Feb. 2008.
5. Sangho Shin, "Towards the Quality of Service for VoIP traffic in IEEE 802.11 Wireless Networks", Ph.D. Computer Science, Feb. 2008.
6. Aniruddha Bohra, "System Architectures Based on Functionality Offloading", Ph.D. Computer Science, Rutgers University, Jan. 2008.
7. Hoon Chang, "Incorporating Physical Layer Capture in the Modeling, Analysis and Design of Wireless Access Mechanisms", Ph.D. Computer Science, May 2007.
8. Xiaotao Wu, "Ubiquitous Programmable Internet Telephony End System Services", Ph.D. Computer Science, May 2007.
9. Weibin Zhao, "Towards Autonomic Computing: Service Discovery and Web Hotspot Service", Ph.D. Computer Science, May 2006.
10. Daniel Villela, "Resource Management in Large-Scale Services: Models and Algorithms", Ph.D. Electrical Engineering, Feb. 2006.

11. Yong Wang, "Resource Constrained Video Coding/Adaptation", Ph.D. Electrical Engineering, Feb. 2006.
12. Giuseppe Valetto, "Orchestrating the Dynamic Adaptation of Distributed Software with Workflow Technology", Ph.D. Computer Science, May 2004.
13. Lisa Amini, "Models and Algorithms for Resource Management in Distributed Computing Cooperatives", Ph.D. Computer Science, Feb. 2004.
14. Jonathan Lennox, "Services for Internet Telephony", Ph.D. Computer Science, Feb. 2004.
15. Raymond Liao, "Utility-Based Adaptation, Dynamic Provisioning and Incentive Engineering Techniques for Internet and its Wireless Extensions", Ph.D. Electrical Engineering, May 2003.
16. Sushil da Silva, "Netscript: A Language System for Active Networks", Ph.D. Computer Science, May 2003.
17. Maria Papadopouli, "Resource Sharing in Mobile Wireless Networks", Ph.D. Computer Science, Oct. 2002.
18. Denes Molnar, "Classical Transport Theory and Its Applications in Heavy-ion Physics", Ph.D. Physics, July 2002.
19. Apostolos Dailianas, "MarketNet: A Survivable, Market-Based Architecture for Large-Scale Information Systems", Ph.D. Computer Science, Jan. 2001.
20. Steve Dossick, "A Virtual Environment Framework for Software Engineering", Ph.D. Computer Science, Nov. 2000.

#### **OTHER DOCTORAL EXAM COMMITTEES**

1. Omer Boyaci, "Multimedia Tools for Application Sharing, Measuring Capture-to-display Latency, and User Created Services", Mar. 2010 (Thesis Proposal Committee).
2. Omer Boyaci, "Multimedia Collaboration and Application Sharing", June 2008 (Candidacy Exam Committee).
3. Stelios Sidiroglou, "Error Virtualization: A Technique for Autonomic Software Self-Healing", Dec. 2006 (Thesis Proposal Committee).
4. Hanhua Feng, "Optimal Stochastic Scheduling", Dec. 2006 (Thesis Proposal Committee).
5. Hoon Chang, "Analytical Model and Fairness Scheduling of CSMA/CA in Physical Layer Capturing", May 2006 (Thesis Proposal Committee).
6. Michael Locasto, "A Virtual CPU Framework for Self-Healing Software", Dec. 2005 (Thesis Proposal Committee).
7. Stelios Sidiroglou, "Common Mode Attacks", Nov. 2005 (Candidacy Exam Committee).
8. Rean Griffith, "Design and Implementation of Self-healing Systems", Nov. 2004 (Candidacy Exam Committee).
9. Daniel Villela, "Resource Management for Services in Federated Systems", Apr. 2004 (Thesis Proposal Committee).
10. Weibin Zhao, "Advanced Service Discovery and Web Hotspot Rescue", May 2003 (Thesis Proposal Committee).
11. Lisa Amini, "Algorithms and Protocols for Content Internetworking", Jan. 2002 (Thesis Proposal Committee).
12. Xiaotao Wu, "Telecommunication Services", Nov. 2001 (Candidacy Exam Committee).
13. Lisa Amini, "Distributed Content Services Framework", Dec. 2000 (Candidacy Exam Committee).
14. Eleazar Eskin, "Probabilistic Approaches of Anomaly Detection Applied to Intrusion Detection", May 2000 (Candidacy Exam Committee).
15. Giuseppe Valetto, "Formalisms and Mechanisms for Specifying and Supporting Coordination in Distributed Systems", Apr. 2000 (Candidacy Exam Committee).
16. Jonathan Lennox, "Advanced Services for Internet Telephony" Feb. 2000 (Thesis Proposal Committee).
17. Weibin Zhao, "Internet Quality of Service", Dec. 1999 (Candidacy Exam Committee).
18. Alexander Konstantinou, "Computational Models of Change Propagation", Dec. 1999 (Candidacy Exam Committee).
19. Ping Pan, "On Scalable Internet Resource Reservation", Apr. 1999 (Candidacy Exam Committee).

#### **MASTERS DISSERTATIONS SUPERVISED**

1. Lei Zhang, "Implementing A Windows Remote Display Architecture", M.S. Computer Science, Feb. 2006.

2. Bogdan Caprita, "Grouped Distributed Queues: Distributed Queue, Proportional Share Multiprocessor Scheduling", M.S. Computer Science, May 2005.
3. V. Guruprasad, "Canonical Simplification and Automation of the Internet", M.S. Computer Science, May 2005.
4. Wong Chun Chan, "Group Ratio Round-Robin: An O(1) Proportional Share Scheduler", M.S. Computer Science, June 2004.
5. Erik Hogstedt, "Implementing ALM: an Application-level Multicast Protocol for Group Work and Group Study", M.S. Media Technology, Royal Institute of Technology, Stockholm, Sweden, June 2002.

#### **OTHER MASTERS DISSERTATION COMMITTEES**

1. Stephen Boyd, "Practical Randomization Techniques For Combatting Code-Injection Attacks", M.S. Computer Science, May 2004.

#### **MASTERS PROJECT STUDENTS SUPERVISED**

1. Carlos Perez, M.S. Computer Science, expected May 2010 (published in *ASPLOS 2009*).
2. Jau-Yuan Chen, M.S. Computer Science, Feb. 2010.
3. Christoffer Dall, M.S. Computer Science, Feb. 2010.
4. Sinan Xiao, M.S. Computer Science, Feb. 2010.
5. Xintong Zhou, M.S. Computer Science, Feb. 2010.
6. Daniel Benamy, M.S. Computer Science, May 2009.
7. Andreas Nilsson, M.S. Computer Science, May 2009.
8. Adrian Frei, M.S. Computer Science, Feb. 2009.
9. Ke Jin, M.S. Computer Science, Feb. 2009.
10. Shariar Kazi, M.S. Computer Science, Feb. 2009.
11. Taek Joo Kim, M.S. Computer Science, Feb. 2009.
12. John Morales, M.S. Computer Science, Feb. 2009.
13. Shrinivas Nidadavolu, M.S. Computer Science, Feb. 2009.
14. Nicolas Viennot, M.S. Computer Science, Feb. 2009 (published in *ASPLOS 2009*).
15. Ken Lee, M.S. Computer Science, May 2008.
16. Divya Arora, M.S. Computer Science, Feb. 2008.
17. Jayesh Kataria, M.S. Computer Science, Feb. 2008.
18. Amortya Ray, M.S. Computer Science, Feb. 2008.
19. Dhruva Shetty, M.S. Computer Science, Feb. 2008.
20. Tarandeep Singh, M.S. Computer Science, Feb. 2008.
21. Young Jin Yoon, M.S. Computer Science, Feb. 2008.
22. Joon Seong Ahn, M.S. Computer Science, Oct. 2007.
23. Ilho Ye, M.S. Computer Science, Feb. 2007.
24. Nabahwaya Bashir-Bello, M.S. Computer Science, Feb. 2006.
25. Joeng Kim, M.S. Computer Science, Feb. 2006 (published in *WWW2006, SCC 2006*).
26. Pinxing Ye, M.S. Computer Science, Feb. 2006.
27. Sarita Bafna, M.S. Computer Science, May 2005.
28. Jonah Benton, M.S. Computer Science, May 2005.
29. Bhagyashree Bohra, M.S. Computer Science, May 2005 (published in *WWW2004*).
30. Pavan-Kumar Josyula-Venkata, M.S. Computer Science, May 2005.

31. Leonard Kim, M.S. Computer Science, May 2005 (published in *SOSP 2005*).
32. Vijayarka Nandikonda, M.S. Computer Science, May 2005 (published in *WWW2004*).
33. Madhuri Shinde, M.S. Computer Science, May 2005.
34. Abhishek Surana, M.S. Computer Science, May 2005 (published in *WWW2004*).
35. Suchita Varshneya, M.S. Computer Science, May 2005 (published in *WWW2004*).
36. Raghu Arur, M.S. Computer Science, May 2004.
37. Paul Henley, M.S. Computer Science, May 2004.
38. Yong Gao, M.S. Computer Science, May 2003.
39. Shilpa Krishnappa, M.S. Computer Science, May 2003 (published in *WWW2003*).
40. Aparna Mohla, M.S. Computer Science, May 2003 (published in *WWW2003*).
41. Mahdi Sajjadpour, M.S. Electrical Engineering, May 2003 (published in *WWW2003*).
42. Nikhil Tiwari, M.S. Computer Science, May 2003 (published in *USENIX 2002*).
43. S. Jae Yang, M.S. Computer Science, in progress (published in *NOSSDAV 2000, PC Magazine 2001, USENIX 2001, PC Magazine 2002, USENIX 2002, TOCS 2003, WWW2003*).
44. Ravi Gadhia, M.S. Computer Science, Feb. 2003.
45. Jianqin Qu, M.S. Computer Science, May 2002.
46. Fei Li, M.S. Computer Science, Jan. 2002 (published in *DCC 2002, ICC 2002*).
47. Albert Lai, M.S. Computer Science, May 2001 (published in *SIGMETRICS 2002, TOCS 2006*).
48. Chris Vaill, M.S. Computer Science, May 2001 (published in *USENIX 2001, SIGCSE 2005, OSR 2006*).
49. Hua Zhong, M.S. Computer Science, May 2001 (published in *USENIX 2001*).
50. Rahul Joshi, M.S. Computer Science, Feb. 2001.
51. Yuan Liu, M.S. Computer Science, Oct. 2000.
52. Johan M. Andersen, M.S. Computer Science, May 2000 (published in *USENIX 2001*).
53. Sung Hyun Cho, M.S. Computer Science, May 2000.
54. Du Hee Lee, M.S. Computer Science, May 2000.
55. Naomi Novik, M.S. Computer Science, May 2000 (published in *USENIX 2001, TOCS 2003*).
56. Ari Steinfeld, M.S. Computer Science, May 2000.
57. Yue Hai Tan, M.S. Computer Science, Feb. 2000.

#### **UNDERGRADUATE DISSERTATIONS SUPERVISED**

1. Matthew Selsky, "Creating Secure Partitions for Virtualized Migration Environments", B.S. Computer Science, May 2005.

#### **UNDERGRADUATE PROJECT STUDENTS SUPERVISED**

1. David Alpert, B.S. Computer Science, May 2009.
2. Jordan Rupperecht, B.S. Computer Science, May 2009.
3. Arjun Roy, B.S. Computer Science, May 2009.
4. Andrew Shu, B.S. Computer Science, May 2009.
5. Matt Schulkind, B.S. Computer Science, May 2006.
6. Bok-Lyn Wong, B.S. Computer Science, Feb. 2006.
7. Bogdan Caprita, B.S. Computer Engineering and B.S. Applied Mathematics, Feb. 2005 (Computing Research Association's Outstanding Undergraduate Award 2004/2005 Finalist, 2005 Theodore R. Bashkow Award, published in *ANCS 2005, USENIX 2005*).

8. Yuly Finkelberg, B.S. Computer Science, May 2005.
9. Irina Likhtina, B.S. Computer Science, May 2005.
10. Robert Tobkes, B.S. Computer Science, May 2005.
11. Tony Capra, B.A. Computer Science, May 2004.
12. Dave Coulthart, B.S. Computer Science, May 2004.
13. Hubert Lin, B.S. Computer Science, May 2004.
14. Dong Lou, B.S. Computer Science, May 2004.
15. Jen Wang, B.S. Computer Science, May 2004.
16. Gerardo Flores, B.S. Computer Science, May 2003.
17. Leonard Kim, B.S. Computer Science, May 2003.
18. Sung Y. Cho, B.S. Computer Science, May 2002.
19. Erik Czernikowski, B.S. Computer Science, May 2002.
20. Aner Fust, B.S. Computer Science, May 2002.
21. Michael Kalnicki, B.S. Computer Science, May 2002.
22. Eugene Kim, B.S. Computer Science, May 2002.
23. Iliia Malkovitch, B.S. Computer Science, May 2002.
24. Steven Osman, B.S. Computer Science, May 2002 (published in *OSDI 2002*).
25. Francesco Tamburrino, B.S. Electrical Engineering, Feb. 2002.
26. Paolo de Dios, B.S. Computer Science, May 2001.
27. Carla Goldberg, B.A. Computer Science, May 2001.
28. Sara Schumacher, B.A. Computer Science, Feb. 2001.
29. Ozgur Can Leonard, B.S. Computer Science, May 2000 (published in *Dr. Dobb's Journal 2000*).

#### **UNIVERSITY SERVICE**

*Member, SEAS Faculty Advisory Committee for Entrepreneurship, 2007 - present.*

*Faculty Advisor, Society for Entrepreneurship and Technological Innovation at Columbia University (SETI), 2008 - 2009.*

*Member, SEAS Nominating Committee, 2005 - 2007.*

*Member, Senate Committee on Athletic Eligibility, 2001 - 2008. Served on provost-appointed committee responsible for general policy on athletic eligibility and ruling on student appeals to be able to participate despite falling short of the Columbia standard for degree progress.*

*Member, Faculty Focus Group on Child Care, Office of Planning and Institutional Research, 2005.*

*Faculty Volunteer, Urban New York, Office of Student Activities, 2003 - 2007, 2010.*

*Member, RASCAL Project Advisory Committee, 1999 - 2001. Served on advisory committee responsible for providing guidance and feedback on the design of the electronic research administration system (RASCAL), now in use by the Office of Projects and Grants, <https://www.rascal.columbia.edu>.*

*Undergraduate Associate Advisor, Massachusetts Institute of Technology, 1987 - 1988.*

#### **DEPARTMENTAL SERVICE (Dept. of Computer Science unless otherwise noted)**

*Member and Chair, Visibility Committee, 2009 - present (Chair, 2009).*

*Member, Academic Committee, 2003 - 2006, 2008 - present.*

*USENIX Campus Liaison, USENIX Association, 2004 - present.*

*Faculty Organizer and Speaker, Professional Preparation Seminar Series, 2008 - 2009.*

*Co-Chair, Faculty Retreat, 2008.*

*Lab Demonstrations, Undergraduate and MS Research Project Fair, 2008.*  
*Member and Chair, Strategic Planning Committee, 2005 - 2008 (Chair, 2007 - 2008).*  
*Speaker, ACM Luncheon and Research Series, 2008.*  
*Member, Faculty Recruiting Committee, 2003 - 2008.*  
*Member and Chair, Facilities Committee, 1999 - 2006 (Chair, 2002 - 2003).*  
*Faculty Advisor, Columbia Mainframe Computing Group, 2005 - 2006.*  
*Member, Bill Campbell Visit Organizing Committee, 2005.*  
*Member, Faculty Retreat Organizing Committee, 2005.*  
*Department Representative, NSF CISE Workshop, 1999, 2005.*  
*Member, Academic Honesty Task Force, 2004 - 2005.*  
*Editor-in-Chief, 25th Anniversary of the Department of Computer Science Newsletter, 2004 - 2005.*  
*Operating Systems Comprehensive Examiner, 1999 - 2004.*  
*Speaker Host, 25th Anniversary Distinguished Lecture Series, 2004.*  
*Lab Demonstrations, 25th Anniversary of the Department of Computer Science, 2004.*  
*Speaker, 25th Anniversary of the Department of Computer Science, 2004.*  
*Columbia College Academic Advisor (Seniors), 2003 - 2004.*  
*Lab Demonstrations, ACM Computer Science Research Fair, 2003.*  
*Ph.D. Funding Survey, Ph.D. Committee, 2003.*  
*Chair, CRF Director Search Committee, 2003.*  
*Columbia College Academic Advisor (Juniors), 2002 - 2003.*  
*Departmental Infrastructure and Systems Area Speaker, External Review, 2003.*  
*Research Demonstration, CAP Computer Science Research Fair, 2002.*  
*Speaker, ACM Computer Science Research Fair, 2002.*  
*Speaker, Faculty Research Colloquia, 2002.*  
*Faculty Assistant Manager, 2000 - 2002.*  
*Columbia College Academic Advisor (Freshman and Sophomores), 2001 - 2002.*  
*Member, Ph.D. Admissions Committee, 1999 - 2002.*  
*Speaker, ACM Computer Science Research Fair, 2001.*  
*Speaker, Faculty Research Colloquia, 2001.*  
*M.S. Academic Advisor, 1999 - 2001.*  
*Department Faculty Representative, SEAS Engineering Council, 2001.*  
*Speaker, ACM Computer Science Research Fair, 2000.*  
*SEAS New Graduate Student Orientation, 2000.*  
*Computer Science Colloquium Chair, 1999 - 2000. Faculty comments: "This seems to have been the most interesting set of colloquia since I've been at Columbia." (Feb. 2000). "I keep having to change plans because you've organized such a terrific colloquium series." (Feb. 2000). "Just fyi, that was one of the best colloquia I've ever been to in my life!" (Dec. 1999).*  
*SEAS Alumni Faculty-Student Dinners, 1999.*  
*Graduate Admissions Committee, Dept. of Electrical Engineering, Stanford University, 1996.*  
*Graduate Mentor, Dept. of Electrical Engineering, Stanford University, 1993 - 1995.*



## CURRICULUM AND TEACHING

(all activities at Columbia University unless otherwise noted)

### NEW CURRICULUM DEVELOPMENT

**COMS E6998 Mobile Computing with iPhone and Android**, 2008 - present. Developed and taught a new course on smartphone mobile computing that explores the technologies and convergence of computing, telephony, and sensors in the physical world. Course has also been profiled in:

Elizabeth Woyke, "iPhone and Android Apps 101", *Forbes.com*, New York, NY, Nov. 2008.

**COMS E6998 Virtual Machines**, 2007 - 2008. Co-developed and taught a new advanced graduate course on virtual machines.

**COMS E6998 Topics in Computer Systems**, 2005 - 2006. Developed and taught a new advanced graduate course on topics in computer systems which focuses on a different technical area of interest each semester.

**COMS W4118 Operating Systems**, 1999 - 2004. Developed and taught a new advanced undergraduate / graduate course in operating systems, which integrates operating system concepts with real-world operating system design and implementation. First course in the world to employ novel virtual machine technology to provide hands-on operating system design and implementation instruction in a real commercial operating system for both on-campus and distance learning students. Approach has been emulated at several other universities, including Calvin College, Clarkson University, John Hopkins University, SUNY Stony Brook, Swarthmore College, University of Illinois, University of Rochester, University of Virginia, University of Washington, Worcester Polytechnic Institute, etc. "The best CS class of my college career, both in terms of how much I learned and how valuable the information turned out to be in the real world. Writing new system calls, device drivers, schedulers... Mention to an interviewer that you know how to do this and they drool..." *Slashdot*, Dec. 2000. Course has also been profiled in:

"Software Doubles as Insurance Policy for Columbia University", *College Planning and Management*, Apr. 2001.

Charles Babcock, "VMware Welcomes Guest OSes", *Inter@ctive Week*, 7(17), Ziff-Davis Media, New York, NY, May 1, 2000, p. 86.

Mara Velasco Sweet, "Columbia Students Gain Valuable Experience in Operating System Design Using VMware", *VMware Customer Success Stories*, VMware, Palo Alto, CA, Oct. 1999.

**COMS E6118 Advanced Operating Systems**, 2000 - 2004. Developed and taught a new advanced graduate course in operating systems. New classroom and lab course materials were developed on recent research developments in operating systems. Course also develops research skills by emphasizing classroom discussion, student presentation skills, and in-depth programming projects.

**COMS W3157 Advanced Programming**, 2001. Helped formulate and develop an undergraduate advanced programming course with an emphasis on systems programming principles and tools.

**COMS W3139 Data Structures and Algorithms in Java**, 1999. Developed and taught a new undergraduate course in data structures and algorithms using Java. Previous versions of the course were taught in C, but a department decision to move the core undergraduate computer science curriculum to Java created a critical need for this course. New Java-based course materials were developed and have been subsequently been used by other faculty for this course.

### TEACHING EXPERIENCE

**COMS W3998 Projects in Computer Science**, Fall 2000 - present. Enrollment 2 (Fall 2000), 1 (Spring 2001), 1 (Fall 2001), 2 (Spring 2002), 1 (Fall 2002), 2 (Spring 2003), 2 (Fall 2003), 3 (Spring 2004), 2 (Fall 2004), 1 (Fall 2005).

**COMS W4901 Projects in Computer Science**, Summer 1999 - present. Enrollment 1 (Summer 1999), 3 (Spring 2000), 2 (Summer 2000), 3 (Spring 2001), 1 (Fall 2001), 2 (Spring 2002), 3 (Spring 2003), 2 (Fall 2003), 2 (Fall 2005), 1 (Fall 2006), 4 (Fall 2008), 3 (Spring 2009).

**COMS E6901 Projects in Computer Science**, Spring 1999 - present. Enrollment 1 (Spring 1999), 8 (Fall 1999), 7 (Spring 2000), 2 (Summer 2000), 4 (Fall 2000), 4 (Spring 2001), 6 (Fall 2001), 6 (Spring 2002), 10 (Fall 2002), 5 (Spring 2003), 11 (Fall 2003), 2 (Spring 2004), 6 (Fall 2004), 6 (Spring 2005), 1 (Fall 2005), 3 (Spring 2006), 7 (Fall 2006), 2 (Spring 2007), 2 (Fall 2007), 6 (Spring 2008), 5 (Fall 2008) 4 (Spring 2009), 1 (Summer 2009), 1 (Fall 2009), 2 (Spring 2010).

**COMS E6118 Advanced Operating Systems**, Spring 2010. Enrollment 5 (2 CVN).

**COMS W4118 Operating Systems**, Fall 2009. Enrollment 65 (7 CVN), instructor rating 4.1/5.0.

**COMS E6998 Mobile Computing with iPhone and Android**, Summer 2009. Enrollment 4 (CVN pre-taped).

**COMS W4118 Operating Systems**, Summer 2009. Enrollment 8 (CVN pre-taped).

**COMS E6998 Mobile Computing with iPhone and Android**, Spring 2009. Enrollment 70 (14 CVN), instructor rating 3.9/5.0.

**COMS W4118 Operating Systems**, Fall 2008. Enrollment 74 (13 CVN), instructor rating 4.5/5.0.

**COMS E6998 Virtual Machines**, Spring 2008. Enrollment 24 (6 CVN), instructor rating 4.8/5.0.

**COMS W4118 Operating Systems**, Fall 2007. Enrollment 42, instructor rating 4.1/5.0.

**COMS E6998 Topics in Computer Systems**, Spring 2006. Enrollment 7, instructor rating 5.0/5.0.

**COMS E6118 Advanced Operating Systems**, Fall 2005. Enrollment 13, instructor rating 4.4/5.0.

**COMS W4118 Operating Systems**, Fall 2004. Enrollment 100 (16 CVN), instructor rating 4.3/5.0.

**COMS W4118 Operating Systems**, Summer 2004. Enrollment 4 (CVN pre-taped).

**COMS E6118 Advanced Operating Systems**, Spring 2004. Enrollment 22, instructor rating 4.3/5.0.

**COMS W4118 Operating Systems**, Fall 2003. Enrollment 83 (10 CVN), instructor rating 4.2/5.0.

**COMS W4118 Operating Systems**, Summer 2003. Enrollment 2 (CVN pre-taped).

**COMS W4118 Operating Systems**, Spring 2003. Enrollment 75 (5 CVN), instructor rating 4.2/5.0.

**G22.3813 Advanced Laboratory in Computer Science**, New York University, Spring 2003. Enrollment 1.

**COMS W4118 Operating Systems**, Fall 2002. Enrollment 84 (14 CVN), instructor rating 4.2/5.0.

**COMS W4118 Operating Systems**, Summer 2002. Enrollment 7 (CVN pre-taped).

**COMS E6118 Advanced Operating Systems**, Spring 2002. Enrollment 17, instructor rating 4.4/5.0.

**COMS W4118 Operating Systems**, Spring 2002. Enrollment 6 (CVN pre-taped).

**COMS W4118 Operating Systems**, Fall 2001. Enrollment 102 (16 CVN), instructor rating 4.1/5.0.

**COMS W4118 Operating Systems**, Summer 2001. Enrollment 8 (CVN pre-taped).

**COMS E6118 Advanced Operating Systems**, Spring 2001. Enrollment 5, instructor rating 4.4/5.0.

**COMS W4118 Operating Systems**, Fall 2000. Enrollment 127 (19 CVN), instructor rating 3.8/5.0.

**COMS E6118 Advanced Operating Systems**, Spring 2000. Enrollment 23, instructor rating 3.9/5.0.

**COMS W4118 Operating Systems**, Fall 1999. Enrollment 119 (11 CVN), instructor rating 3.8/5.0.

**COMS E6901 Operating Systems and Networking Reading Seminar**, Fall 1999.

**COMS W3139 Data Structures and Algorithms in Java**, Spring 1999. Enrollment 52, instructor rating 4.2/5.0. (nominated for Columbia Great Teacher Award)

**Intermediate Guitar**, Christian Guitarist Conference, Apr. 1996, 1997, 1998.

#### **SELECTED STUDENT COURSE EVALUATION COMMENTS**

“Great teaching and organization, the best CS course.” (Fall 2009)

“I got to learn the most out of any course in my 2 years at Columbia.” (Fall 2009)

“A true master of the subject matter; excellent classroom delivery; and unafraid to innovate around the homework assignments (Android, Git, VMs, etc).” (Fall 2009)

“I had Jason Nieh for both Operating Systems and this course. He is a great lecturer that really knows how to motivate students to learn.” (Spring 2009)

"I love the concept of the class and I believe it's vital for students to continue broadening their skill sets to encompass more than just your usual CS topics. There was a lot of self-exploration but I felt that Professor Nieh did an excellent job keeping everyone engaged for the entire semester. That surely isn't easy." (Spring 2009)

"I'm so glad I took this course. It was so much fun...amazing course." (Spring 2009)

"Professor Nieh is the best professor I've studied under at Columbia University. His high standards boundless energy and ability to draw students into the lecture are amazing. His class is known for being the toughest and most demanding in our program. Yet I looked forward each day to attending his lectures and attacked the difficult problem sets with motivation and vigor unlike any other class. He inspires students to do the tough work not unlike the manner in which an athletic coach pushes and motivates his or her players. I wanted to do well in this class wanted to pull the countless all nighters if for no other reason than having the pride and incredible sense of accomplishment that comes with being able to hang with Jason Nieh. We need more professors like this who are able to set incredibly high standards while also inspiring students to achieve them while at the same time leaving the student with a very solid understanding of theory and very marketable skills." (Fall 2008)

"This course is the best CS course I have ever taken...Jason is an excellent teacher, who is very approachable and answers any question with insight and dedication, so take this course with him if you have the chance." (Fall 2008)

"This is by far the most demanding and rewarding class I have taken as a CS grad student at Columbia." (Fall 2008)

"Prof. Nieh is amazingly knowledgeable in this area and is able to communicate the material in an effective interesting manner that truly captivates students attention. Undoubtedly the best CS lecturer I have come across at Columbia." (Fall 2008)

"The best instructor I've encountered at CU." (Fall 2008)

"OS is the most thorough classes I've taken and has taught me the most." (Fall 2008)

"Prof. Nieh really knows his stuff and has some pretty amazing homework lined up. You can tell he put a lot of work into designing problems that seem plausible and teach you a lot. Much to my classmates chagrin I'd say the homework is the best part of the class." (Fall 2008)

"...the best course I have taken. So much to learn and the hands-on Linux kernel development is fantastic." (Fall 2008)

"Professor is amazing." (Fall 2008)

"Great course. I actually look forward to going to class each lecture. The instructor is very engaging -- by far the best lecturer I've had at CU...The class is tough but I really feel like I am getting a ton of value out of it." (Fall 2008)

"The professor and TAs definitely know the material inside-out and the lectures are excellent and far more educational than other classes I've taken in the CS dept." (Fall 2008)

"...I really enjoyed OS...(undoubtedly) the most challenging course I've taken, but it was the most interesting and I believe will be the most useful." (Fall 2008)

"One of the best courses taken..." (Spring 2008)

"This class was the class I have learned the most from, and has also been the class from which I have gained the most marketable skills I have and have at least indirectly landed me job offers." (Fall 2007)

"I probably learned more in this course than my last three CS courses combined." (Fall 2007)

"Prof. Nieh is the greatest teacher I ever met." (Fall 2004)

"Best CS teacher at Columbia hands down." (Fall 2004)

"The best lecturer I have ever." (Fall 2004)

"The best one (course) I have ever taken..." (Fall 2004)

"Amazing class and teacher." (Fall 2004)

"Brilliant, knowledgeable, approachable professor." (Fall 2004)

"There's nothing he can't do." (Fall 2004)

"Outstanding professor. Knows EVERYTHING about linux and operating systems in general." (Fall 2004)

"...definitely recommended for any Computer Science student." (Fall 2004)

“Dr. Nieh took a potentially dry topic and made it very interesting. The classroom was very crowded throughout the semester: not just because there were way too many desks and not enough space, but because Dr. Nieh made lectures intriguing enough that most students always came.” (Fall 2004)

“Dr. Nieh is a great professor. I took an Operating Systems course at my undergrad university, and it was very dry. Dr. Nieh made the lectures interesting, and he kept our attention...” (Fall 2004)

“One of the best! If we had more professors like this one, the MS would be number 1!” (Fall 2004)

“I rate this one of the best courses in Columbia University.” (Fall 2004)

“...a fun and highly informative class!” (Fall 2004)

“...my favorite. Being able to hack the Linux kernel is awesome. I am learning a lot. And Professor Nieh’s delivery is second to none...I really do love the course.” (Fall 2004)

“...extremely well organized and handled, despite having a huge number of students.” (Fall 2004)

“Best teacher I have had so far.” (Fall 2003)

“Great teacher, great course. Extremely clear about why things are how they are. Challenges the students to think through the answer instead of just stating it, which too few professors in CS do.” (Fall 2003)

“...a master in his field...a brilliant orator, presenter and well a learned man all in one.” (Fall 2003)

“Professor Nieh runs a class that is orders of magnitude more organized and more thoughtfully planned. He’s structured unbelievably dense material extremely well so that I’m able to follow the course of the subject easily.” (Fall 2003)

“The course material was invaluable. The skills and knowledge you learn are immense.” (Fall 2003)

“...the most enjoyable, informative, and well-structured course...every CS student at Columbia should not miss out the opportunity to learn under him.” (Fall 2003)

“Best lecturer in Computer Science in my academic career.” (Fall 2003)

“The best CS class I’ve had, combines very well theory and practice.” (Fall 2003)

“I recommend more in-depth classes on operating systems to be taught by Prof. Nieh.” (Fall 2003)

“Professor Nieh clearly knows his stuff about OS and is able to teach it to his students very well.” (Fall 2003)

“Very organized, approachable, unlike some professors, knows his stuff very very well. Overall, an awesome professor.” (Fall 2003)

“Professor Nieh is very approachable and extremely knowledgeable. He exudes everything that a teacher should be.” (Fall 2003)

“Knows the subject inside out...very approachable and friendly...strives to provide a quality class, makes no compromises.” (Fall 2003)

“...knows his subject so well...amongst the best professors I have met.” (Fall 2003)

“...very well-lectured and well-run, and I was impressed by the amount that we learned.” (Fall 2003)

“...a very good professor who knows how to relate a difficult subject in a very easy to understand manner.” (Fall 2003)

“Great teacher...you’ll get a lot out from this class, in terms of programming skills and systems knowledge in general...definitely one of the best CS classes I took at Columbia.” (Spring 2003)

“Nieh is an awesome teacher that is very organized and that instructs his class with a lot of thought behind everything.” (Spring 2003)

“Nieh is clear, concise, and eminently knowledgeable within the contemporary operating systems field.” (Spring 2003)

“The best CS professor I have taken a class with.” (Spring 2003)

“Prof. Nieh is very friendly, very knowledgeable in his field and very open to students.” (Spring 2003)

“A tremendous amount of thought was clearly put into the course design. One of the best organized classes I’ve been in.” (Spring 2003)

“Professor Nieh is a great and very knowledgeable professor. He is also always available and willing to help.” (Spring 2003)

“Best organized class I’ve taken so far. Professor Nieh really cares about what people learn, and he takes his job seriously.” (Spring 2003)

“I’m really impressed...never had a course like this...” (Spring 2003)

“Prof. Nieh is an excellent teacher. He is always prepared for class. He maintains an outstanding course website. He also addresses student questions and allows them to think in the classroom... he is very approachable and is a really nice guy...you also gain a lot from the class.” (Spring 2003)

“Nieh is a terrific instructor. He has a gift for selecting just the right details to demonstrate a particular point so that the rest of the material falls into place...” (Fall 2002)

“I have not come across a professor as good as he is in my life.” (Fall 2002)

“Professor Nieh takes what is possibly the most difficult topic in Computer Science and explains it in a way that makes difficult topics seem almost common-sense. His classroom delivery is impeccable, and the amount learned is incredible.” (Fall 2002)

“Nieh is gifted; he has an ability to communicate ideas both colloquially but also with appropriate technical precision.” (Fall 2002)

“Aside from knowing his stuff, Prof. Nieh has a great style of lecturing. He always comes prepared, always ready to answer questions, and actually gets you to think about the material.” (Fall 2002)

“Great professor, knows his stuff.” (Fall 2002)

“Nieh is one of the best professors in the CS department...was always available whether during office hours or not. Compared to other professors, he is a much better speaker and has better presentation skills. His knowledge of subject matter is on par with other great professors I’ve had. Most importantly, he’s a nice and understanding guy which is very welcome in a department of professors who seem like they’re out to get you. I learned a tremendous amount and thoroughly enjoyed the class.” (Fall 2002)

“A very good instructor in all the sense of the word. He knows his material, listens to students, and is willing to help the students.” (Fall 2002)

“...made the Linux kernel accessible to students to a degree I wouldn’t have imagined possible.” (Fall 2002)

“It’s a great, great class.” (Fall 2002)

“Very, very knowledgeable and easily approachable.” (Fall 2002)

“Highly recommended...” (Spring 2002)

“This class was fun. It’s laid back and very instructive...” (Spring 2002)

“This is an excellent class.” (Spring 2002)

“Prof. Nieh is by far the best professor I have encountered in this school.” (Fall 2001)

“Must-take class for all CS majors.” (Fall 2001)

“The best CS class of my college career, both in terms of how much I learned and how valuable the information turned out to be in the real world. Writing new system calls, device drivers, schedulers... Mention to an interviewer that you know how to do this and they drool...” (Fall 2000)

“Hardest, but best class I’ve taken so far at Columbia...” (Fall 2000)

“This is the best course I have taken in 6 years at the CS dept.” (Spring 2000)

“I love that we’re working with a real OS like Linux. Doing the homework was fun, particularly so because it felt like really accomplishing something of practical value.” (Fall 1999)

“A relative new-comer to Columbia, Nieh is a VERY smart guy, and when it comes to OS, he is THE specialist. His lectures are one of the better ones here at Columbia, and you’ll actually learn a lot.” (Fall 1999)

“A great course, I really enjoyed it. Thanks.” (Spring 1999)

“Best course I’ve taken at Columbia thus far.” (Spring 1999)

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	7444671
<b>Application Number:</b>	95001270
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	2128
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	7188180
<b>Customer Number:</b>	23630
<b>Filer:</b>	Toby H. Kusmer./Kelly Ciarmataro
<b>Filer Authorized By:</b>	Toby H. Kusmer.
<b>Attorney Docket Number:</b>	077580-0090
<b>Receipt Date:</b>	19-APR-2010
<b>Filing Date:</b>	08-DEC-2009
<b>Time Stamp:</b>	19:40:05
<b>Application Type:</b>	inter partes reexam

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Reexam - Affidavit/Decl/Exhibit Filed by 3rd Party	Nieh_Declaration.pdf	1488660 <small>39f74042d0fcc15599d3b66aa6721cf03e5a0ec8</small>	no	45

### Warnings:

### Information:

2	Reexam Certificate of Service	Cert_Serv_Nieh.pdf	24155	no	1
			2834a429e9606e2234d7163c061a5f3be2978427		

**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	1512815
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**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

EXHIBIT H



<p style="text-align: center;">IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION</p> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">VIRNETX INC. AND SCIENCE</td> <td style="width: 5%; text-align: center;">}</td> <td style="width: 35%;"></td> </tr> <tr> <td>APPLICATIONS INTERNATIONAL CORP.,</td> <td style="text-align: center;">}</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">}</td> <td></td> </tr> <tr> <td style="text-align: center;">Plaintiff,</td> <td style="text-align: center;">}</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">}</td> <td style="text-align: center;">Civil Action</td> </tr> <tr> <td style="text-align: center;">v.</td> <td style="text-align: center;">}</td> <td style="text-align: center;">No. 6:07CV80V (LED)</td> </tr> <tr> <td></td> <td style="text-align: center;">}</td> <td></td> </tr> <tr> <td>MICROSOFT CORPORATION,</td> <td style="text-align: center;">}</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">}</td> <td></td> </tr> <tr> <td style="text-align: center;">Defendant.</td> <td style="text-align: center;">}</td> <td></td> </tr> </table> <hr/> <p style="text-align: center;">Videotape Deposition Upon Oral Examination of GARY TOMLINSON</p> <hr/> <p style="text-align: center;">Taken at 925 Fourth Avenue, Suite 2900 Seattle, Washington</p> <p>DATE: Friday, February 27, 2009</p> <p>REPORTED BY: Ronald L. Cook CCR, RMR, CRR</p>	VIRNETX INC. AND SCIENCE	}		APPLICATIONS INTERNATIONAL CORP.,	}			}		Plaintiff,	}			}	Civil Action	v.	}	No. 6:07CV80V (LED)		}		MICROSOFT CORPORATION,	}			}		Defendant.	}		<p style="text-align: right;">Page 3</p> <p style="text-align: center;">I N D E X</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">EXAMINATION BY:</td> <td style="width: 5%;"></td> <td style="width: 35%; text-align: right;">PAGE</td> </tr> <tr> <td>Mr. King</td> <td></td> <td style="text-align: right;">5</td> </tr> <tr> <td>Mr. Lin</td> <td></td> <td style="text-align: right;">87</td> </tr> <tr> <td>Mr. King</td> <td></td> <td style="text-align: right;">141</td> </tr> <tr> <td></td> <td style="text-align: center;">* * *</td> <td></td> </tr> <tr> <td>EXHIBIT</td> <td style="text-align: center;">DESCRIPTION</td> <td style="text-align: right;">FOR I.D.</td> </tr> <tr> <td>EX. 1</td> <td>Document entitled "Subpoena in a Civil Case," dated October 19, 2007, with attachments.</td> <td style="text-align: right;">7</td> </tr> <tr> <td>EX. 2</td> <td>Document entitled "Aventail Connect, v3.1/v2.6, Administrator's Guide, Windows."</td> <td style="text-align: right;">28</td> </tr> <tr> <td>EX. 3</td> <td>Document entitled "Aventail ExtraWeb Server v3.2 Administrator's Guide."</td> <td style="text-align: right;">36</td> </tr> <tr> <td>EX. 4</td> <td>Document entitled "Aventail Connect, v3.1/v2.6, Administrator's Guide, Windows."</td> <td style="text-align: right;">39</td> </tr> <tr> <td>EX. 5</td> <td>DVD, entitled "Aventail ExtraNet Center, 2.6 / 3.1 / 3.2, SRC."</td> <td style="text-align: right;">41</td> </tr> <tr> <td>EX. 6</td> <td>Source code.</td> <td style="text-align: right;">56</td> </tr> <tr> <td>EX. 7</td> <td>Source code.</td> <td style="text-align: right;">56</td> </tr> </table>	EXAMINATION BY:		PAGE	Mr. King		5	Mr. Lin		87	Mr. King		141		* * *		EXHIBIT	DESCRIPTION	FOR I.D.	EX. 1	Document entitled "Subpoena in a Civil Case," dated October 19, 2007, with attachments.	7	EX. 2	Document entitled "Aventail Connect, v3.1/v2.6, Administrator's Guide, Windows."	28	EX. 3	Document entitled "Aventail ExtraWeb Server v3.2 Administrator's Guide."	36	EX. 4	Document entitled "Aventail Connect, v3.1/v2.6, Administrator's Guide, Windows."	39	EX. 5	DVD, entitled "Aventail ExtraNet Center, 2.6 / 3.1 / 3.2, SRC."	41	EX. 6	Source code.	56	EX. 7	Source code.	56
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<p style="text-align: center;">Page 2</p> <p style="text-align: center;">A P P E A R A N C E S</p> <p>For the Plaintiffs: HONG S. LIN McDermott Will &amp; Emery 275 Middlefield Road Suite 100 Menlo Park, California 94025-4004 650.815.7560 hlin@mwe.com and CHRISTOPHER D. BRIGHT McDermott Will &amp; Emery 18191 Von Karman Avenue Suite 500 Irvine, California 92612 cbright@mwe.com</p> <p>For the Defendant: THOMAS KING Weil, Gotshal &amp; Manges 201 Redwood Shores Parkway Redwood Shores, California 94065 650.802.3210 thomas.king@weil.com</p> <p>For the SonicWALL, Inc., and the Witness: LAUREL M.V. BUCKNER 2101 Fourth Avenue Suite 400 Seattle, Washington 98121 206.438.7367 lbuckner@sonicwall.com</p> <p>Also Present: CHRISTOPHER STOW, Videographer</p>	<p style="text-align: center;">Page 4</p> <p style="text-align: center;">SEATTLE, WASHINGTON; FRIDAY, FEBRUARY 27, 2009 10:08 A.M. --o0o--</p> <p style="text-align: center;">THE VIDEOGRAPHER: Here begins Volume I, Videotape No. 1, in the deposition of Richard Aventail, in the matter of VirnetX, Incorporated, and Science Applications International corporation vs. Microsoft, in the United States District Court for the Eastern District of Texas, Tyler Division, Case No. 6:07CV80V(LED). Today's date is Friday, February 27, 2009. The time on the video monitor is 10:08 a.m. The video operator today is Chris Stow, contracted by Merrill Legal Solutions, San Francisco, California. This video deposition is taking place at 925 Fourth Avenue, Suite 2900, Seattle, Washington, 98104. Counsel, please identify yourselves and state whom you represent. MR. KING: Thomas King, from Weil, Gotshal &amp; Manges, here on behalf of Microsoft Corporation. MR. BRIGHT: Chris Bright, with McDermott Will &amp; Emery, on behalf of plaintiff, VirnetX. MR. LIN: Hong Lin, also from McDermott Will &amp; Emery, for plaintiff VirnetX.</p>
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(Pages 1 to 4)

Page 5

1 MS. BUCKNER: And I'm Laurel Buckner,  
 2 associate general counsel at SonicWALL, which was the  
 3 acquirer of Aventail Corporation, and I'm here primarily to  
 4 protect SonicWALL's confidential information.  
 5 THE VIDEOGRAPHER: The court reporter today  
 6 is Ronald L. Cook, of Premiere Realtime Litigation Services.  
 7 Would the reporter please swear in the  
 8 witness.  
 9  
 10 GARY TOMLINSON, deponent herein, being  
 11 first duly sworn on oath,  
 12 was examined and testified  
 13 as follows:  
 14  
 15 MR. KING: Before we begin the questioning,  
 16 I'd like to just state -- get -- clarify the record for the  
 17 record. This is the -- the witness is Gary Tomlinson, and  
 18 this is a -- he's here representing a company called  
 19 SonicWALL, Inc.  
 20  
 21 EXAMINATION  
 22 BY MR. KING:  
 23 Q. Good morning, Mr. Tomlinson.  
 24 A. Good morning.  
 25 Q. You understand that you're here to testify

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1 today on behalf of SonicWALL, Incorporated; is that --  
 2 A. I do.  
 3 Q. -- is that correct?  
 4 Before we -- before we begin with the  
 5 deposition, I just want to set a few -- few ground rules.  
 6 Because you're represented by counsel, I presume you're  
 7 somewhat familiar with this process, but the way this is  
 8 going to work today is I'll be asking some questions and  
 9 you'll be answering those questions to the best of your  
 10 ability. Is that fair?  
 11 A. Yes.  
 12 Q. At some point during the process either your  
 13 counsel or counsel for VirnetX might interpose some  
 14 objections. That's just for the record, and you understand  
 15 that you're still under an obligation to answer those  
 16 questions unless -- unless your counsel directs otherwise;  
 17 is that fair?  
 18 A. Yes, I understand that, mm-hmm.  
 19 Q. And the last thing, and this is hard, but --  
 20 as the day goes on, but for the sake of the court reporter,  
 21 let's try to just have one person talking at a time so we  
 22 can have a clear record. Is that fair?  
 23 A. Yes.  
 24 Q. Is there any reason why you can't give full  
 25 and -- full and truthful testimony today?

Page 7

1 A. No, there's no reason.  
 2 MR. KING: Let's see. I'd like to mark an  
 3 exhibit.  
 4 (Discussion off the record.)  
 5 (Deposition Exhibit 1 was marked  
 6 for identification.)  
 7 Q. BY MR. KING: Have you ever seen this  
 8 document before?  
 9 A. Let me look.  
 10 I'm not sure if I've seen this. I think I  
 11 have but I'm not sure. I've seen several documents  
 12 presented to us.  
 13 Q. Okay.  
 14 I'll represent to you that is the subpoena  
 15 that we sent SonicWALL, requesting production of documents  
 16 and requesting that someone from -- a representative from  
 17 SonicWALL come to testify about a partic -- some topics.  
 18 Would you mind turning to Page 6?  
 19 A. Sure.  
 20 Q. It's Page 6 of Attachment A.  
 21 A. Of Attachment --  
 22 Q. Or might also be --  
 23 A. It says "Attachment B."  
 24 Q. It's labeled "Attachment B." Okay.  
 25 A. Is that --

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1 Q. That's it.  
 2 A. Okay.  
 3 Q. Do you see up at the top where it says  
 4 "Deposition Topics"?  
 5 A. Yes.  
 6 Q. Have you seen -- have you seen this page  
 7 before?  
 8 A. I believe so. It's been some time since I've  
 9 seen it.  
 10 Q. All right.  
 11 Are you prepared to testify on these topics  
 12 today?  
 13 A. Yeah, to my best of my ability, yes.  
 14 Q. Okay.  
 15 Before we do that, I'd like to take a few  
 16 minutes and walk through -- walk through your background,  
 17 your -- starting with your education. Would you please tell  
 18 me where you went to school after -- after high school?  
 19 A. I went to two schools. I went to Antelope  
 20 Valley Community College, where I picked up an Associate's  
 21 of Science degree on my way to a four-year degree, and then  
 22 I matriculated into California State University at  
 23 Northridge, where I picked up a Bachelor of Science in  
 24 business administration, information systems.  
 25 Q. And what -- what year did you graduate from

(Pages 5 to 8)

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1 **Cal State Northridge?**  
 2 A. 1979.  
 3 **Q. Where did you go to -- where did you start**  
 4 **working after graduation?**  
 5 A. I began my career at -- let's see. Sperry  
 6 Univac was the name at that time, in Salt Lake City, Utah,  
 7 and I was there four years for my first stint.  
 8 **Q. And what was your -- what was your position**  
 9 **at Sperry Univac?**  
 10 A. I was a -- a systems developer, so I was  
 11 brought in and I worked on operating systems and  
 12 communication subsystems.  
 13 **Q. What is Sperry Univac's line of business?**  
 14 A. At that time?  
 15 **Q. At that time.**  
 16 A. Primarily -- I mean, it was a -- what would  
 17 you call it? A large-scale computer systems provider. I  
 18 worked in mainframes and at that time front-end processors,  
 19 which were -- you'd think of more like a minicomputer of the  
 20 era but specialized.  
 21 **Q. Where did you go after leaving Sperry Univac?**  
 22 A. I went to a startup that some friends of mine  
 23 had done, and I -- we were in -- oddly enough, insurance  
 24 sales support systems. I spent two years there, until the  
 25 business folded.

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1 **Q. This was in 1985?**  
 2 A. Yeah. Yeah, it -- that's right. It folded  
 3 in 1985.  
 4 **Q. Where did you go after -- after the -- after**  
 5 **your startup folded?**  
 6 A. I returned to -- to Sperry.  
 7 **Q. Mm-hmm.**  
 8 A. And I stayed there until 1989. I went  
 9 through the Unisys merger.  
 10 **Q. What was your role during those -- during**  
 11 **that time period at Sperry?**  
 12 A. I was a developer.  
 13 **Q. Mm-hmm.**  
 14 A. I -- along the way, in 1982, I started  
 15 picking up Unix skills at Sperry Univac. I went back  
 16 because I had extensive Unix background, and I did  
 17 development of TCP/IP and quite a bit of ARPANET type --  
 18 type stuff.  
 19 **Q. Are you a programmer?**  
 20 A. Am I a programmer?  
 21 **Q. Yes.**  
 22 A. I'm a poor programmer nowadays. At one time  
 23 I was quite skilled.  
 24 **Q. What were you doing with -- with TCP/IP?**  
 25 A. I was developing X.25 interfaces for Millnet.

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1 We had contracts with the Department of Army and -- what was  
 2 it? I guess Air Force. So we were hooking in the  
 3 underlying communication systems to the IP layer, and then I  
 4 moved on to doing some more, you know, of the IP kind of  
 5 expanding the stack out in the Berkeley Unix as well as the  
 6 System 5 Unix.  
 7 **Q. So you were -- were you building a TCP/IP**  
 8 **stack for Unix?**  
 9 A. Extending it. So the code that we had came  
 10 from University of California at Berkeley.  
 11 **Q. Mm-hmm.**  
 12 A. So we were extending -- there was in that era  
 13 considerable work going on in the Department of Defense  
 14 around options and things that weren't in the standard  
 15 commercial space.  
 16 **Q. You mentioned X.25. Can you tell me what**  
 17 **that is, very briefly?**  
 18 A. Oh, it's a packet-switched protocol. I don't  
 19 know if it -- how much it's used anymore, but it was a  
 20 wide-area protocol, and the -- at that time the standard  
 21 communi -- wide-area communications that was available was  
 22 ARPA 1822, which was the original standard that was --  
 23 produced the ARPANET, and the U.S. Government -- or the  
 24 military didn't want to really use that. It was -- it was a  
 25 little bit of an oddball standard, right? And so X.25 was

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1 an international standard, and they were using that for  
 2 wide-area communications.  
 3 **Q. What were some of the extensions to TCP/IP**  
 4 **that you -- that you built?**  
 5 A. In -- specifically, mostly centered in the IP  
 6 layer. There's an area called IP options, and nowadays it's  
 7 maybe better documented, although I would say marginally  
 8 documented in some areas. The DOD had a number of -- and  
 9 I'm not -- I don't really know what they're used for, I just  
 10 know how to parse them -- options that they were adding in  
 11 there that we had to include or pass through. And I -- most  
 12 of it had to do with cryptography.  
 13 **Q. Are you familiar with cryptography?**  
 14 A. Marginally.  
 15 **Q. Are you familiar with network security?**  
 16 A. That's a broad topic. Yes, to some extent I  
 17 am.  
 18 **Q. When did you start working on -- on network**  
 19 **security as a -- as a broad topic?**  
 20 A. 19 -- well, -- yeah, I'd say probably 1996,  
 21 in earnest.  
 22 **Q. Okay.**  
 23 **Now, you mentioned that you were with Sperry**  
 24 **through a Unisys merger --**  
 25 A. Yes.

(Pages 9 to 12)

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1 **Q. -- in 1989?**  
 2 A. That merger occurred I believe in 1986, '7.  
 3 I don't remember exactly. But yes. I was -- I was there  
 4 until 1989.  
 5 **Q. When did you leave the combined Sperry Unisys**  
 6 **company?**  
 7 A. September of 1989.  
 8 **Q. And where did you go?**  
 9 A. I went to Novell.  
 10 **Q. How long were you at Novell?**  
 11 A. 10 years.  
 12 **Q. Until 1999?**  
 13 A. Yes.  
 14 **Q. Okay.**  
 15 A. Actually, until -- I guess slightly over 10  
 16 years -- 2000. Until June of 2000.  
 17 **Q. What was your -- what were your**  
 18 **responsibilities during the time you were at Novell?**  
 19 A. I was a -- I began as kind of a lead  
 20 developer, and I developed some of the core NetWare product,  
 21 and then I moved on to Unix and began doing NetWare work  
 22 with Unix, both on the client and the server sides, and  
 23 produced -- we produced some stuff for the next computer  
 24 for -- for Steve Jobs.  
 25 And then I moved on to experimental operating

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1 systems in the advanced technologies group, and we produced  
 2 some sort of operating systems that actually never were --  
 3 were commercialized, although variations of them were cut  
 4 out and commercialized in NetWare. And I was a part of  
 5 the -- the Unix -- when Novell acquired the Unix labs, I was  
 6 promoted to a director position. I ran a fairly large  
 7 engineering team, on the order of about 80 people.  
 8 And when I was in the advanced technologies I  
 9 was kind of a combination individual contributor and I ran  
 10 the organization from the -- the development side of  
 11 advanced tech.  
 12 I guess -- let's see. What would be  
 13 interesting?  
 14 That's where my security actually began. So  
 15 it was with respect to Internet security.  
 16 So we -- when I was in Novell we produced  
 17 very, very fast and scalable proxy technology, and to that  
 18 we added a comprehensive security suite, known as the Border  
 19 Manager of the era. I believe that was first made available  
 20 in -- commercially in nineteen ninety -- either seven or  
 21 eight. I don't recall when it actually came to the street,  
 22 but it was developed in the '95 to '97 time frame.  
 23 And in that we put in virtual private  
 24 networking technology, both the beginnings of the IPSEC of  
 25 that era as well as we put SOCKS in. That was kind of an

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1 emerging space that -- that people were actually using for  
 2 some virtual private networks of the day.  
 3 And that's -- that's kind of where I began  
 4 what you would think of as a -- a net -- you know, a network  
 5 security background, was -- was putting those in. And  
 6 firewall rules, things like that.  
 7 **Q. Mm-hmm.**  
 8 **Can you explain more about how Border Manager**  
 9 **worked?**  
 10 A. Sure. Border Manager was a -- a suite of  
 11 services that ran on the NetWare operating system. The  
 12 services were -- let's see. There was a basic firewall that  
 13 would not be a stateful packet firewall, that would be just  
 14 a strictly rule-based, you know, simple layer 3 and 4  
 15 firewall, just kind of ACLs, not really looking at content.  
 16 We also had a -- like I said, a SOCKS proxy  
 17 in there, to do various forms of what we would think as  
 18 virtual private networks. We had an early-day IPSEC VPN,  
 19 and we also had a Web proxy, both a forward proxy as well as  
 20 a reverse proxy, that had access control capabilities, and  
 21 so that could also be used for a form of security or  
 22 acceleration and scaling. That was a whole suite of  
 23 products, known as Border Manager.  
 24 And then I went on to a variation of that,  
 25 which was called Internet Caching System, ICS, and that was

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1 OEM to a number of companies. Dell and IBM were the -- the  
 2 two biggest that come to mind. What we were doing there is  
 3 the -- the Border Manager was a product that was very  
 4 NetWare centric so it was kind of to a classic Novell  
 5 audience and not as -- not as broadly applicable outside the  
 6 Novell networks. I don't know if you remember the era.  
 7 Novell was quite large in those days, had somewhere like  
 8 90 percent of the market share, so -- anyway, the Border  
 9 Manager was relatively popular, but, you know, we had a  
 10 number of ISPs that -- they didn't really want NetWare, they  
 11 wanted it, quote, to look like a Cisco router, so, you know,  
 12 we repackaged it into an appliance and kind of took it out  
 13 the NetWareisms and offered that.  
 14 That product was not really a security --  
 15 security-oriented product. That was mainly a Internet  
 16 infrastructure scaling product. So that was more around the  
 17 Web caches and things like that.  
 18 **Q. Okay. We'll come back to that one.**  
 19 **Where did you -- where did you go after**  
 20 **leaving Novell in 2000?**  
 21 A. I went to a startup, called Entera,  
 22 E-n-t-e-r-a, Inc.  
 23 **Q. And what were your -- what was your job title**  
 24 **at Entera, Inc.?**  
 25 A. I was the chief scientist of Entera.

(Pages 13 to 16)

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1 **Q. And what were your responsibilities?**  
 2 A. Designing kind of and managing the -- well,  
 3 designing new products and managing the technology for the  
 4 CTO. And our products were in streaming media, so we did  
 5 stream splitting and caching, and it was very much oriented  
 6 around scaling streaming media for -- basically for public  
 7 infrastructure, primarily.  
 8 **Q. How long were you at Entera?**  
 9 A. Well, Entera became acquired by CacheFlow,  
 10 and I moved in to CacheFlow, I was there until April of  
 11 2002, and my last role was the CTO of the company.  
 12 **Q. Mm-hmm.**  
 13 **Was that when you joined Aventail?**  
 14 MR. LIN: Object to form.  
 15 THE WITNESS: What was that?  
 16 MR. LIN: I was objecting to form.  
 17 THE WITNESS: Objecting?  
 18 MR. LIN: Yes.  
 19 THE WITNESS: Okay.  
 20 MR. KING: Let me just ask a different  
 21 question, then.  
 22 **Q. Where did you go after leaving Entera or**  
 23 **leaving -- in 2002?**  
 24 A. Where did I go?  
 25 I was doing some independent consulting.

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1 **Q. Mm-hmm.**  
 2 A. And I knew the Aventail folks from prior --  
 3 from my Novell days. We had done some work with them. And  
 4 so I -- I had developed a considerable background in kind of  
 5 the appliance space, Internet appliances, and Aventail was  
 6 interested in producing such a product. So I took on a  
 7 consulting role that grew to consuming all of my time. I  
 8 was a consultant from May 2002 until February 2003, at which  
 9 point I joined Aventail as their chief architect.  
 10 **Q. Mm-hmm.**  
 11 **Are you still a chief architect within**  
 12 **SonicWALL?**  
 13 A. No. I am a vice-president of -- of one of  
 14 the software engineering groups.  
 15 **Q. Mm-hmm.**  
 16 A. Primarily the VPN group.  
 17 **Q. Okay.**  
 18 **What was your -- what were your**  
 19 **responsibilities when you joined Aventail in 2003 as a chief**  
 20 **architect?**  
 21 A. I was responsible for bringing essentially  
 22 the -- the overall architecture of -- of our product lines,  
 23 you know, kind of bringing them together and driving them  
 24 forward over time into new products. And additionally, you  
 25 know, I had to manage some of the teams along the way.

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1 **Q. What Aventail products were you working with**  
 2 **in 2003, when you joined?**  
 3 A. I worked primarily with -- well, to some  
 4 extent all of them in my role. My -- my primary area was on  
 5 the server side, so we -- we already had existing clients  
 6 that they were in reasonably good shape, but the challenge  
 7 was we were moving from a managed service -- we had a  
 8 managed service offering, and we needed to turn that into,  
 9 you know, the -- an appliance, and that's -- I mean, that's  
 10 very much around turnkey and kind of op -- you know, there's  
 11 no humans involved in back rooms and things like hosted  
 12 services. So a lot of my attention in the early part was on  
 13 the server, getting that into a suitable form factor for,  
 14 you know, what -- what customers would consider an appliance  
 15 that met the operational expense needs.  
 16 Then -- in -- so from the very beginning it  
 17 was mostly taking existing services and straightening them  
 18 out. That would have been a lot of 2003.  
 19 **Q. Can you give me the -- some names of Aventail**  
 20 **servers that were in existence when you started in 2003?**  
 21 A. Oh, the services?  
 22 **Q. Sorry. Servers.**  
 23 A. Servers.  
 24 What do you mean by "server"?  
 25 **Q. Let's start -- did Aventail sell a VPN server**

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1 **when you joined in 2003?**  
 2 A. Yes.  
 3 **Q. What was it called?**  
 4 A. There were two VPN servers. I -- I tend to  
 5 call them services. I may have messed you up. I think the  
 6 term "server" is sometimes overloaded to mean either a  
 7 particular piece of software on a box or the box.  
 8 **Q. Mm-hmm.**  
 9 A. So -- but if you mean a piece of software on  
 10 the box that provided a service, yes. There were two  
 11 servers in 2003 that were VPN oriented. One was called the  
 12 Anywhere VPN Server, AVPN, formerly known as the ExtraNet  
 13 Server in marketing. The other was the ExtraWeb Server.  
 14 The Ex -- the AVPN server -- or I guess maybe I should just  
 15 refer to it as ExtraNet; I think that people know it better  
 16 by that term -- was a SOCKS-based VPN server, that would  
 17 handle TCP traffic -- it was, well, tunneled through TCP and  
 18 SOCKS, it could handle TCP-originated connections from  
 19 clients, you know, to other systems, and it had some minimal  
 20 UDP capabilities in it.  
 21 The ExtraWeb Server was a reverse Web proxy  
 22 that would represent basically a whole series of internal  
 23 Web servers, basically doing rewriting of URLs, right? So  
 24 everything would be redirected to it, and through URL  
 25 encoding, right, it would derive the correct destination Web

(Pages 17 to 20)

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1 server and then present it through. And that -- that was a  
 2 Web-only VPN service, as opposed to the AVPN/ExtraNet, which  
 3 was a -- kind of a general, you know, TCP/IP and limited UDP  
 4 application VPN.

5 **Q. Now, you mentioned -- you've mentioned SOCKS**  
 6 **a couple times. Can you tell me what -- what SOCKS stands**  
 7 **for?**

8 A. Oh. You know, I don't remember the exact  
 9 definition. I mean -- it's an I -- it's an IETF standard,  
 10 and I -- I don't remember. But it's -- you know, it's a --  
 11 it's a way to encapsulate traffic securely through a tunnel.

12 **Q. You mentioned ExtraNet Server a few minutes**  
 13 **ago.**

14 A. Yes.

15 **Q. What -- what was Aventail's current version**  
 16 **of ExtraNet Server when you joined in 2003?**

17 A. Boy. Hmm.  
 18 I'm a little un -- unsure, because we  
 19 renumbered and named things in 2002. So it -- by then they  
 20 were all a part of a -- of the -- the new appliance  
 21 software, which was called ASAP, Aventail Secure Access  
 22 Platform. And it was using a relatively new version of the  
 23 SOCKS server that was developed in -- I am not sure when it  
 24 started, but it -- it came to market for the first time  
 25 in -- in 2002.

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1 Oh, wait. Let me think.  
 2 In beta form in 2002, and was released to the  
 3 public in the spring of 2003. And I don't -- I don't know  
 4 the number because it was kind of -- became part of ASAP.

5 **Q. We've been talking about the server side of**  
 6 **Aventail's products. What about the -- the client side,**  
 7 **what was the client -- what was Aventail's VPN client**  
 8 **called?**

9 A. Connect proxy.

10 **Q. Mm-hmm.**

11 A. And -- when I came to the company was called  
 12 Connect proxy. It was also known as AutoSOCKS.

13 **Q. Mm-hmm.**

14 A. From -- from an earlier era. I believe that  
 15 was the original name that it was marketed -- possibly  
 16 marketed under. Definitely internally known as AutoSOCKS.

17 **Q. Did it have any other names?**

18 A. Not to my knowledge. The marketing name was  
 19 Connect proxy.

20 **Q. Are you familiar with Aventail's corporate**  
 21 **history?**

22 MR. LIN: Object to form.  
 23 I'm going to be objecting periodically so --  
 24 THE WITNESS: Sure.  
 25 To varying degrees, yes. I first ran into

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1 Aventail in 1996, when I was at Novell, and we were working  
 2 on that Border Manager product that I told you about, and we  
 3 were building a SOCKS proxy ourself, and so our business  
 4 development people at Novell had run into Aventail, who was  
 5 a new startup in 1996, at one of the trade shows. I  
 6 don't -- I don't recall which. But -- and, of course,  
 7 Aventail had a SOCKS client, and they also had a SOCKS  
 8 server that they were, you know, producing. I don't believe  
 9 it was commercially available yet but, you know, they  
 10 were -- they were producing it.

11 And we -- we met them, and we did some joint  
 12 work with Aven -- with Aventail in 1997, and probably I  
 13 would imagine 1998, if -- if memory is correct, where we  
 14 were doing interoperability testing. So our SOCKS server at  
 15 Novell would -- was interoperable with Aventail's SOCKS  
 16 client. So I -- I was familiar with -- with that.

17 And then through the years, probably 1999 --  
 18 I moved to Seattle in the end of 1997, and after moving here  
 19 I -- I spent more time with the Aventail people on working  
 20 some of the -- you know, some -- some of the ongoing Novell  
 21 kind of -- you know, as the products -- versions would  
 22 change and things like that I would sort of work with  
 23 Aventail people because I was here. I was still with -- I  
 24 worked for Novell but I was here.  
 25 So, you know, I knew a little about, sort of

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1 from a technical standpoint, some of the evolution, although  
 2 not -- not firsthand, from Aventail. I know a considerably  
 3 greater amount from mid-2002 on.

4 **Q. BY MR. KING: What -- what sort of**  
 5 **communications or interactions did you have with Aventail**  
 6 **when a new product came out?**

7 A. We -- we talked about, sort of under  
 8 nondisclosure, obviously, some of the kinds of things that  
 9 we were doing at Novell.

10 **Q. Mm-hmm.**

11 A. And we were looking at ways -- you know, we  
 12 viewed Ave -- Aventail as -- as kind of a partner in an  
 13 ecosystem, so, you know, we would discuss where we were  
 14 going and, you know, they would discuss somewhat what --  
 15 what they were trying to do, as well.

16 And then we would look at, okay, you know,  
 17 what kind of extensions were we putting in, and then we'd  
 18 get into areas like -- one of -- one of the most challenging  
 19 areas was always the way security is done in SOCKS, and it  
 20 became that we all centralized on SSL, but, you know, SSL in  
 21 SOCKS is different. It's -- it's a little bit different  
 22 than SSL just straight up on TCP, right?

23 So, in other words, you have to encapsulate  
 24 SSL in SOCKS, and that was always an area that -- it was  
 25 kind of bleeding edge in the IETF and, you know --

(Pages 21 to 24)

Page 25

1 I don't know if you're familiar, but it's  
 2 always a bit of a challenge from an interoperability  
 3 standpoint until things are codified, so we -- that would be  
 4 like an area that we would be working on. There would be,  
 5 you know, some new cipher or something and some new option.  
 6 So it always required a little, you know, dinking around  
 7 with both sides to, you know, get them to talk to each  
 8 other. Things like that.

9 **Q. Okay.**  
 10 **Were you -- are you familiar with WinSock 2?**

11 A. I'm -- I'm not an expert in WinSock 2, but  
 12 yes, I know what it is.

13 **Q. What is WinSock 2?**

14 A. WinSock 2 is a -- a -- well, it's a -- it's a  
 15 plug-in architecture in the WinSock libraries from Microsoft  
 16 that allow --

17 Well, first off, it's a Microsoft version of  
 18 Sockets, modeled loosely after Berkeley, and then WinSock 2  
 19 was essentially a Microsoft, I guess, somewhat proprietary  
 20 standard but modeled after open standards, that had  
 21 capabilities to put in layered service providers, and that  
 22 was a -- a way to be able to plug in the underlying network  
 23 infrastructure that WinSock would run over.

24 So, in other words, it wasn't -- it wasn't  
 25 designed just strictly, say, to run only with Microsoft's

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1 TCP/IP directly, it was designed to be run over intermediate  
 2 infrastructure, as well, from a networking standpoint.

3 **Q. Did Aventail provide a product that was a**  
 4 **layered service provider?**

5 A. Yes.

6 MR. LIN: Object to form.

7 **Q. BY MR. KING: Do you recall discussing**  
 8 **layered service providers with Aventail during your time at**  
 9 **Novell?**

10 A. Minimally. Minimally. I mean, I was  
 11 familiar with it and I knew that Aventail was using that  
 12 architecture to build their SOCKS client such that it would  
 13 not require what is known as socksification. So --  
 14 Are you familiar with socksification?

15 **Q. Why don't -- why don't you explain what it**  
 16 **is.**

17 A. So in the very beginning, the way SOCKS was  
 18 designed, it was a requirement of the day -- this would be  
 19 roughly 1995 to probably -- well, till the layered service  
 20 provider world came out, that the applications had to  
 21 actually incorporate the SOCKS mechanisms themselves. So,  
 22 in other words, there -- there was no provider they could  
 23 link to like as a library, I mean -- or as an intermediate  
 24 infrastructure. They had to actually code in SOCKS  
 25 capabilities. And making an application work with SOCKS was

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1 known as socksification.

2 So I was familiar with Aventail wanting to,  
 3 you know -- obviously that -- that wasn't a leveraged, you  
 4 know, type, you know -- an economically leveraged, you know,  
 5 mechanism to -- to sell your products, right? If you had to  
 6 go and socksify all of the client applications, that might  
 7 limit the utility of the SOCKS servers. And so we were  
 8 familiar that Aventail was -- at Novell was working on  
 9 layered service providers. They briefed us on that.

10 And, of course, at Novell we were very  
 11 interested in this because, you know, if they could make it  
 12 possible for a wide variety of applications to work over  
 13 SOCKS without modification, it would probably enable the  
 14 industry to work -- you know, I mean, it would provide a  
 15 much larger opportunity for all of us, and we were  
 16 interested in selling SOCKS servers, so --

17 MR. LIN: I'm going to object to that -- that  
 18 question -- that answer as being a narrative and  
 19 nonresponsive.

20 **Q. BY MR. KING: Do you know whether or not**  
 21 **Aventail --**  
 22 **Strike that.**  
 23 **Do you know when Aventail released its first**  
 24 **product using what -- that was a layered service provider?**  
 25 MR. LIN: Object to form.

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1 THE WITNESS: Actually, I am not -- I am not  
 2 sure. I think it was in 1998.

3 **Q. BY MR. KING: Mm-hmm.**  
 4 **Did you know whether or not --**  
 5 **Strike that.**  
 6 **Did Aventail release a -- its layered service**  
 7 **provider product before you left Novell in 2000?**  
 8 MR. LIN: Object to form.  
 9 THE WITNESS: Yes, it did.

10 **Q. BY MR. KING: And how do you know that?**  
 11 MR. LIN: Object to form.  
 12 THE WITNESS: Because I used it.

13 **Q. BY MR. KING: What was the name of the**  
 14 **product you used?**

15 A. I believe it was called AutoSOCKS.

16 **Q. Now, when did you leave Mi -- when did you**  
 17 **leave Novell?**

18 A. July of 2000.

19 **Q. Okay.**  
 20 **Do you remember whether you used this**  
 21 **layered -- Aventail's layered service provider product in**  
 22 **1999?**

23 A. Yes. For sure. And I believe probably 1998.  
 24 MR. KING: I'm going to mark another exhibit.  
 25 (Deposition Exhibit 2 was marked

(Pages 25 to 28)

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1 for identification.)  
 2 (Discussion off the record.)  
 3 **Q. BY MR. KING: Do you recognize this document?**  
 4 A. Yes, I do.  
 5 **Q. What is it?**  
 6 A. It's the administrator's guide for the  
 7 Aventail Connect proxy application.  
 8 **Q. How do you recognize this document? Where**  
 9 **have you seen this document before?**  
 10 MR. LIN: Object to form.  
 11 THE WITNESS: I have seen this document  
 12 because when we were -- I'm not sure of the correct  
 13 technical term but served subpoena, I guess to provide  
 14 information, we went back through our -- our archives and  
 15 produced information for the years requested, and this was a  
 16 piece of information that we provided.  
 17 **Q. BY MR. KING: When you say you went back**  
 18 **through your archives, what -- what kind of archives does --**  
 19 **does Aventail maintain?**  
 20 A. Well, formerly Aventail.  
 21 **Q. Mm-hmm.**  
 22 A. Aventail maintained two different  
 23 repositories of archives. One was source code control that  
 24 was CVS based in this -- in this time frame, and the other  
 25 was a -- a document management archive that was LiveLink

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1 maintained. This particular piece came from the LiveLink  
 2 archives.  
 3 **Q. What is LiveLink?**  
 4 A. It's a Web-based portal and documentation  
 5 management system, probably similar to what we would think  
 6 of as SharePoint today.  
 7 **Q. Did Exhibit 2 come from your LiveLink**  
 8 **database?**  
 9 A. Yes, it did.  
 10 **Q. Why was -- why was Exhibit 2 stored in the**  
 11 **LiveLink database?**  
 12 A. It's produced by the -- the technical  
 13 documentation group.  
 14 **Q. Mm-hmm.**  
 15 A. And that group typically does not store  
 16 things in the source code repository. That's not -- I mean,  
 17 not the friendliest system for nonprogrammers. So the  
 18 LiveLink system was used to store all of the sort of  
 19 non-code-related material in the company, and so the  
 20 documentation group stored things in there, and they're  
 21 archived over time by -- by revision and by -- by product.  
 22 **Q. What does the technical documentation -- what**  
 23 **did the technical documentation group at Aventail do?**  
 24 A. I can only speak since mid-2002.  
 25 They would write the administrator's guides,

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1 the end user's guides, and also edit some of the technical  
 2 marketing material and things like that. Not -- not write  
 3 the copy but do the copy edits. But roughly that -- that  
 4 type of work.  
 5 **Q. Were the technical marketing -- were members**  
 6 **of the technical marketing group responsible for being**  
 7 **familiar with the products they were writing about?**  
 8 MR. LIN: Object to form.  
 9 THE WITNESS: Yes. From what we would think  
 10 of as a -- a technical white paper point of view, yeah, and  
 11 in terms of data sheets and things like that, yes.  
 12 **Q. BY MR. KING: Mm-hmm.**  
 13 **Were these manuals reviewed by developers or**  
 14 **others at Aventail who were responsible for creating the**  
 15 **products?**  
 16 MR. LIN: Object to form.  
 17 THE WITNESS: I don't know about this one,  
 18 because it predates me being a part of the organization, but  
 19 all the documents that were written from mid-2002 on are  
 20 reviewed by the developers and the management of  
 21 development, you know, for accuracy.  
 22 **Q. BY MR. KING: Mm-hmm.**  
 23 **Is it Aventail's general practice to review**  
 24 **product manuals for accuracy?**  
 25 A. Yes.

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1 MR. LIN: Object to form.  
 2 **Q. BY MR. KING: Is it Aventail's general**  
 3 **practice to release product manuals that are -- that**  
 4 **accurately reflect how its products work?**  
 5 MR. LIN: Object to form.  
 6 THE WITNESS: Yes, as accurately as, you  
 7 know, we can afford.  
 8 **Q. BY MR. KING: Are product manuals such as**  
 9 **Exhibit 2 given to customers who buy the product?**  
 10 MR. LIN: Object to form.  
 11 THE WITNESS: Yes.  
 12 **Q. BY MR. KING: Is it part of --**  
 13 **Strike that.**  
 14 **Does Aventail store manuals such as this in**  
 15 **its LiveLink database as part of its ordinary course of --**  
 16 **in the ordinary course of business?**  
 17 MR. LIN: Object to form.  
 18 THE WITNESS: It did. SonicWALL now uses --  
 19 THE REPORTER: I'm sorry. It's --  
 20 THE WITNESS: Yes.  
 21 THE REPORTER: It did?  
 22 Aventail did during -- yes, until -- until  
 23 Aventail was acquired.  
 24 **Q. BY MR. KING: And where -- where are the**  
 25 **documents that were stored in the LiveLink database stored**

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Page 33	Page 35
<p>1 <b>now?</b></p> <p>2 MR. LIN: Object to form.</p> <p>3 THE WITNESS: They're still in the LiveLink</p> <p>4 database. It's a -- archive -- I mean, it's a system that's</p> <p>5 maintained for archival purposes.</p> <p>6 <b>Q. BY MR. KING: Okay.</b></p> <p>7 <b>Let's turn to Page i, the first -- the first</b></p> <p>8 <b>page.</b></p> <p>9 A. Mm-hmm.</p> <p>10 <b>Q. Do you see up at the top it says "© 1996-1999</b></p> <p>11 <b>Aventail Corporation. All rights reserved"?</b></p> <p>12 A. Yes, I see that.</p> <p>13 <b>Q. Does that indicate to you when this product</b></p> <p>14 <b>manual was released to the public?</b></p> <p>15 MR. LIN: Object to form.</p> <p>16 THE WITNESS: No, it does not.</p> <p>17 <b>Q. BY MR. KING: Why not?</b></p> <p>18 A. That's a copyright that's spanning material</p> <p>19 over a several-year duration.</p> <p>20 <b>Q. Mm-hmm.</b></p> <p>21 <b>Does that indicate to you that this product</b></p> <p>22 <b>was released to the public no later than 1999?</b></p> <p>23 MR. LIN: Object to form.</p> <p>24 THE WITNESS: As an individual?</p> <p>25 <b>Q. BY MR. KING: Mm-hmm.</b></p>	<p>1 <b>copyright date?</b></p> <p>2 A. Yes.</p> <p>3 <b>Q. And when Aventail -- would that copyright</b></p> <p>4 <b>date be put into the document by a technical writer or</b></p> <p>5 <b>someone from the technical writing group?</b></p> <p>6 MR. LIN: Object to form.</p> <p>7 THE WITNESS: It would be put in by the</p> <p>8 documentation group.</p> <p>9 <b>Q. BY MR. KING: In your experience at Aventail,</b></p> <p>10 <b>does the technical -- is it the technical writing group's</b></p> <p>11 <b>standard practice to mark a user manual such as Exhibit 2</b></p> <p>12 <b>with a copyright date showing when the manual was actually</b></p> <p>13 <b>finished and published?</b></p> <p>14 MR. LIN: Objection.</p> <p>15 THE WITNESS: See, this is where I'm a little</p> <p>16 bit confused, because you're asking a date, and the</p> <p>17 copyright is typically a range in time.</p> <p>18 <b>Q. BY MR. KING: Okay. So I --</b></p> <p>19 A. It is the practice -- was the practice of</p> <p>20 Aventail and is the practice of SonicWALL that we maintain</p> <p>21 our copyrights, so we would be advancing our copyrights each</p> <p>22 year. If this was produced in 2000 it would say 2000.</p> <p>23 <b>Q. And what does it mean that this document says</b></p> <p>24 <b>"1996-1999" at the top?</b></p> <p>25 MR. LIN: Object to form.</p>
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<p>1 A. Yeah, I would interpret that.</p> <p>2 <b>Q. And why -- why would you interpret that as</b></p> <p>3 <b>being -- as showing that it was released in 1999?</b></p> <p>4 MR. LIN: Same objection.</p> <p>5 THE WITNESS: I wouldn't say it was re --</p> <p>6 well, I would interpret that because I think it is common</p> <p>7 practice for organizations to update their copyrights to</p> <p>8 current.</p> <p>9 <b>Q. BY MR. KING: Mm-hmm.</b></p> <p>10 A. So -- typically I would find the most</p> <p>11 advanced year to be the year that it came from.</p> <p>12 <b>Q. Is it common practice --</b></p> <p>13 MR. LIN: Object to that answer as being</p> <p>14 nonresponsive. Excuse me.</p> <p>15 MR. KING: Can I hear the question and answer</p> <p>16 back?</p> <p>17 (Record read.)</p> <p>18 <b>Q. BY MR. KING: Is it Aventail's ordinary</b></p> <p>19 <b>practice to mark its product manuals with a copyright date</b></p> <p>20 <b>showing when the -- when the manual was published?</b></p> <p>21 MR. LIN: Object to form.</p> <p>22 THE WITNESS: I'm not sure I understand that</p> <p>23 question exactly.</p> <p>24 <b>Q. BY MR. KING: Was it -- was it Aventail's</b></p> <p>25 <b>practice to mark its user manuals, such as Exhibit 2, with a</b></p>	<p>1 THE WITNESS: My understanding is the</p> <p>2 material that is contained here within began in some form in</p> <p>3 1996 and derivatives of it are spanning through 1999.</p> <p>4 <b>Q. BY MR. KING: Okay.</b></p> <p>5 MS. BUCKNER: We've been going for about an</p> <p>6 hour, Counsel. Do you think we could take a break?</p> <p>7 MR. KING: Absolutely.</p> <p>8 THE VIDEOGRAPHER: Going off the record. The</p> <p>9 time is 10:58 a.m.</p> <p>10 (Short recess.)</p> <p>11 THE VIDEOGRAPHER: We are now back on the</p> <p>12 record. The time is 11:09 a.m.</p> <p>13 <b>Q. BY MR. KING: Referring back to Exhibit 2, I</b></p> <p>14 <b>want to ask you a few more follow-up questions. Did</b></p> <p>15 <b>Aventail have a technical writing group before you joined in</b></p> <p>16 <b>2002?</b></p> <p>17 A. I -- I don't know that.</p> <p>18 <b>Q. Okay. All right.</b></p> <p>19 <b>I'm going to mark as Exhibit 3 a document</b></p> <p>20 <b>entitled "Aventail ExtraWeb Server 3.2 Administrator's</b></p> <p>21 <b>Guide."</b></p> <p>22 <b>(Deposition Exhibit 3 was marked</b></p> <p>23 <b>for identification.)</b></p> <p>24 <b>Q. BY MR. KING: Have you ever seen Exhibit 3</b></p> <p>25 <b>before?</b></p>

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1 A. I have.  
 2 **Q. What is Exhibit 3?**  
 3 A. It's the administrator's guide for the  
 4 ExtraNet Server.  
 5 **Q. When have you seen this document previously?**  
 6 A. When we went through the archives looking for  
 7 information that was being subpoenaed.  
 8 **Q. That's the LiveLink system?**  
 9 A. Yes. We found -- I did not. It was found  
 10 for me by one of my subordinates.  
 11 **Q. Okay.**  
 12 **Let me just ask a slightly different**  
 13 **question. And I apologize for the repetition. Was this**  
 14 **document stored in the LiveLink system?**  
 15 MR. LIN: Object to form.  
 16 THE WITNESS: Yes, it was.  
 17 **Q. BY MR. KING: Who -- who did you ask to**  
 18 **search the LiveLink system in order to -- who actually**  
 19 **located this document within the LiveLink system?**  
 20 A. A manager of our documentation department.  
 21 **Q. Who is that?**  
 22 A. Mary Siple.  
 23 **Q. Do you know who wrote Exhibit 3?**  
 24 A. I do not.  
 25 MR. LIN: Object to form.

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1 **Q. BY MR. KING: Was Exhibit 3 written by**  
 2 **Aventail's technical documentation group?**  
 3 MR. LIN: Object to form.  
 4 THE WITNESS: I don't have knowledge of that.  
 5 **Q. BY MR. KING: Was it Aventail's general**  
 6 **practice to have their technical documentation group prepare**  
 7 **manuals such as -- such as Exhibit 3?**  
 8 MR. LIN: Object to form.  
 9 THE WITNESS: I don't know if through that  
 10 time frame.  
 11 **Q. BY MR. KING: Is it -- was it Aventail's**  
 12 **general practice from 2003 through -- through the time of**  
 13 **the acquisition to have its technical documentation group**  
 14 **prepare product manuals?**  
 15 A. Yes.  
 16 **Q. Why did Aventail have its technical**  
 17 **documentation group prepare product manuals?**  
 18 MR. LIN: Object to form.  
 19 THE WITNESS: In what time frame?  
 20 **Q. BY MR. KING: In the -- we'll start with the**  
 21 **2003 time frame, when you were working at -- at Aventail.**  
 22 A. To provide information to our customers on  
 23 how to operate our products.  
 24 **Q. Do you have any -- any reason to believe that**  
 25 **was -- that Aventail created product manuals for a different**

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1 **purpose prior to the time that you joined?**  
 2 MR. LIN: Object to form.  
 3 THE WITNESS: I don't have any knowledge of  
 4 that. Speculating, I would imagine that's what it was for.  
 5 **Q. BY MR. KING: Mm-hmm.**  
 6 **From 2003 onward was it Aventail's general**  
 7 **practice to store product manuals in its LiveLink system?**  
 8 A. Yes.  
 9 **Q. And was this product manual stored in -- in**  
 10 **the Aventail LiveLink system?**  
 11 MR. LIN: Object to form.  
 12 THE WITNESS: This -- can you rephrase that  
 13 question?  
 14 **Q. BY MR. KING: Certainly.**  
 15 **Was Exhibit 3 stored in the Aventail LiveLink**  
 16 **system?**  
 17 A. It -- it is currently stored there.  
 18 MR. KING: I'm going to mark as Exhibit 4 a  
 19 document called "Aventail Connect User's Guide."  
 20 (Deposition Exhibit 4 was marked  
 21 for identification.)  
 22 **Q. BY MR. KING: Have you seen this document**  
 23 **before?**  
 24 A. Yes, I've seen this document.  
 25 **Q. What is it?**

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1 A. This is the end user's guide for Connect  
 2 proxy.  
 3 **Q. Where have you seen this document before?**  
 4 A. I've seen it when we produced it according to  
 5 a subpoena.  
 6 **Q. Where was this document stored within**  
 7 **Aventail?**  
 8 A. In the LiveLink archive system.  
 9 **Q. Mm-hmm.**  
 10 **Is this document a user manual?**  
 11 MR. LIN: Object to form.  
 12 THE WITNESS: This -- yes, this document is  
 13 intended for end users of Connect proxy to be able to  
 14 utilize it.  
 15 **Q. BY MR. KING: Is it Aventail's general**  
 16 **practice to prepare user manuals for -- so that its users**  
 17 **can correctly operate its software?**  
 18 MR. LIN: Object to form.  
 19 THE WITNESS: In what -- which years?  
 20 **Q. BY MR. KING: Well, start with the time**  
 21 **period that you're familiar with.**  
 22 A. Yes.  
 23 MR. LIN: Object to form.  
 24 **Q. BY MR. KING: Why was this document stored in**  
 25 **the Aventail LiveLink archives?**

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1 MR. LIN: Object to form.  
 2 THE WITNESS: We store all of our user  
 3 document -- or all of our documentation -- product  
 4 documentation in the LiveLink archive, until the merger with  
 5 SonicWALL.  
 6 **Q. BY MR. KING: So this -- this document states**  
 7 **that it's for Version 3.1 of Aventail Connect. Are you**  
 8 **familiar with any earlier versions of -- of an Aventail**  
 9 **product that are stored in the LiveLink system?**  
 10 MR. LIN: Object to form.  
 11 THE WITNESS: I am not.  
 12 **Q. BY MR. KING: Do you know how far back in**  
 13 **time the archives go in the LiveLink system?**  
 14 MR. LIN: Object to form.  
 15 THE WITNESS: I -- I don't know the -- the --  
 16 no, I do not know how far back.  
 17 **Q. BY MR. KING: Okay.**  
 18 **Let's take a quick break to get this computer**  
 19 **up and running.**  
 20 THE VIDEOGRAPHER: Going off the record. The  
 21 time is 11:18 a.m.  
 22 (Discussion off the record.)  
 23 (Deposition Exhibit 5 was marked  
 24 for identification.)  
 25 THE VIDEOGRAPHER: Back on the record. The

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1 time is 11:21 a.m.  
 2 MR. KING: Thanks.  
 3 **Q. We've given you on the break what's been**  
 4 **marked as Exhibit 5. Can you -- do you mind reading what**  
 5 **Exhibit 5 is for the record?**  
 6 A. It says, "Property of SonicWALL, Inc.,  
 7 Outside Counsel Eyes Only, Source Code, Confidential  
 8 Information. Aventail ExtraNet Center, 2.6 / 3.1 / 3.2,  
 9 Source."  
 10 **Q. Thank you.**  
 11 **In responding to Microsoft's subpoena, did**  
 12 **you search for source code that was responsive to the**  
 13 **questions that Microsoft asked?**  
 14 A. Yes.  
 15 **Q. And where did you search for the source code?**  
 16 A. In our CVS archive, which is a source code  
 17 control archive that we maintain for -- not for active use  
 18 but for archival use.  
 19 **Q. Mm-hmm.**  
 20 **Can you tell me more?**  
 21 MR. LIN: Object to form.  
 22 THE WITNESS: Tell --  
 23 **Q. BY MR. KING: Can you describe your CVS**  
 24 **archive more fully?**  
 25 MR. LIN: Same objection.

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1 THE WITNESS: Yes. CVS is a -- an open  
 2 source source code management tool, and it was the  
 3 management tool that we were using up until 2004.  
 4 **Q. BY MR. KING: Mm-hmm.**  
 5 A. All of Aventail's source code prior to 2004  
 6 is in there.  
 7 **Q. When you say "all of Aventail's source code,"**  
 8 **do you mean all of Aventail's source code starting in 1996?**  
 9 MR. LIN: Object to form.  
 10 THE WITNESS: All that I am aware of.  
 11 **Q. BY MR. KING: Does that include Version 2 of**  
 12 **Aventail's VPN product?**  
 13 A. It --  
 14 MR. LIN: Object to form.  
 15 THE WITNESS: It includes that to at least  
 16 this information. I don't -- I don't know definitively if  
 17 there's more than that in there.  
 18 **Q. BY MR. KING: Mm-hmm.**  
 19 **Do you know when Aventail or around what time**  
 20 **period Aventail started using the CVS source archive?**  
 21 MR. LIN: Object to form.  
 22 THE WITNESS: I do not know when it was put  
 23 into place.  
 24 **Q. BY MR. KING: Okay.**  
 25 **How does C -- how does CVS --**

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1 **Strike that.**  
 2 **What properties does CVS have that allow it**  
 3 **to be used as a source code archival system?**  
 4 MR. LIN: Object to form.  
 5 THE WITNESS: CVS maintains a record and  
 6 version history of -- of all versions of a file, and it's  
 7 structured in a way that is, you know, common practice for  
 8 software development.  
 9 **Q. BY MR. KING: Is CVS used by software**  
 10 **developers at the time that they're developing the software?**  
 11 MR. LIN: Object to form.  
 12 THE WITNESS: Yes.  
 13 **Q. BY MR. KING: Who inputs files into CVS?**  
 14 MR. LIN: Object to form.  
 15 THE WITNESS: A variety of people. Whomever  
 16 is responsible for a particular file.  
 17 **Q. BY MR. KING: How do you know when source**  
 18 **code is input into CVS?**  
 19 MR. LIN: Object to form.  
 20 **Q. BY MR. KING: That was a little unclear. Let**  
 21 **me rephrase.**  
 22 **Does CVS track the date and time when source**  
 23 **code is input into the system or modified?**  
 24 A. Yes.  
 25 **Q. How does it do that?**

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1 MR. LIN: Object to form.  
 2 THE WITNESS: It uses the clock of the server  
 3 that it's on.  
 4 **Q. BY MR. KING: Mm-hmm.**  
 5 **And where is this date and time tracking**  
 6 **information stored within CVS?**  
 7 A. It's stored in the attributes,  
 8 meta-attributes, along with the files.  
 9 **Q. When you say the attributes, what do you**  
 10 **mean?**  
 11 A. The attributes have information about who did  
 12 it, what time it was done, and what the chain sets were or  
 13 the deltas that were applied.  
 14 **Q. Where are the attributes stored within the**  
 15 **CVS system?**  
 16 A. I -- I don't know the actual structure of  
 17 CVS.  
 18 **Q. Mm-hmm.**  
 19 **Does CVS put a time stamp within the actual**  
 20 **source code file describing the time when changes were made?**  
 21 A. Not to my knowledge. It's been awhile since  
 22 I've looked at CVS.  
 23 **Q. When you were looking for source code in**  
 24 **response to Microsoft's subpoena, what source code did**  
 25 **you -- what source code did you extract from the CVS system?**

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1 A. We extracted all of the source code that was  
 2 in the time frame that was specified in the subpoena and  
 3 that was within the scope of what we thought the subpoena  
 4 was asking.  
 5 **Q. Mm-hmm.**  
 6 **Do you remember what versions of Aventail's**  
 7 **products that included?**  
 8 A. I do not. I do not remember.  
 9 **Q. Okay.**  
 10 **Would you mind taking that DVD and putting it**  
 11 **into the computer system.**  
 12 A. (Witness complies.)  
 13 **Q. Would you please cancel that and open up an**  
 14 **Explorer window.**  
 15 **It's probably under My Computer.**  
 16 A. Ah. Yes.  
 17 **Q. And open up the DVD.**  
 18 A. Okay.  
 19 **Q. What does the top-level directory of the DVD**  
 20 **include?**  
 21 A. It includes different versions of the  
 22 product.  
 23 **Q. How do you know that those are different**  
 24 **versions of the product that are shown at the top-level**  
 25 **directory of Exhibit 5?**

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1 MR. LIN: Object to form.  
 2 THE WITNESS: I know because of the way  
 3 they're tagged. They're named.  
 4 **Q. BY MR. KING: Do you recognize these**  
 5 **directories?**  
 6 A. Yes, I do.  
 7 **Q. How do you recognize -- where have you seen**  
 8 **these directories before?**  
 9 A. These were the directories that my team  
 10 collected the information and pulled out from CVS.  
 11 **Q. Once you pulled these directories out of CVS,**  
 12 **what did you do with them?**  
 13 A. Put them on a DVD and gave them to Laurel.  
 14 **Q. Okay.**  
 15 **Who was it on your team who actually took**  
 16 **these directories out of the CVS system?**  
 17 A. Well, there were several people.  
 18 **Q. Mm-hmm.**  
 19 A. Primarily there was Bill Perry and Bryan  
 20 Sauve.  
 21 **Q. Did Bill and Perry -- did Bill and Bryan pull**  
 22 **this source code out at your direction?**  
 23 A. Yes.  
 24 **Q. Would you mind opening up the version --**  
 25 **Let me ask another question. See where it**

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1 **says -- there's a folder titled "V260"?**  
 2 A. Yes.  
 3 **Q. What does "V260" mean?**  
 4 MR. LIN: Object to form.  
 5 THE WITNESS: It means Version 2.6.  
 6 **Q. BY MR. KING: Version 2.6 of what?**  
 7 A. I have to look in here. I don't recall  
 8 what's all in here.  
 9 **Q. Okay. Fair enough.**  
 10 **What does "V310" mean?**  
 11 A. Version 3.1.  
 12 **Q. And "V320"?**  
 13 A. Version 3.6.  
 14 MR. LIN: Object --  
 15 **Q. BY MR. KING: 3.6? Are you sure?**  
 16 A. Oh. Excuse me. Version 3.2.  
 17 **Q. Thank you.**  
 18 **Would you mind opening up the Version 3.1**  
 19 **directory.**  
 20 A. (Witness complies.)  
 21 **Q. And would you mind reading that. What**  
 22 **directory is shown under there?**  
 23 A. This is SOCKS S5.  
 24 **Q. What does SOCKS S5 refer to?**  
 25 A. It refers to Version 5 of the SOCKS server.

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1 **Q. Mm-hmm.**  
 2 **And would you please open up the SOCKS 5**  
 3 **directory.**  
 4 A. (Witness complies.)  
 5 **Q. And what -- what is contained within the**  
 6 **Version 5 of the SOCKS directory?**  
 7 MR. LIN: Object to form.  
 8 THE WITNESS: It is the -- I'm not -- I  
 9 haven't looked at this code for a long time, but from what I  
 10 can tell, it has both the client and the server for the --  
 11 for this version source code contained in it.  
 12 **Q. BY MR. KING: How can you tell that it**  
 13 **contains the code for both the client and the server?**  
 14 A. There's a directory called AS, and that  
 15 refers to AutoSOCKS.  
 16 **Q. Okay.**  
 17 A. There's a directory called Server, obviously  
 18 a bunch of server stuff, NT. I'm not familiar with all the  
 19 structure but, I mean, I can tell that both sides are at  
 20 least partially contained here, I suspect entirely, given  
 21 the developers pulled it for me.  
 22 **Q. How do you know that AS stands for AutoSOCKS?**  
 23 A. I'm familiar with the source tree. There's  
 24 nothing that says Connect proxy inside the source tree.  
 25 **Q. Okay.**

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1 **Is the source tree at the top level similar**  
 2 **to source trees that you encountered when you joined**  
 3 **Aventail in 2003?**  
 4 MR. LIN: Object to form.  
 5 THE WITNESS: This is different, but it would  
 6 be similar. It's relative to this particular product set.  
 7 **Q. BY MR. KING: Okay.**  
 8 **Does the V -- does the Version 3.1 directory**  
 9 **on Exhibit 5 correspond to Aventail Connect Version 3.1 --**  
 10 **the Aventail Connect Version 3.1 manuals --**  
 11 **Let me start over.**  
 12 **Would you pull out Exhibit 2 for a second.**  
 13 A. Yes.  
 14 **Q. Mm-hmm.**  
 15 A. Mm-hmm.  
 16 **Q. Exhibit 2 states that it's for Version 3.1**  
 17 **and 2.6 of Aventail Connect, right?**  
 18 A. It does.  
 19 **Q. Does the Version 3.1 on Exhibit 2 correspond**  
 20 **to Version 3.1 in the source code DVD that we've marked as**  
 21 **Exhibit 5?**  
 22 MR. LIN: Object to form.  
 23 THE WITNESS: I'm told by a person who is  
 24 familiar with it that it does.  
 25 **Q. BY MR. KING: Who -- who told you that?**

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1 MR. LIN: Object to form.  
 2 THE WITNESS: Bryan Sauve.  
 3 **Q. BY MR. KING: How does Bryan know that**  
 4 **they -- that Version 3.1 --**  
 5 A. He --  
 6 MR. LIN: Object to form.  
 7 Hold on.  
 8 Object to form.  
 9 **Q. BY MR. KING: Let me back up. How does Bryan**  
 10 **know that -- that this manual corresponds to the source code**  
 11 **on -- labeled Version 3.1 on Exhibit 5?**  
 12 MR. LIN: Object to form.  
 13 THE WITNESS: Bryan was a developer who  
 14 worked on Version 3.1.  
 15 **Q. BY MR. KING: Mm-hmm.**  
 16 **Let's go to Version 2.6 on the source code**  
 17 **DVD, Exhibit 5.**  
 18 **And I'll note for the record that you just**  
 19 **entered the SOCKS S5 directory.**  
 20 A. Oh, excuse me. Excuse me. I'm sorry. I  
 21 went a little fast.  
 22 Yes. SOCKS S5 is the first.  
 23 **Q. Would you mind opening up the SOCKS S5**  
 24 **directory.**  
 25 A. Yes, I will do that.

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1 **Q. What is shown within the SOCKS S5 directory**  
 2 **of the Version 2.6 branch of the source code?**  
 3 A. I believe it shows the entire set of source  
 4 for the 2.6 product. Both the client and the server.  
 5 **Q. Where is the server code stored within**  
 6 **Version 2.6 of the source code branch?**  
 7 MR. LIN: Object to form.  
 8 THE WITNESS: Well, it's primarily in server,  
 9 but, again, source code does have referrals across common  
 10 code.  
 11 **Q. BY MR. KING: And where is the client code**  
 12 **for Version 2.6 stored within this directory?**  
 13 MR. LIN: Object to form.  
 14 THE WITNESS: It's primarily stored in the AS  
 15 directory.  
 16 **Q. BY MR. KING: AS stands for AutoSOCKS?**  
 17 A. AutoSOCKS.  
 18 **Q. Okay.**  
 19 **Do you know whether the Version 2.6 of the**  
 20 **source code on the source code DVD corresponds to**  
 21 **Version 2.6 of Aventail Connect as described in Exhibit 2?**  
 22 MR. LIN: Object to form.  
 23 THE WITNESS: I -- I don't know firsthand  
 24 that. I believe it does.  
 25 **Q. BY MR. KING: Why do you believe that it**

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Page 53	Page 55
<p>1 does?</p> <p>2 A. Because --</p> <p>3 MR. LIN: Object to form.</p> <p>4 THE WITNESS: -- the developer told me it</p> <p>5 did.</p> <p>6 <b>Q. BY MR. KING: And this is Bryan --</b></p> <p>7 A. Yes.</p> <p>8 <b>Q. What was his last name?</b></p> <p>9 A. Sauve.</p> <p>10 <b>Q. Sauve. Okay.</b></p> <p>11 <b>Let's go to the Version 3.2 branch on</b></p> <p>12 <b>Exhibit 5.</b></p> <p>13 A. Yes.</p> <p>14 <b>Q. Can you open that up?</b></p> <p>15 A. Yes.</p> <p>16 <b>Q. What's shown within the Version 3.2 branch?</b></p> <p>17 A. SOCKS S5.</p> <p>18 <b>Q. Would you mind opening the SOCKS S5</b></p> <p>19 <b>directory.</b></p> <p>20 A. Yes.</p> <p>21 <b>Q. Can you describe what is contained within the</b></p> <p>22 <b>SOCKS S5 directory?</b></p> <p>23 A. I believe it has the entire source for the</p> <p>24 3.2 product, both the client and server.</p> <p>25 <b>Q. And where is the server code primarily stored</b></p>	<p>1 <b>How does Bill Perry know that the Version 3.2</b></p> <p>2 <b>of the source code as contained in Exhibit 5 corresponds to</b></p> <p>3 <b>the Aventail ExtraNet Center Version 3.2 manual that</b></p> <p>4 <b>we've -- that we're talking about with Exhibit 3?</b></p> <p>5 MR. LIN: Object to form.</p> <p>6 THE WITNESS: Bill Perry developed part of</p> <p>7 the ExtraNet Server.</p> <p>8 <b>Q. BY MR. KING: Who at Aventail -- or who at</b></p> <p>9 <b>SonicWALL is responsible for maintaining the CVS tree at the</b></p> <p>10 <b>present time?</b></p> <p>11 A. It's not actively used anymore.</p> <p>12 <b>Q. Mm-hmm.</b></p> <p>13 A. Our build master is responsible for</p> <p>14 maintaining the archive.</p> <p>15 <b>Q. And who is your build master?</b></p> <p>16 A. Wade Valentine.</p> <p>17 <b>Q. Who does -- does Wade Valentine report to</b></p> <p>18 <b>you?</b></p> <p>19 A. Not anymore.</p> <p>20 <b>Q. Did he report to you in the past?</b></p> <p>21 A. Yes.</p> <p>22 <b>Q. What was your -- what was your title when he</b></p> <p>23 <b>reported to you?</b></p> <p>24 A. Chief architect and director of software</p> <p>25 engineering.</p>
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<p>1 <b>within this directory?</b></p> <p>2 MR. LIN: Object to form.</p> <p>3 THE WITNESS: It's primarily stored in the</p> <p>4 server folder.</p> <p>5 <b>Q. BY MR. KING: Where is the client code</b></p> <p>6 <b>primarily stored within this directory?</b></p> <p>7 A. In the --</p> <p>8 MR. LIN: Same objection.</p> <p>9 THE WITNESS: -- AS folder.</p> <p>10 MR. LIN: Did you get my objection?</p> <p>11 THE REPORTER: Yes.</p> <p>12 <b>Q. BY MR. KING: Does the Version 3.2 folder on</b></p> <p>13 <b>Exhibit 5 correspond to Exhibit 3, the Aventail ExtraNet</b></p> <p>14 <b>Center Version 3.2 administrator's guide?</b></p> <p>15 MR. LIN: Object to form.</p> <p>16 THE WITNESS: Yes, I believe the server does.</p> <p>17 <b>Q. BY MR. KING: Mm-hmm.</b></p> <p>18 <b>And why do you believe that the source code</b></p> <p>19 <b>corresponds to Exhibit 3?</b></p> <p>20 MR. LIN: Object to form.</p> <p>21 THE WITNESS: Because a developer vouched for</p> <p>22 it.</p> <p>23 <b>Q. BY MR. KING: And which developer was that?</b></p> <p>24 A. Bill Perry.</p> <p>25 <b>Q. Okay.</b></p>	<p>1 <b>Q. Okay.</b></p> <p>2 <b>Was Wade Valentine, at the time he reported</b></p> <p>3 <b>to you, your build master?</b></p> <p>4 A. Yes.</p> <p>5 <b>Q. Was he responsible for maintaining the CVS</b></p> <p>6 <b>tree?</b></p> <p>7 A. Maintaining the system, yes, as an archive.</p> <p>8 <b>Q. Okay.</b></p> <p>9 <b>Is it Aventail's ordinary course of business</b></p> <p>10 <b>to --</b></p> <p>11 <b>Or strike that.</b></p> <p>12 <b>Was it Aventail's typical business practice</b></p> <p>13 <b>to store source code in -- in the CVS system?</b></p> <p>14 MR. LIN: Object to form.</p> <p>15 THE WITNESS: Yes, at that time.</p> <p>16 <b>Q. BY MR. KING: Mm-hmm.</b></p> <p>17 <b>And was developing source code one of</b></p> <p>18 <b>Aventail's standard business activities?</b></p> <p>19 MR. LIN: Object to form.</p> <p>20 THE WITNESS: It has been since I have been</p> <p>21 an employee, yes.</p> <p>22 <b>Q. BY MR. KING: Okay.</b></p> <p>23 <b>Going to mark two more exhibits.</b></p> <p>24 <b>(Deposition Exhibits 6 and 7 were</b></p> <p>25 <b>marked for identification.)</b></p>

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1 THE WITNESS: Yes.  
 2 **Q. BY MR. KING: Mm-hmm.**  
 3 **So you're -- we've handed you Exhibits 6 and**  
 4 **7, which are two files of source code that I'll represent to**  
 5 **you came from Exhibit 5.**  
 6 **Have you ever seen -- let's start with**  
 7 **Exhibit 6. Have you ever seen a document -- have you ever**  
 8 **seen Exhibit 6 before?**  
 9 MR. LIN: Object to form.  
 10 THE WITNESS: I might have seen it before. I  
 11 don't recall whether I've actually looked at the source or  
 12 not.  
 13 **Q. BY MR. KING: Mm-hmm.**  
 14 **Have you ever seen doc -- are you familiar**  
 15 **with documents like this at Aventail?**  
 16 MR. LIN: Object to form.  
 17 THE WITNESS: Yes.  
 18 **Q. BY MR. KING: What -- what is Exhibit 6?**  
 19 A. This is source code. Source code to the  
 20 AutoSOCKS redirector.  
 21 **Q. What is the AutoSOCKS redirector?**  
 22 A. That's part of the layered service provider  
 23 that takes requests that are coming in from applications and  
 24 redirects them into the VPN.  
 25 **Q. Mm-hmm.**

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1 A. It's part of that system.  
 2 **Q. Okay.**  
 3 **Do you see the first half of this page has a**  
 4 **slash and then a line of -- of asterisks going down the**  
 5 **side?**  
 6 A. Yes.  
 7 **Q. What does -- what does the slash and that**  
 8 **line of asterisks indicate?**  
 9 A. It means that these are comments.  
 10 **Q. Mm-hmm.**  
 11 **And what do these -- we'll start with the**  
 12 **first comment up at the top, where it says "\$Header."**  
 13 A. Yes.  
 14 **Q. What does that comment indicate to you?**  
 15 A. That would have been produced by CVS.  
 16 **Q. Mm-hmm.**  
 17 **When you say it was produced by CVS, what do**  
 18 **you mean?**  
 19 A. CVS put its time stamp in there when it  
 20 was -- and I'm not sure. I think when it was checked in.  
 21 My knowledge of CVS is starting to get old.  
 22 **Q. Okay.**  
 23 **So where is the time stamp within the -- the**  
 24 **first header of Exhibit 6?**  
 25 A. It's at the top of the comments.

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1 **Q. Mm-hmm.**  
 2 **And when does it say that Exhibit 6 was**  
 3 **marked by CVS?**  
 4 A. February -- let's see. Ooh. Let me think.  
 5 You know, I'm -- I'm not sure. I'd have to  
 6 look it up. It's either February 8th or August 2nd. I  
 7 don't remember the order that CVS puts these out. At 1:22  
 8 in the afternoon.  
 9 **Q. That's the 1322?**  
 10 A. 1322.  
 11 **Q. Okay.**  
 12 **Do you see at the right-hand side of the**  
 13 **first line where it says "v 1.5"?**  
 14 A. Yes.  
 15 **Q. What does that mean?**  
 16 A. That's the specific version of this source  
 17 file.  
 18 **Q. Did CVS always put time -- time and date**  
 19 **stamps like this at the top of files when they were checked**  
 20 **in?**  
 21 MR. LIN: Object to form.  
 22 THE WITNESS: I would have to actually  
 23 examine the source code to answer that. I don't know.  
 24 **Q. BY MR. KING: Mm-hmm.**  
 25 A. I think it does.

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1 **Q. Have you seen -- you've seen headers like**  
 2 **this before?**  
 3 A. I have.  
 4 **Q. Okay.**  
 5 A. Yes.  
 6 **Q. Let's turn to the -- the end of -- of**  
 7 **Exhibit 6.**  
 8 A. Which -- which page? The very end?  
 9 **Q. I guess it's three pages from the end, where**  
 10 **the comments begin.**  
 11 A. Yes.  
 12 **Q. Do you see where it says "\$Log"?**  
 13 A. I do.  
 14 **Q. What does that refer to?**  
 15 A. This is CVS information that it's maintaining  
 16 for revision history.  
 17 **Q. And what -- what is revision history?**  
 18 A. Talks about various check-ins that have been  
 19 done to the code.  
 20 **Q. Mm-hmm.**  
 21 **Do you see where it says "Revision 1.5**  
 22 **1999/02/08"?**  
 23 A. I do.  
 24 **Q. What does that refer to?**  
 25 A. I think I can actually refer -- now I can see

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<p>1 it because I can see the next one down.                  2 That would be February 8th, 1999. A fifth                  3 revision was done to this. I think this would be a more                  4 major branch.                  5 My CVS is getting old now.                  6 And it was done by the initials DB.                  7 <b>Q. What do those initials refer to?</b>                  8 A. Derek Brown.                  9 <b>Q. Who is Derek Brown?</b>                  10 A. He's one of the founders of Aventail who                  11 wrote the original AutoSOCKS.                  12 <b>Q. Is Derek Brown a software developer?</b>                  13 A. Yes.                  14 <b>Q. Let's go -- do you see below that it says,</b>                  15 <b>"Remerge the stuff from the branch back to the trunk"?</b>                  16 A. Yes. So --                  17 <b>Q. Why -- why is that statement contained within</b>                  18 <b>Exhibit 6, if you know?</b>                  19 MR. LIN: Object to form.                  20 THE WITNESS: My interpretation --                  21 <b>Q. BY MR. KING: Mm-hmm.</b>                  22 A. -- as -- as a software developer?                  23 This is a comment stating that other branches                  24 had changes made that needed to be merged back into the main                  25 trunk. So probably one of the earlier versions of the</p>	<p>1 record.                  2 THE WITNESS: So the -- the actual CVS                  3 repository was on a Unix system and not a Windows system.                  4 This is a Unix path.                  5 I can't state definitively because I can't                  6 see this, but it's probably referring to the same SOCKS 5                  7 that we're seeing here under the -- each of these versions.                  8 I don't know which particular version this -- this came                  9 from.                  10 <b>Q. BY MR. KING: Would you see if you can find</b>                  11 <b>this file within the Version 3.1 branch of Exhibit 5?</b>                  12 A. Yeah. Let's see. Probably going to be under                  13 AS.                  14 <b>Q. I think you're under the Version 3.2 branch</b>                  15 <b>right now.</b>                  16 A. Am I under -- you are correct.                  17 Okay. So I've gone into AS, and then I go                  18 into WIN. I'm going to go into S5HOOK.                  19 Do you see an S5HOOK up here?                  20 Yeah. Okay.                  21 And REDIR.CPP is probably -- yup. Probably                  22 right here.                  23 Ooh. This is Unix.                  24 <b>Q. Maybe you can open it with WordPad instead of</b>                  25 <b>NotePad.</b></p>
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<p>1 product had changes made that were being merged back into                  2 the currently under development version.                  3 <b>Q. What is a trunk within CVS terminology?</b>                  4 A. CVS is -- you can have branches, so like a                  5 product branch typically would be branched, some instance,                  6 and the trunk is kind of where all the sort of continuum is                  7 going on. So you take snapshots in time that are called                  8 branches, and you can make modifications there that are                  9 unique to that particular branch. And if you need to have                  10 them in any other branch, you have to merge them.                  11 The trunk is kind of the continuum over time,                  12 right? Does that make sense?                  13 You take a branch of code in time. Trunk                  14 just continues on.                  15 <b>Q. Okay.</b>                  16 <b>Let's go back to the first page of Exhibit 6.</b>                  17 <b>Do you see at the top of the first CVS header where it says,</b>                  18 <b>"/usr/aventail/prodroot," et cetera?</b>                  19 A. Yes.                  20 <b>Q. And then it says "socks5" after that?</b>                  21 A. Yes.                  22 <b>Q. Does that "socksf5" -- what does that</b>                  23 <b>"socksf5" refer to?</b>                  24 MR. LIN: Object to form.                  25 MR. KING: Sorry. "Socks5," just for the</p>	<p>1 A. That's probably a good idea.                  2 Okay.                  3 Yeah, it looks remarkably similar, huh?                  4 1322. February 8th.                  5 <b>Q. Does the file you're looking at on Exhibit 5</b>                  6 <b>have the same CVS header?</b>                  7 A. Yes, it has the same CVS header.                  8 <b>Q. All right.</b>                  9 <b>And can you use that CVS header to</b>                  10 <b>determine --</b>                  11 <b>Strike that.</b>                  12 <b>Let me ask you another question.</b>                  13 <b>Let's go to Exhibit 7.</b>                  14 A. Yes.                  15 <b>Q. What is Exhibit 7?</b>                  16 A. Appears to be the same as Exhibit 6, but I'm                  17 not sure.                  18 I don't know where this actually originated                  19 from.                  20 <b>Q. Well, I'll represent to you --</b>                  21 <b>Let me start over. Do you see the top CVS</b>                  22 <b>header?</b>                  23 A. Yes.                  24 <b>Q. Does that provide you with any indication of</b>                  25 <b>what this -- of what Exhibit 7 is?</b></p>

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1 MR. LIN: Object to form.  
 2 THE WITNESS: It does, although it looks to  
 3 be the same to me as Exhibit 6.  
 4 **Q. BY MR. KING: Can I see that?**  
 5 A. Mm-hmm.  
 6 **Q. You are correct.**  
 7 **Let me see if I can fix that.**  
 8 **All right. I guess we had a copy error.**  
 9 A. Okay.  
 10 **Q. Let's go back to Exhibit 6.**  
 11 A. Yes.  
 12 **Q. Looking again at the CVS time stamp, what --**  
 13 **how did CVS generate that -- the time stamp shown at the top**  
 14 **of Exhibit 6?**  
 15 MR. LIN: Object to form.  
 16 THE WITNESS: From what I know of CVS, it  
 17 used the then current time that this was checked in by Derek  
 18 Brown to generate that -- that additional header. If you  
 19 notice, that's actually a -- a separate comment.  
 20 **Q. BY MR. KING: Mm-hmm.**  
 21 **And when you say "the then current time,"**  
 22 **what -- what do you mean?**  
 23 A. When Derek committed this change, there is a  
 24 command that when you're done coding and doing whatever  
 25 you're going to do you commit it, and it -- it was at that

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1 time the system actually took a time stamp as it was  
 2 committing it into the archive.  
 3 **Q. Okay.**  
 4 **Let's go back to Exhibit 5. If you could**  
 5 **close down the WordPad --**  
 6 **Sorry. We're going back to Exhibit 5 on the**  
 7 **computer.**  
 8 A. Okay.  
 9 **Q. If you could close down the WordPad file.**  
 10 A. Yes.  
 11 **Q. Can you change the Internet Explorer window**  
 12 **so that it shows times and dates on -- or the time and date**  
 13 **those files were modified?**  
 14 A. Yeah, this is --  
 15 This right here?  
 16 **Q. That's correct.**  
 17 A. Yes.  
 18 **Q. Okay.**  
 19 **Now, can you find the time and date that**  
 20 **REDIR.CPP was -- was modified?**  
 21 MR. LIN: Object to form.  
 22 THE WITNESS: Oh. This says February 7th,  
 23 1999, at 4:13.  
 24 **Q. BY MR. KING: What does that -- what is the**  
 25 **significance that -- of --**

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1 **Are you familiar with the way in which files**  
 2 **obtain date modified notations within -- within operating**  
 3 **systems?**  
 4 MR. LIN: Object to form.  
 5 THE WITNESS: Yeah, at one time I was pretty  
 6 familiar with the Unix.  
 7 **Q. BY MR. KING: Mm-hmm.**  
 8 **What does it mean when it says date mod -- a**  
 9 **date modified of February --**  
 10 A. I believe this means this was the last time  
 11 that there was a write operation performed on it.  
 12 MR. LIN: I'm going to object -- object to  
 13 that question.  
 14 **Q. BY MR. KING: Is it unusual that that date on**  
 15 **REDIR.CPP is different from the CVS header that we saw on a**  
 16 **printed -- on the printed version of REDIR.CPP as Exhibit 6?**  
 17 MR. LIN: Object to form.  
 18 THE WITNESS: I can't account for that. I  
 19 don't know why that is.  
 20 **Q. BY MR. KING: Okay. All right.**  
 21 **Let's go to -- go back to Exhibit 2.**  
 22 **Exhibit -- can you tell me what -- what**  
 23 **Aventail Connect is?**  
 24 MR. LIN: Object to form.  
 25 THE WITNESS: Yes. Aventail Connect is a --

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1 a marketing name for a product that is a -- or was a -- a  
 2 VPN client that would redirect application traffic into a --  
 3 a SOCKS-based VPN server.  
 4 **Q. BY MR. KING: How would -- you said Aventail**  
 5 **Connect is a VPN client, right?**  
 6 A. Yes.  
 7 **Q. What does that mean that it's a VPN client?**  
 8 MR. LIN: Object to form.  
 9 THE WITNESS: By Aventail definition, it  
 10 means that it is a piece of software that will securely  
 11 connect an application on the client side with a service or  
 12 an application on the server side that's located through a  
 13 cryptographically protected tunnel, so that you can use  
 14 information on servers that are on other networks securely  
 15 from typically an insecure network that you're on at that  
 16 point. The end user.  
 17 **Q. BY MR. KING: The end user.**  
 18 **Is Aven -- where is Aventail Connect**  
 19 **installed?**  
 20 MR. LIN: Object to form.  
 21 THE WITNESS: It's installed on Windows-based  
 22 clients.  
 23 **Q. BY MR. KING: Is it -- how do end users use**  
 24 **Aventail Connect?**  
 25 MR. LIN: Object to form.

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1 THE WITNESS: They use it to establish a  
 2 secure communications channel to remote resources that they  
 3 want to keep confidential.  
 4 **Q. BY MR. KING: Mm-hmm.**  
 5 **Is Aventail Connect installed on an end**  
 6 **user's computer?**  
 7 A. One who's going to use this particular VPN,  
 8 yes.  
 9 **Q. Okay.**  
 10 **Can we go to -- let's go to Page 7 of the**  
 11 **administrator's guide, Exhibit 2.**  
 12 **Do you see the second paragraph from the**  
 13 **bottom, last sentence, "Aventail Connect does not require**  
 14 **administrators to manually establish an encrypted tunnel;**  
 15 **Aventail Connect can establish an encrypted tunnel**  
 16 **automatically"?**  
 17 A. Yes.  
 18 **Q. Can you tell me what that means?**  
 19 MR. LIN: Object to form.  
 20 THE WITNESS: Yeah. I can tell you what it  
 21 means. The -- the interpretation in this -- in this  
 22 instance is the -- the application does not have to initiate  
 23 any kind of cryptography on its own. They connect -- a  
 24 proxy client will automatically initiate that cryptography  
 25 when the connection is placed through the VPN.

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1 **Q. BY MR. KING: Does the user have to do**  
 2 **anything to initiate the cryptography?**  
 3 MR. LIN: Object to form.  
 4 THE WITNESS: They have to do one thing.  
 5 They have to log into the VPN prior, and then while they're  
 6 logged in, all applications going to resources in the VPN  
 7 will have the cryptography automatically instantiated for  
 8 them.  
 9 **Q. BY MR. KING: How did -- what do users have**  
 10 **to enter into the computer in order to log into the VPN?**  
 11 MR. LIN: Object to form.  
 12 THE WITNESS: They have to connect to the  
 13 server, and they have to pass some authentication  
 14 challenges.  
 15 **Q. BY MR. KING: What sort of authentication**  
 16 **challenges do they have to pass?**  
 17 MR. LIN: Object to form.  
 18 THE WITNESS: That depends on the kind of  
 19 authentication that the administrator has chosen.  
 20 **Q. BY MR. KING: Mm-hmm.**  
 21 A. There are different forms. One would be user  
 22 name and password, very typical. Another form might be --  
 23 in the Connect supported is challenge response, so  
 24 multifactor tokens, where you know more than just a user  
 25 name, a user name and a PIN and some random number

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1 generator, things like that. But that's -- that's based on  
 2 what the administrator chose for the authentication.  
 3 **Q. Does the user have to enter any cryptographic**  
 4 **information when logging into the VPN under the user name**  
 5 **and password scenario?**  
 6 MR. LIN: Object to form.  
 7 THE WITNESS: No, not -- not as I would  
 8 consider cryptographic. I mean, nothing outside the scope  
 9 of what I just said.  
 10 **Q. BY MR. KING: Mm-hmm.**  
 11 **What about in the multifactor scenario, in that**  
 12 **scenario does the user have to enter any cryptographic**  
 13 **information?**  
 14 MR. LIN: Object to form.  
 15 THE WITNESS: No.  
 16 **Q. BY MR. KING: Let's go to Page 11.**  
 17 **Do you see where it says "How Does Aventail**  
 18 **Connect Work?"**  
 19 A. Yes.  
 20 **Q. I want to spend a couple minutes and just**  
 21 **walk through Page 11 and Page 12 and Page 13 and have you**  
 22 **describe for us how Aventail Connect works. Is that fair?**  
 23 A. Yeah. I might have to read this a little bit  
 24 with you.  
 25 **Q. That's fine.**

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1 A. I haven't seen this for a while.  
 2 **Q. That's fine.**  
 3 **Let's -- actually -- let's start with**  
 4 **Page 10.**  
 5 **Not even Page 10. Page 9. Where it says**  
 6 **"What Does Aventail Connect Do?"**  
 7 A. Yes.  
 8 **Q. Do you see that -- that picture on Page 9?**  
 9 A. Yes, I see, yes, protocol stack.  
 10 MR. LIN: Tom, can I lodge a standing  
 11 objection at this point to form as to all the questions  
 12 regarding AVN 00015 and 00016?  
 13 MR. KING: What's the basis for your  
 14 objection?  
 15 MR. LIN: The witness has -- did not prepare  
 16 this document. He wasn't employed by Aventail at the time  
 17 this product was released. Lacks foundation, personal  
 18 knowledge.  
 19 MR. KING: Okay.  
 20 MR. LIN: Yeah.  
 21 MR. BRIGHT: Tom, just to be clear, is that  
 22 okay that we have a standing objection, or do you want us to  
 23 lodge the objection to every question?  
 24 MR. KING: I'm not sure that's an objection  
 25 to form, so I don't -- I don't -- you can do --

(Pages 69 to 72)

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1 MR. BRIGHT: What we feel necessary?  
 2 MR. KING: -- what you feel necessary.  
 3 MR. BRIGHT: Okay.  
 4 MR. KING: And I'll note that if it's not an  
 5 objection to form, you'd be waiving it by stating it on the  
 6 record.  
 7 MR. BRIGHT: You can note what you want.  
 8 **Q. BY MR. KING: What does the figure on Page 9**  
 9 **of Exhibit 2 show?**  
 10 MR. LIN: Object to form.  
 11 THE WITNESS: It is a representation of how  
 12 Microsoft networking stacks were composed in Win 95.  
 13 **Q. BY MR. KING: And can you walk me through**  
 14 **this figure and explain to me what it shows?**  
 15 A. Yeah, to the best of my ability, I can.  
 16 **Q. Mm-hmm.**  
 17 A. The top box refers to an application that's  
 18 running on Windows 95 that -- that is going to use the  
 19 TCP/IP protocol, and it's going to consume that -- or it's  
 20 going to interface with TCP/IP either through the older  
 21 WinSock 1.1 API or the newer WinSock 2 API.  
 22 MR. LIN: I'm going to object to the previous  
 23 question.  
 24 THE WITNESS: The box immediately below it,  
 25 that says WinSock 2, is describing the WinSock 2 sort of

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1 block architecture, in that the application can directly use  
 2 WinSock 2 through the right arrow. That's a -- that was the  
 3 more modern API of the day. And on the left, the  
 4 WinSock 1.1 interface was also for compatibility provided by  
 5 the WinSock 2 provider. So it could -- either a WinSock 1.1  
 6 or a WinSock 2 client or application could use the WinSock 2  
 7 API.  
 8 And then in the middle, it says "Aventail  
 9 Connect (Layered Service Provider)," and over on the right  
 10 it says, "Multiple LSPs can be installed at this level." So  
 11 the -- what that is saying is the Aventail Connect is  
 12 actually implemented as a layered service provider in the  
 13 Win -- WinSock 2 architecture and that the -- and it may  
 14 coexist with other WinSock providers.  
 15 And when an application makes a call to  
 16 WinSock 2, it ultimately will pass through the Aventail  
 17 Connect provider, who will inspect it and decide what to do,  
 18 and once the Aventail Connect has decided what to do, the  
 19 traffic will be passed on to the TCP/IP stack, where it will  
 20 be forwarded on whatever the physical connector is, such as,  
 21 say, ethernet.  
 22 **Q. BY MR. KING: Were you familiar with this**  
 23 **architecture -- architectural model during the time that you**  
 24 **were at Novell?**  
 25 MR. LIN: Object to form.

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1 THE WITNESS: Yes.  
 2 **Q. BY MR. KING: What was your -- was your**  
 3 **understanding of how Aventail's products work -- worked in**  
 4 **1999 consistent with this model as shown in Aventail**  
 5 **Connect -- in the Aventail Connect 3.1 manual that is**  
 6 **Exhibit 2?**  
 7 MR. LIN: Object to form.  
 8 THE WITNESS: Yes.  
 9 **Q. BY MR. KING: Let's go to Page 11.**  
 10 **And you'll see that Page 11 through 13 has a**  
 11 **number of numbers and bullet points, Step 1, 2, 3, and then**  
 12 **some bullet points. Do you see that?**  
 13 A. I do see that.  
 14 **Q. Let's start with -- would you take a minute**  
 15 **to -- to read Pages 11 through 13.**  
 16 A. Yes, I will.  
 17 Okay.  
 18 **Q. Okay.**  
 19 **We need to change the tape, so why don't we**  
 20 **just take a quick break.**  
 21 THE VIDEOGRAPHER: Going off the record. The  
 22 time is 12:11 p.m.  
 23 (Discussion off the record.)  
 24 (Short recess.)  
 25 THE VIDEOGRAPHER: This marks the beginning

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1 of Tape No. 2. Back on the record. The time is 12:17 p.m.  
 2 **Q. BY MR. KING: Referring to Exhibit 2, do you**  
 3 **see Paragraph No. 1 on Page 11?**  
 4 A. Yes.  
 5 **Q. Would you mind reading that into the record?**  
 6 A. Starting with --  
 7 **Q. Starting with, "The application."**  
 8 A. On which page?  
 9 **Q. On Page -- sorry. Page 11.**  
 10 A. 11? Yeah.  
 11 **Q. See where it says, "1. The application does**  
 12 **a DNS lookup"?**  
 13 A. Oh, oh, oh. Okay. Excuse me. Okay. Yes.  
 14 Okay. All right.  
 15 "The application does a DNS lookup to convert  
 16 the hostname to an IP address or, in rare cases, it will do  
 17 a reverse DNS lookup to convert the IP address to a host  
 18 name. If the application already knows the IP address, the  
 19 entire step is skipped. Otherwise, Aventail Connect does  
 20 the following."  
 21 **Q. What does -- can you explain -- explain to me**  
 22 **what Paragraph 1 means?**  
 23 MR. LIN: Object to form.  
 24 THE WITNESS: Yes. So most of the time an  
 25 application is actually looking up something by name --

(Pages 73 to 76)

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1 **Q. BY MR. KING: Mm-hmm.**  
 2 A. -- such as, say, www.google.com, and so  
 3 there's a system called DNS, or the Domain Name Service,  
 4 which will try and convert a name into an IP address.  
 5 Applications can't connect directly to names, they have to  
 6 connect to addresses. So what it's saying is it -- most  
 7 likely the application is going to do a DNS name, and  
 8 sometimes it's the opposite. Sometimes it knows an IP  
 9 address name but it wants to know a name for it. That's not  
 10 a typical kind of thing, but if that's the case, the DNS  
 11 system can be programmed to reverse it.  
 12 **Q. Let's put reverse DNS to the side for now.**  
 13 A. Reverse. Yeah, it's not probably --  
 14 That's what that means.  
 15 **Q. Mm-hmm.**  
 16 **What sort of applications could use Aventail**  
 17 **Connect 3.1?**  
 18 MR. LIN: Object to form.  
 19 THE WITNESS: Well, from what I recall of  
 20 3.1, any TCP/IP application that's initiating a connection  
 21 out.  
 22 **Q. BY MR. KING: Can you give me some examples**  
 23 **of programs that use TCP/IP?**  
 24 A. Mm-hmm.  
 25 MR. LIN: Object to form.

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1 THE WITNESS: Yeah. So the Aventail Connect  
 2 component had a set of rules that defined the servers and  
 3 application, primarily it would be servers, servers that  
 4 were in the VPN, that the traffic should be intercepted and  
 5 redirected through the VPN, the cryptographically protected  
 6 VPN. And so the Aventail Connect ran inside the LSP,  
 7 meaning that all of the communications coming down it could  
 8 intercept and look at. So it wanted to see if a DNS name  
 9 that was coming down was in the redirection set.  
 10 **Q. BY MR. KING: When you say it was wanted --**  
 11 **it wanted to see whether a DNS name was in the redirection**  
 12 **set, can you explain to me what that means, and maybe --**  
 13 A. Yeah. So --  
 14 **Q. In the way that you would explain to it a**  
 15 **layperson?**  
 16 MR. LIN: Object to form.  
 17 THE WITNESS: Yeah. So I'll give you two  
 18 examples of how this would sort of -- when it would  
 19 intervene and when it would not. So let's say that it sees  
 20 a name www.myco.com, and that name is a name that the  
 21 administrator of the VPN has registered as being inside the  
 22 VPN. Okay. So when a request comes in, let's say it's in  
 23 Internet Explorer, so you type www.myco.com, and the  
 24 Aventail Connect proxy sees this, because it's sitting in  
 25 the -- it's filtering all the traffic coming from the

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1 THE WITNESS: Outlook, the mail reader, FTP  
 2 would do it. Web, so use IE would do it.  
 3 **Q. BY MR. KING: IE is what?**  
 4 A. Internet Explorer.  
 5 **Q. Where does your familiarity of Aventail**  
 6 **Connect 3.1 come from?**  
 7 MR. LIN: Object to form.  
 8 THE WITNESS: It comes as -- as a user of it,  
 9 not -- not -- not a heavy user of it but a user of it in  
 10 testing with Novell products.  
 11 **Q. BY MR. KING: That was during the -- the 1999**  
 12 **time frame?**  
 13 A. Yeah. Ninety -- yeah, between 1998 and 2000,  
 14 so --  
 15 **Q. BY MR. KING: Okay.**  
 16 **Let's go to the next paragraph. Do you see**  
 17 **where it says, "If the hostname"?**  
 18 A. Yes.  
 19 MR. LIN: Object to form.  
 20 **Q. BY MR. KING: I won't ask you to read that**  
 21 **for the record, but would you mind explaining to -- you**  
 22 **know, with that paragraph in mind, would you mind explaining**  
 23 **to me what Aventail Connect did when it received a DNS**  
 24 **lookup request from an application?**  
 25 MR. LIN: Object to form.

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1 application from WinSock. It says, Oh, that matches a rule  
 2 that's in the VPN. I'm going to have to intercept that and  
 3 begin doing some of these other operations that -- that are  
 4 described here. Okay?  
 5 As opposed to, let's say that you were saying  
 6 www.google.com, right? A public name, not programmed for  
 7 redirection by the VPN administrator. Aventail Connect  
 8 would look at that and say, Oh. That's not in the  
 9 redirection set. Do not, you know, intercept this request,  
 10 just let it flow on through, without any disturbance by the  
 11 Aventail Connect. That's so that it could go out through a  
 12 different provider.  
 13 **Q. BY MR. KING: How did the Aventail Connect**  
 14 **proxy determine whether the DNS request should be sent to**  
 15 **the DNS server as opposed to --**  
 16 **Or sorry. Let me strike that.**  
 17 **How did the Aventail Connect proxy determine**  
 18 **whether to direct traffic to a VPN or not?**  
 19 MR. LIN: Object to form.  
 20 THE WITNESS: It used a configuration file  
 21 that was stored on the client that contained all the  
 22 redirection rules, so when it loaded it read that in, and  
 23 then it used that as a rule set to look at against  
 24 connection -- or name requests coming through.  
 25 **Q. BY MR. KING: Did redirection rules specify**

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1 **whether or not a host name corresponded to a secure target?**  
 2 MR. LIN: Object to form.  
 3 THE WITNESS: Well, you know, I don't have  
 4 firsthand knowledge from this era.  
 5 **Q. BY MR. KING: Mm-hmm.**  
 6 A. From the year 2002 on, there's no -- there's  
 7 no information in there as to whether that -- that was a --  
 8 a secure site or not.  
 9 **Q. How did Aventail Connect determine whether or**  
 10 **not to send traffic over a VPN, then?**  
 11 MR. LIN: Object to form.  
 12 THE WITNESS: Yeah. Let me read the rest of  
 13 these steps.  
 14 **Q. BY MR. KING: Mm-hmm.**  
 15 A. What it would do is it would need to  
 16 determine if the request coming in was either a name that is  
 17 in the VPN or an address that's in the VPN. The rules could  
 18 be either. If -- if it is a name, it has to get a name  
 19 translated to an address, because the -- the actual connect  
 20 request is going to come from an application, it's not going  
 21 to be a name. You can't say connect to and then a name,  
 22 right? You have to connect to an address.  
 23 So in the case that it's a name, it has to  
 24 convert it to an address that it can subsequently intercept,  
 25 right? So it's going to say, Oh. Here's a name. It needs

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1 to be resolved within the -- the VPN. And it would do that  
 2 by essentially impersonating the -- the DNS system, and it  
 3 would -- it would forward the -- the request to the server,  
 4 and the server would attempt to resolve it by name inside  
 5 the remote network. And then if the name was resolved, the  
 6 server responds to the client and tells him what the actual  
 7 real address is. And then the client, Aventail Connect,  
 8 would generate a fake IP address and give it back that it  
 9 would remember, so it would tag it and give kind of a fake  
 10 address that -- that would go back to the -- to the client  
 11 application.  
 12 And then when the client application  
 13 subsequently makes the connect request, it wants to  
 14 establish a TCP connection, it would intercept either the  
 15 fake address or an address that's in the redirected  
 16 namespace, that's a rule, and basically divert that into its  
 17 SSL -- or a SOCKS tunnel.  
 18 And that's essentially what this whole thing  
 19 is saying here.  
 20 If it's not an address that's in the  
 21 redirection set, it would not redirect it, it would just  
 22 pass it on through to whoever the next provider is.  
 23 **Q. Was a -- was a user -- was an end user aware**  
 24 **that any of this was happening behind the scenes when they**  
 25 **used Aventail Connect?**

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1 MR. LIN: Object to form.  
 2 THE WITNESS: Not typically. A user could  
 3 be, if they wanted to understand how to program the client,  
 4 but typically that would be done by the administrator, and  
 5 the user didn't really know unless they were challenged by  
 6 the VPN to -- to log in.  
 7 **Q. BY MR. KING: Did -- did Aventail Connect**  
 8 **allow applications to connect directly to the target**  
 9 **computer through a VPN, or did all communications have to go**  
 10 **through the SOCKS server?**  
 11 MR. LIN: Object to form.  
 12 THE WITNESS: They would have to go through  
 13 the SOCKS server.  
 14 **Q. BY MR. KING: Why -- why did all**  
 15 **communications have to go through the SOCKS server?**  
 16 MR. LIN: Object to form.  
 17 THE WITNESS: They had to be put into a  
 18 cryp -- well, typically cryptographically protected. It's  
 19 possible to run SOCKS without it, but typically an  
 20 SSL-encrypted tunnel in SOCKS, so what it had to do is it  
 21 had to take the requests from the client and redirect them  
 22 into a tunnel that was cryptographically protected, and that  
 23 tunnel was a connection between the physical client and the  
 24 SOCKS server, and traffic would transit on this encrypted  
 25 connection, at which point the server would take it out of

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1 the tunnel and then forward it on to the correct IP address  
 2 using just routed -- you know, routing inside the VPN.  
 3 **Q. BY MR. KING: Mm-hmm.**  
 4 **Did the server have a -- have a VPN**  
 5 **connection to the target computer?**  
 6 MR. LIN: Object to form.  
 7 THE WITNESS: No.  
 8 **Q. BY MR. KING: Was the Aventail Connect client**  
 9 **aware of the real IP address of the target computer?**  
 10 MR. LIN: Object to form.  
 11 THE WITNESS: I -- I don't recall.  
 12 **Q. BY MR. KING: Mm-hmm.**  
 13 **Do you see at the bottom of Page 12, the last**  
 14 **partial sentence, "From the applications point of view, the**  
 15 **entire SOCKS negotiation, including the authentication**  
 16 **negotiation, is merely the TCP handshaking"?**  
 17 **It's the last sentence of Page 12, and then**  
 18 **going on to Page 13.**  
 19 A. Yes, I see that.  
 20 **Q. Can you tell me what that sentence means?**  
 21 MR. LIN: Object to form.  
 22 THE WITNESS: Yes. The -- yes. So the --  
 23 the TCP connection itself can't be completed until the SOCKS  
 24 negotiation is done and the tunnel. In SOCKS these -- these  
 25 were not multiplex, so the -- each and every individual

(Pages 81 to 84)

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1 connection being made by a client application had a separate  
 2 TCP/IP connection to the server that was going -- that was  
 3 SOCKS encapsulated, and so the process of establishing the  
 4 SOCKS communication was done transparently to the  
 5 application, such that its request was held up while the  
 6 Connect proxy actually contacted the server, negotiated it  
 7 all out, and once -- if it got, you know, a clean tunnel up,  
 8 then it would allow the TCP/IP traffic to flow through and  
 9 complete the TCP handshake.

10 **Q. You said it was transparent to the**  
 11 **application. Does that also mean that it was transparent to**  
 12 **the end user?**

13 MR. LIN: Object to form.  
 14 THE WITNESS: Yes.

15 **Q. BY MR. KING: I'll just wrap up with a few**  
 16 **questions going back to your time at Novell. You said that**  
 17 **Novell -- was Novell interested in developing a WinSock 2**  
 18 **layered service provider VPN?**

19 A. No.  
 20 **Q. No?**  
 21 **Why not?**

22 MR. LIN: Object to form.  
 23 **Q. BY MR. KING: Actually, strike that. Let me**  
 24 **ask a different question.**  
 25 **Are you aware of anybody other than Aventail**

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1 **who developed a WinSock 2 layered service provider VPN?**  
 2 A. No.  
 3 MR. LIN: Object to form.  
 4 **Q. BY MR. KING: Aventail is the only one you're**  
 5 **aware of?**

6 A. In that era.  
 7 **Q. Okay.**  
 8 **All right. Well, that's all of the questions**  
 9 **I have for now. Why don't we break for lunch.**

10 THE VIDEOGRAPHER: Going off the record. The  
 11 time is 12:33 p.m.  
 12 (A luncheon recess was taken at  
 13 12:33 p.m.)  
 14 ---o---  
 15  
 16  
 17  
 18  
 19  
 20  
 21  
 22  
 23  
 24  
 25

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1 SEATTLE, WASHINGTON; FRIDAY, FEBRUARY 27, 2009  
 2 1:35 P.M.  
 3 --o0o--  
 4  
 5 THE VIDEOGRAPHER: Back on the record. The  
 6 time is currently 1:35 p.m.  
 7  
 8 EXAMINATION  
 9 BY MR. LIN:  
 10 **Q. Now the roles are reversed. I'm going to be**  
 11 **asking you some questions.**  
 12 **Do you understand that you're still under**  
 13 **oath?**

14 A. I do.  
 15 **Q. Okay.**  
 16 **If I could have you turn to what's previously**  
 17 **been marked as Exhibit 2.**

18 A. Yes.  
 19 **Q. Is it correct, sir, that you did not prepare**  
 20 **Exhibit 2?**

21 A. I did not prepare it, no.  
 22 **Q. Have you ever seen this document before,**  
 23 **Exhibit 2?**

24 A. I have seen it, yes.  
 25 **Q. When did you see this document?**

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1 A. I saw it when we were asked to produce  
 2 information.  
 3 **Q. Have you ever seen Exhibit 2 prior to being**  
 4 **asked to produce information?**

5 A. I think I did, but I'm -- I'm not exactly  
 6 sure.  
 7 **Q. So you don't -- so you don't know that you**  
 8 **reviewed this precise version of Exhibit 2?**

9 A. I don't know that I ever reviewed this one.  
 10 **Q. Okay.**  
 11 **And do you know who maintained custody of**  
 12 **Exhibit 2 from the time it was first produced until the time**  
 13 **that you joined Aventail?**

14 A. I don't know for sure when it was first  
 15 produced. I know who had custody when I did join Aventail,  
 16 and that was Scott Boggan.  
 17 **Q. Do you have any personal knowledge as to who**  
 18 **maintained custody of this document prior to you joining**  
 19 **Aventail?**

20 A. I do not.  
 21 **Q. And do you have any personal knowledge as to**  
 22 **when this document was published?**

23 A. I do not.  
 24 **Q. And have you ever reviewed this document to**  
 25 **confirm the accuracy of the contents of Exhibit 2?**

(Pages 85 to 88)

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1 A. Yes, I have reviewed it with our developers  
 2 with respect to the source code.  
 3 **Q. And when was that?**  
 4 A. December of 2007.  
 5 **Q. And was that in response to receiving the**  
 6 **subpoena by Microsoft?**  
 7 A. Yes.  
 8 **Q. Who did you speak with to verify the accuracy**  
 9 **of the contents of Exhibit 2?**  
 10 A. Bryan Sauve.  
 11 **Q. And who is Bryan Sauve?**  
 12 A. He's a former Aventail and SonicWALL employee  
 13 who was a developer of Connect.  
 14 **Q. When did Bryan Sauve depart from Aventail?**  
 15 A. He departed from SonicWALL in September of  
 16 2008.  
 17 **Q. And can you describe the steps that you took**  
 18 **to confirm the accuracy of the contents of Exhibit 2 with**  
 19 **respect to the source code?**  
 20 A. Yes. We matched the source code up against  
 21 the descriptions in this document.  
 22 **Q. And how much time did you spend verifying the**  
 23 **contents of Exhibit 2?**  
 24 A. Less than one day.  
 25 **Q. And how many source code files are --**

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1 **Excuse me. How many source code files are**  
 2 **there for the versions of Aventail Connect described in**  
 3 **Exhibit 2?**  
 4 A. That I don't know off the top of my head.  
 5 **Q. Would it be more than a thousand files?**  
 6 A. No, I don't believe it's more than a thousand  
 7 files.  
 8 **Q. Can I direct your attention to Exhibit 5, and**  
 9 **if you --**  
 10 A. Yes.  
 11 **Q. -- will remain the computer.**  
 12 **Could you -- could you go to the root**  
 13 **directory, the C, please.**  
 14 A. (Witness complies.)  
 15 **Q. Is that the root directory?**  
 16 **Thanks.**  
 17 A. Okay.  
 18 **Q. Could you please open the file that -- excuse**  
 19 **me -- open the folder that corresponds to Version 3.1?**  
 20 A. (Witness complies.)  
 21 **Q. And can you do a right click on that SOCKS 5**  
 22 **folder?**  
 23 A. Yes.  
 24 **Q. And click on Properties?**  
 25 A. Yes.

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1 **Q. And how many files are in that folder?**  
 2 A. There's 4,000 files, of which the lion's  
 3 share I believe are on the server side.  
 4 **Q. Okay.**  
 5 **So it's your testimony that on the Connect**  
 6 **side --**  
 7 A. Yeah, I -- I don't know exactly how many.  
 8 I'd have to sit down with the guys.  
 9 **Q. Okay.**  
 10 A. The server is considerably larger than the --  
 11 than the client.  
 12 **Q. And did you review every single source code**  
 13 **file for Aventail Connect Version 3.1?**  
 14 A. No, we did not go through every single file.  
 15 **Q. How many files, approximately, did you go**  
 16 **through with Mike Sauve?**  
 17 **Did I get the name correct?**  
 18 A. Oh, Bryan.  
 19 **Q. Bryan.**  
 20 A. Bryan Sauve. It's S-a-u-v-e.  
 21 I don't recall how many.  
 22 **Q. And did you do a page-by-page analysis in**  
 23 **Exhibit 2?**  
 24 A. Not in depth.  
 25 **Q. Not in depth?**

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1 A. Not in depth.  
 2 **Q. And when you identified a feature described**  
 3 **in Exhibit 2, did Bryan Sauve direct you to the relevant**  
 4 **source code?**  
 5 A. He did not go source file by source file, as  
 6 he was aware of what -- what the entire tree was.  
 7 **Q. So to what extent did you review the contents**  
 8 **of Exhibit 2 in connection with the source code?**  
 9 A. We verified that the source that we had  
 10 pulled in Exhibit -- oh -- that what is described in  
 11 Exhibit 2 was matched up with what we had found in the  
 12 source.  
 13 **Q. And how did you determine what was pulled**  
 14 **from the source matched what was described in Exhibit 2?**  
 15 A. If I recall, we looked at the configuration  
 16 file, primarily, to see if it lined up correctly with what  
 17 was described in here, and then we matched the time of the  
 18 archives between the LiveLink as well as the CVS, to confirm  
 19 they were from the same epoch.  
 20 **Q. So you confirmed that the source code was**  
 21 **approximately developed at the same time as Exhibit 2? Is**  
 22 **that what you're saying?**  
 23 A. That was our intent.  
 24 **Q. And which of the source code files in**  
 25 **Exhibit 5 did Bryan Sauve write?**

(Pages 89 to 92)

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1 A. That I'm not sure.  
 2 **Q. Okay.**  
 3 **And you also said that you reviewed a**  
 4 **configuration file. Is that something that was produced in**  
 5 **Exhibit 5?**  
 6 A. Yes, I believe it's in here.  
 7 **Q. And how did what was contained in the**  
 8 **exhibit file confirm for you that the source code**  
 9 **corresponded to what was described in Exhibit 2?**  
 10 A. The schema for it.  
 11 **Q. Excuse me?**  
 12 A. The schema for the configuration file  
 13 contained the elements described in this document.  
 14 **Q. So Exhibit 2 describes the configuration**  
 15 **file, and -- is that correct?**  
 16 A. Indirectly, yes. If you look at each of the  
 17 capabilities that you can configure, that's what you'd be  
 18 looking for in the schema.  
 19 **Q. So what -- what do you mean by schema of the**  
 20 **configuration?**  
 21 A. The structure of it. Did it have -- you  
 22 know, did it have the element set present that would match  
 23 this.  
 24 **Q. So you made sure that the configuration file**  
 25 **had certain -- had a certain structure that was reflected in**

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1 **what was described in Exhibit 2?**  
 2 A. Yes.  
 3 **Q. Did you confirm, as well, that on a --**  
 4 **Excuse me. Let me strike -- let me rephrase.**  
 5 **Did you also confirm that the source code**  
 6 **would interact with the configuration file in a manner**  
 7 **described in Exhibit 2?**  
 8 A. No, we did not.  
 9 **Q. So is it fair to say, then, you reviewed the**  
 10 **configuration file to make sure that the structure of the**  
 11 **configuration was similar to what was described in Exhibit 2**  
 12 **and you reviewed the time stamps in the source code archive**  
 13 **to ensure that it was in the same time frame; is that -- as**  
 14 **when Exhibit 2 was prepared?**  
 15 MR. KING: Objection, form.  
 16 **Q. BY MR. LIN: You may answer.**  
 17 A. Yes.  
 18 **Q. Okay.**  
 19 **Now, do you have any personal knowledge that**  
 20 **Exhibit 2 describes a product that was released?**  
 21 A. I do have some personal knowledge, yes.  
 22 **Q. What's the extent of that personal knowledge?**  
 23 A. When I was in Novell and we were interacting  
 24 with Aventail, we had to do some setup and work with them,  
 25 so -- I can't attest that this exact one I worked on, but I

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1 can attest that something that approximated this was  
 2 released.  
 3 **Q. So when you worked at Novell you acquired a**  
 4 **released version of Aventail software; is that correct?**  
 5 A. Yes.  
 6 **Q. And while you were at Novell did you have**  
 7 **access to Aventail confidential information or source code?**  
 8 A. I don't believe we had access to the source  
 9 code. We had access to some confidential information, the  
 10 sharing of -- of design documents.  
 11 **Q. Was Aventail under nondisclosure agreement**  
 12 **with Novell before February of 2000?**  
 13 A. I believe so.  
 14 **Q. And can you describe the extent to which you**  
 15 **tested the Aventail software while you were at Novell?**  
 16 A. Yeah. We tested the software against --  
 17 against our SOCKS server for interoperability. We also  
 18 tested it against our own network client as another LSP  
 19 provider, so that the two could cooperate simultaneous.  
 20 **Q. So Aventail Connect is capable of**  
 21 **communicating with SOCKS servers other than Aventail's SOCKS**  
 22 **server?**  
 23 A. It was in -- at that time.  
 24 **Q. It was not?**  
 25 A. It was at that time.

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1 **Q. At the time. Okay.**  
 2 **And do you have any personal knowledge of**  
 3 **the -- any sales of Aventail Connect Version 3.1?**  
 4 A. I do not.  
 5 **Q. Do you have any personal knowledge of any**  
 6 **offers for sale of Aventail Connect Version 3.1?**  
 7 A. No, I do not.  
 8 **Q. Do you have any personal knowledge of any**  
 9 **public uses of Aventail Connect Version 3.1?**  
 10 MR. KING: Objection, form.  
 11 THE WITNESS: During that time frame?  
 12 **Q. BY MR. LIN: Yes.**  
 13 A. No, no firsthand.  
 14 **Q. Okay. Thank you.**  
 15 **Do you have any personal knowledge of any**  
 16 **public disclosures of Aventail Version 3.1 prior to 2000?**  
 17 A. Not -- well, no. You're -- no, I do not.  
 18 **Q. Let me just ask the previous question again.**  
 19 **Do you have any personal knowledge of any public disclosures**  
 20 **of Aventail Version 3.1 prior to February 2000?**  
 21 A. Not public.  
 22 **Q. Okay. Thank you.**  
 23 **I'd like to direct your attention to**  
 24 **Exhibit 3.**  
 25 **And did you prepare Exhibit 3?**

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1 A. No, I did not.  
 2 **Q. Have you seen Exhibit 3 before?**  
 3 A. Yes, I have.  
 4 **Q. And when did you first see Exhibit 3?**  
 5 A. When we were pulling the information that we  
 6 were being subpoenaed on.  
 7 **Q. So you haven't seen Exhibit 3 prior to 2007;**  
 8 **is that correct?**  
 9 A. That is correct.  
 10 **Q. And do you have any personal knowledge of who**  
 11 **had custody of Exhibit 3 from the time it was prepared until**  
 12 **the time you joined Aventail?**  
 13 A. Not from when it was first prepared, but from  
 14 when I joined. That would be Scott Boggan.  
 15 **Q. But you don't have any personal knowledge as**  
 16 **to who had custody of this document from when it was first**  
 17 **prepared until when you joined Aventail?**  
 18 A. I do not.  
 19 **Q. And do you have any personal knowledge as to**  
 20 **when Exhibit 3 was first published?**  
 21 A. I haven't -- no, not firsthand.  
 22 **Q. And did you undertake to verify the accuracy**  
 23 **of the contents of Exhibit 3 with respect to any source**  
 24 **code?**  
 25 A. Yes, we did.

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1 **Q. And when did you do that?**  
 2 A. In December of 2007.  
 3 **Q. And who did you speak with to determine that**  
 4 **the contents of Exhibit 3 were consistent with the source**  
 5 **code?**  
 6 A. Bill Perry.  
 7 **Q. And is Bill Perry still with SonicWALL?**  
 8 A. Yes.  
 9 **Q. And how much time did you spend comparing the**  
 10 **contents of Exhibit 3 with the source code for Aventail**  
 11 **ExtraWeb Server 3.2?**  
 12 A. I spent less than a day.  
 13 **Q. Less than a day.**  
 14 **And do you know approximately how many files**  
 15 **are associated with ExtraWeb Server Version 3.2?**  
 16 A. Well, I might now. Probably somewhere  
 17 between -- maybe roughly 3,000 or so. I don't know the  
 18 exact breakdown between the two. Some -- some of the code  
 19 is shared.  
 20 **Q. And did you review all 3,000 files of source**  
 21 **code with Bill Perry?**  
 22 A. I did not.  
 23 **Q. Which source code files did Bill Perry write?**  
 24 A. I don't know which ones.  
 25 **Q. What was the extent of Bill Perry's**

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1 **involvement in developing the source code for ExtraWeb**  
 2 **Server 3.2?**  
 3 A. I don't -- I don't know the magnitude of it.  
 4 He is one of the founders.  
 5 **Q. And did you do a page-by-page review of**  
 6 **Exhibit 3 in connection with the source code?**  
 7 A. I did not do page-by-page. I did samplings  
 8 with Bill.  
 9 **Q. And did you select the samplings of Exhibit 3**  
 10 **to compare with the source code?**  
 11 A. Bill selected them.  
 12 **Q. And approximately how many pages did you**  
 13 **sample out of Exhibit 3 to compare with the source code?**  
 14 A. I'd say roughly about one-third.  
 15 **Q. One-third? Okay.**  
 16 **And when you identified a portion of**  
 17 **Exhibit 3 that you wanted to compare with source code, how**  
 18 **did you compare that portion of Exhibit 3 with the source**  
 19 **code?**  
 20 A. We used the same strategy. We used the  
 21 configuration files to match up, you know, the user  
 22 interface material with the actual structure of the  
 23 configuration files.  
 24 **Q. So you compared the structure of the**  
 25 **configuration files. Did you also undertake to look at**

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1 **source code that might interact with the configuration files**  
 2 **to perform a certain function?**  
 3 A. I did not.  
 4 **Q. And do you have personal knowledge of whether**  
 5 **Exhibit 3 accurately describes a product that was released?**  
 6 A. I do not have personal knowledge.  
 7 **Q. Do you have personal knowledge of any sales**  
 8 **of ExtraWeb Server Version 3.2?**  
 9 A. Not -- no, not direct.  
 10 **Q. Do you have personal knowledge of any offer**  
 11 **for --**  
 12 **Excuse me. Let me re -- restate that.**  
 13 **Do you have any personal knowledge of any**  
 14 **offers for sale of Aventail ExtraWeb Server Version 3.2?**  
 15 A. I do not.  
 16 **Q. Do you have any personal knowledge of any**  
 17 **public use of Aventail ExtraWeb Server Version 3.2?**  
 18 A. I think so. I know of customer sites that I  
 19 believe were running this when I joined the company.  
 20 **Q. Do you have personal knowledge as to when**  
 21 **those customer sites began using Aventail ExtraWeb**  
 22 **Version 3.2?**  
 23 A. I do not.  
 24 **Q. Do you have any personal knowledge as to any**  
 25 **public disclosure of Aventail ExtraWeb Version 3.2?**

(Pages 97 to 100)

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1 A. Only in the form that it was at sites that  
 2 were -- had bought it commercially.  
 3 **Q. But you don't know when those sites first  
 4 started using ExtraWeb Version 3.2; is that correct?**  
 5 A. I do not.  
 6 **Q. And you don't know when those sites first --  
 7 Excuse me. Let me restate that.  
 8 And you don't know whether any of the sites  
 9 used ExtraWeb Version 3.2 prior to February of 2000; is that  
 10 correct?**  
 11 A. I do not.  
 12 **Q. So for Exhibits 2 and 3, you don't have any  
 13 personal knowledge as to anyone using these products prior  
 14 to February 15, 2000; is that correct?**  
 15 A. Not for commercial sale. I do in that we  
 16 used it in our own development with Aventail.  
 17 **Q. But not in public use; is that correct?**  
 18 A. But not in public use.  
 19 **Q. Okay. Thank you.  
 20 Do you have any personal knowledge as to how  
 21 source code was maintained at Aventail prior to your joining  
 22 Aventail in 2003?**  
 23 A. I do not.  
 24 **Q. And your experience with CVS, which is the  
 25 repository for source code, is between 2003 and 2004; is**

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1 **that correct?**  
 2 A. With Aventail, yes.  
 3 **Q. Do you know when Microsoft first contacted  
 4 SonicWALL in connection with the litigation with VirnetX?**  
 5 A. I do not.  
 6 **Q. Do you know whether Microsoft contacted  
 7 SonicWALL in connection with the litigation with VirnetX?**  
 8 A. I do not.  
 9 **Q. Have you ever seen a subpoena that Microsoft  
 10 sent to SonicWALL in connection with the litigation with  
 11 VirnetX?**  
 12 A. I may have.  
 13 **Q. Do you know of any meetings between Microsoft  
 14 and SonicWALL in connection with the litigation with  
 15 VirnetX?**  
 16 A. I do not.  
 17 Can I clarify that?  
 18 **Q. Yeah, please.**  
 19 A. How about a -- a representative of -- of  
 20 Microsoft?  
 21 **Q. Yes, that would include representatives from  
 22 Microsoft, including their counsel.**  
 23 A. I know of one where they were asking for  
 24 information.  
 25 **Q. Can you describe that meeting?**

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1 A. Briefly. We were talking, I believe, to Tom,  
 2 and Tom was clarifying the subpoena as to what --  
 3 essentially what they were looking for.  
 4 **Q. Do you know when this meeting took place?**  
 5 A. I believe it was November of 2007. I'm not  
 6 positive about that.  
 7 **Q. And in what regards did Microsoft or  
 8 attorneys for Microsoft clarify what they were looking for  
 9 in the subpoena?**  
 10 A. They described our products. They knew of  
 11 some of our products, specifically the ExtraNet and Connect,  
 12 if I remember, and possibly ExtraWeb, and we discussed sort  
 13 of the clarifications of what, you know, roughly those  
 14 products did, and then they asked for -- or I think it might  
 15 have been just Tom. I think it was Tom, asked for, you  
 16 know, the kinds of information like, Gee, yeah, get me  
 17 the -- the information on these, and that's where we kind of  
 18 defined the scope with -- with Laurel on what it was we  
 19 were -- they were looking for.  
 20 **Q. Did this conversation include discussions  
 21 about source code, Aventail source code?**  
 22 A. Yes, it did, at the time.  
 23 **Q. And what was said regarding Aventail source  
 24 code?**  
 25 A. That we could produce the source code.

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1 **Q. And did SonicWALL produce the source code to  
 2 Microsoft?**  
 3 A. I believe so, but I -- I don't know when. I  
 4 wasn't party to that.  
 5 **Q. Do you know if Microsoft was given access to  
 6 SonicWALL source code?**  
 7 A. I do not.  
 8 **Q. And when did you first gather the source code  
 9 for production in response to Microsoft's subpoena?**  
 10 A. In December of 2007.  
 11 **Q. And is it your understanding that source code  
 12 was actually provided to Microsoft in December of 2007?**  
 13 A. I don't believe it was, but I -- I'm not the  
 14 one who would provide it.  
 15 **Q. Do you know when the source code was first  
 16 provided to Microsoft?**  
 17 A. I believe it was recently.  
 18 **Q. How recently?**  
 19 A. Within the last couple months.  
 20 **Q. Okay.  
 21 Is it correct to say that Aventail Connect is  
 22 software that runs on a computer?**  
 23 A. Yes, it is correct.  
 24 **Q. And I'm referring to Aventail Connect  
 25 Version 3.1.**

(Pages 101 to 104)

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1 A. Yes, that is correct.

2 **Q. Is it correct to say that Aventail Connect**

3 **Version 3.1 runs on a client computer?**

4 A. That is a more precise.

5 **Q. Is it correct to say that Aventail Connect**

6 **does not always make a connection directly between the**

7 **client computer and the remote host?**

8 A. Yes, that is -- it never makes a direct

9 connection.

10 **Q. And is it okay with you if I also refer to**

11 **remote host as a target computer?**

12 A. Yes.

13 **Q. Will you understand what I'm saying?**

14 A. Yes.

15 **Q. Okay.**

16 A. As opposed to a VPN server?

17 **Q. Okay.**

18 **Is it correct to say that Aventail Connect is**

19 **specifically designed to operate only for TCP/IP**

20 **communication?**

21 A. That is incorrect.

22 **Q. And in what way is it incorrect?**

23 A. It could pass UDP traffic, as well.

24 **Q. Okay.**

25 **Is it correct to say that for connections**

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1 **that are redirected to a SOCKS server, that Aventail Connect**

2 **does not establish a direct connection between a client**

3 **computer and the target computer?**

4 MR. KING: Objection to form.

5 THE WITNESS: Yes, technically that is

6 correct.

7 **Q. BY MR. LIN: Is it correct to say that**

8 **Aventail Connect establishes a connection between the client**

9 **computer and the Aventail SOCKS server software?**

10 A. That is correct.

11 **Q. Is it correct to say that there's a separate**

12 **connection established between the Aventail SOCKS server**

13 **software and the target computer?**

14 A. That is correct.

15 **Q. Now, does Aventail Connect take any action in**

16 **the absence of an application requesting a connection?**

17 MR. KING: Objection, form.

18 THE WITNESS: Can you -- yeah. Maybe you

19 could clarify that to me.

20 **Q. BY MR. LIN: Okay.**

21 **What does Aventail Connect respond to?**

22 MR. KING: Objection, form.

23 THE WITNESS: It responds to -- in this --

24 circa this era, it responds to WinSock requests.

25 **Q. BY MR. LIN: And where are those WinSock**

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1 **requests -- where do those WinSock requests originate from?**

2 A. In the client application.

3 **Q. Okay.**

4 **So in the absence of a WinSock request from a**

5 **client application, does Aventail Connect do anything?**

6 A. No.

7 **Q. What precisely does Aventail Connect do in**

8 **response to a DNS request?**

9 A. It interprets the -- the type of request,

10 specifically looking for a name or an address --

11 And address could be a form of a name here.

12 **Q. Okay.**

13 A. -- that matches the configured redirection

14 rule set on the client. If it matches, it forwards the

15 request over a SOCKS connection to the SOCKS server to be

16 resolved.

17 **Q. Okay.**

18 **And does Aventail Connect do anything after**

19 **that in the absence of any request from the application?**

20 A. It caches the response as a handle, to be

21 used in a subsequent WinSock request at an unknown point in

22 time.

23 **Q. And could a subsequent WinSock request**

24 **include a connection request from the application?**

25 A. Yes.

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1 **Q. And what precisely does Aventail Connect do**

2 **in response to receiving a connection request?**

3 A. It looks to see if the IP address of the

4 target server matches a cached handle that it's resolved it

5 against its redirection set.

6 **Q. So could I direct your attention to**

7 **Exhibit 2. It's going to be Page 11. It's also Bates**

8 **stamped AVEN 00000015.**

9 A. You said Page 11?

10 **Q. Yes.**

11 A. Okay.

12 And what -- what was the rest of it?

13 **Q. I was also identifying the Bates number,**

14 **beginning in 015 at the beginning of the page.**

15 A. Yes, okay. Yes.

16 **Q. So Point No. 1, is that describing what**

17 **Aventail Connect does in response to a DNS request?**

18 A. Yeah, that -- it approximates it, yes.

19 **Q. So the first -- first point, in summary, says**

20 **that if the host name matches a local domain stream or does**

21 **not match a redirection rule, then Aventail Connect passes**

22 **the name resolution query through the IP -- TCP/IP stack,**

23 **correct?**

24 A. Yes, technically to whoever the next provider

25 is.

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1 **Q. And what is a local domain stream?**  
 2 A. I believe it's the DNS domain you're a member  
 3 of, that the client system is a member of.  
 4 **Q. And what does it mean to not match a**  
 5 **redirection rule?**  
 6 A. Ah. It means that the name that is being  
 7 looked up is not a name that has been programmed for  
 8 redirection into the VPN.  
 9 **Q. Why would you program a name for redirection**  
 10 **to the VPN?**  
 11 A. Because the system actually operates on names  
 12 rather than IP addresses. It treats IP addresses like  
 13 names.  
 14 For example, a host address or a subnet is  
 15 also a form of a name. A DNS server's a name -- I mean, a  
 16 DNS, either qualified fully or non, are names.  
 17 **Q. Okay.**  
 18 **And if you turn to the next page, Page 12.**  
 19 **Does the first bullet on Page 12 describe**  
 20 **what Aventail Connect does if a destination host name**  
 21 **matches a redirection rule?**  
 22 A. Yes, that's -- that's approximately what  
 23 happens.  
 24 **Q. And Aventail Connect creates a false DNS**  
 25 **entry, correct?**

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1 A. Yes.  
 2 **Q. And what is a false DNS entry?**  
 3 A. You know, I don't recall the exact structure.  
 4 It's a -- it's a tag that we were using to subsequently  
 5 recognize later on resolution.  
 6 **Q. Does a false DNS entry correspond to the**  
 7 **computer address of the target computer?**  
 8 A. I believe it is populated by the -- by it,  
 9 but it doesn't contain it at first.  
 10 Actually, let me clarify that a little more.  
 11 It's -- it's false in the sense that the server knows the  
 12 actual real address and that the proxy connection itself is  
 13 going to be bound to it, and so we create a -- kind of a  
 14 fake -- a fake address.  
 15 **Q. Okay.**  
 16 **But that doesn't necessarily include the**  
 17 **computer address of the target computer; is that correct?**  
 18 A. You know, my memory's a little faulty. I  
 19 don't believe it has the actual address of the target.  
 20 **Q. Okay. Thank you.**  
 21 **So let's say, for example, the application**  
 22 **has submitted a DNS request that matches a redirection rule.**  
 23 **What is the next step the application will take to initiate**  
 24 **a connection with the target computer?**  
 25 **And by "application" I'm talking about the**

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1 **WinSock application.**  
 2 A. Right.  
 3 So the -- this false entry, what happens  
 4 there is we've created essentially an alias IP address, and  
 5 I believe it's in the net2 namespace, which is not -- not  
 6 allocated so we kind of stole it. So --  
 7 **Q. Okay.**  
 8 A. So, in other words, we create -- they're  
 9 like NAT -- are you familiar with NAT?  
 10 **Q. I'm not.**  
 11 A. Okay.  
 12 So we create an address on the local side  
 13 that actually is going to end up becoming bound to the  
 14 remote address, right? Indirectly through the connection  
 15 going from Connect proxy to the server. The server knows  
 16 the real address associated with that -- that proxy -- it's  
 17 like a -- yeah. That TCP connection coming in from the  
 18 client's associated with remote address.  
 19 **Q. Mm-hmm.**  
 20 A. On the client side we associate a fake  
 21 address back to the application.  
 22 **Q. Okay.**  
 23 A. We resolve it.  
 24 When the application comes through and  
 25 initiates some form of a connect method, like Connect, let's

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1 say, for TCP, right, the address that they're connecting to  
 2 is one of our false addresses, that we recognize and then  
 3 look up in the table which T -- or who that's associated  
 4 with and place the SOCKS connection back to the server.  
 5 **Q. What do you mean, "who that's associated**  
 6 **with"?**  
 7 A. What -- what resolution that was associated  
 8 with.  
 9 **Q. What do you mean by "what resolution that was**  
 10 **associated with"?**  
 11 A. So if you -- if you translate a name, right,  
 12 that we resolve via the SOCKS server, we get an imaginary,  
 13 if you were, IP address that we've created for it, right?  
 14 We reassociate that and pass it back through to the SOCKS  
 15 server, who then looks up and says, Oh, this fake address on  
 16 the client side is really associated with this actual target  
 17 host.  
 18 **Q. So you're saying the DNS resolution takes**  
 19 **place at the SOCKS server; is that correct?**  
 20 A. Yes. The actual DNS resolution takes place  
 21 at the SOCKS server.  
 22 **Q. Is the false DNS entry associated with**  
 23 **anything that the SOCKS server might resolve?**  
 24 A. Yes.  
 25 **Q. And the purpose of that is to identify which**

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1 **SOCKS server will be used to redirect the connection; is**  
 2 **that correct?**  
 3 A. No. It's to identify what the target host is  
 4 we're supposed to proxy to.  
 5 **Q. So I believe you were in the process of**  
 6 **describing what happens when the application requests a**  
 7 **connection host, so you were saying that the application**  
 8 **tries to connect to this false address; is that correct?**  
 9 A. That's correct.  
 10 **Q. And then what happens after that?**  
 11 A. The Connect proxy intercepts that request,  
 12 realizes that it's an IP address that was fabricated for the  
 13 SOCKS server, and establishes the new SOCKS connection,  
 14 passes that through to the server. The server, of course,  
 15 now associates that with the real address.  
 16 Once that's all done, then we go ahead and  
 17 pass the traffic on the connect coming through, which in  
 18 TCP's case would be a TCP send.  
 19 **Q. But that would only be in response to the**  
 20 **application sending data; is that correct?**  
 21 A. That's correct.  
 22 **Q. Now, does the connection request contain a**  
 23 **domain name?**  
 24 A. It does not.  
 25 **Q. The application -- the connection request**

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1 **from the application includes a computer address; is that**  
 2 **correct?**  
 3 A. It does.  
 4 **Q. Does Aventail Connect respond to standard DNS**  
 5 **requests?**  
 6 A. Yes. It participates in the resolution of  
 7 standard DNS requests when those are in the re -- when their  
 8 name's in the redirected rule set.  
 9 **Q. Does Aventail Connect require the DNS request**  
 10 **from the application to be formatted in any particular way?**  
 11 A. No, any standard DNS is -- is allowed.  
 12 **Q. Does Aventail Connect modify the DNS software**  
 13 **that is part of the Microsoft operating system?**  
 14 A. It does not.  
 15 **Q. Does Aventail Connect remove any DNS software**  
 16 **that is part of the Microsoft operating system?**  
 17 A. It does not.  
 18 **Q. Does Aventail Connect disable the DNS**  
 19 **software that is part of the Microsoft operating system?**  
 20 A. It does not.  
 21 **Q. Is the DNS request a standard IETF DNS**  
 22 **request?**  
 23 A. Yes.  
 24 **Q. Does Aventail Connect's response to a DNS**  
 25 **request ever include initiating a TCP/IP connection to the**

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1 **target computer?**  
 2 A. No.  
 3 **Q. Does Aventail Connect's response to a DNS**  
 4 **request ever include initiating a VPN connection to the**  
 5 **target computer?**  
 6 A. Repeat that again.  
 7 **Q. Does Aventail Connect's response to a DNS**  
 8 **request ever include initiating a VPN connection to the**  
 9 **target computer?**  
 10 MR. KING: Objection, form.  
 11 THE WITNESS: No.  
 12 **Q. BY MR. LIN: Do the redirection rules**  
 13 **associated with Aventail Connect reside on the client**  
 14 **computer?**  
 15 A. Yes.  
 16 **Q. Does the use of Aventail Connect require a**  
 17 **user to configure the redirection rules on a client**  
 18 **computer?**  
 19 MR. KING: Objection, form.  
 20 THE WITNESS: It requires an administrator or  
 21 a user to.  
 22 **Q. BY MR. LIN: Without a user configuring the**  
 23 **redirection rules, will Aventail Connect be connected?**  
 24 A. It will be passive.  
 25 **Q. Passive.**

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1 **So if an application request matches a**  
 2 **redirection rule, is a new connection to the SOCKS server**  
 3 **created?**  
 4 A. Can you repeat that? I'm -- you're so  
 5 specific.  
 6 **Q. Sorry.**  
 7 A. It's okay.  
 8 **Q. If an application request matches a**  
 9 **redirection rule, is a new connection to the SOCKS server**  
 10 **created?**  
 11 MR. KING: Objection, form.  
 12 THE WITNESS: Yes.  
 13 **Q. BY MR. LIN: So for each new application**  
 14 **request a separate connection is made to the SOCKS server;**  
 15 **is that correct?**  
 16 A. Correct.  
 17 **Q. After Aventail Connect makes a connection to**  
 18 **the SOCKS server, does the SOCKS server then make a new**  
 19 **connection to the remote host?**  
 20 A. Yes.  
 21 **Q. If Application A sends data on a specific**  
 22 **connection to the SOCKS server, then will the data always go**  
 23 **on -- to the same remote host?**  
 24 A. Application A.  
 25 MR. KING: Objection, form.

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1 THE WITNESS: Repeat that, please.  
 2 **Q. BY MR. LIN: If an application sends data on**  
 3 **a specific connection to the SOCKS server, will the data**  
 4 **always go to the same remote host?**  
 5 A. Yes.  
 6 **Q. Can it ever go anywhere else?**  
 7 A. No.  
 8 **Q. If another application -- let's call it**  
 9 **Application --**  
 10 A. Let me -- I need to clarify that. Can a  
 11 UDP --  
 12 No, no. That's true. Never mind. The  
 13 answer was correct.  
 14 **Q. Okay.**  
 15 **If another application, let's call it**  
 16 **Application B, sends data on another specific connection to**  
 17 **the SOCKS server, will that data always go to the same**  
 18 **remote host?**  
 19 A. I believe so.  
 20 Let -- let me see if I got that right. So if  
 21 the application initiates a connection with a different  
 22 target --  
 23 **Q. If a different application.**  
 24 A. If a different -- even the same, but -- if an  
 25 application initiates with a different target, will it

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1 always go over the same SOCKS connection and the associated  
 2 same proxy connection to that --  
 3 **Q. Go ahead, answer that question.**  
 4 A. Yes.  
 5 **Q. So if you have a second application that has**  
 6 **another specific connection to a SOCKS server, and it's**  
 7 **always -- it's routing data to a remote host, will the data**  
 8 **from Application B always go to the same remote host?**  
 9 A. To Target B?  
 10 **Q. Yeah.**  
 11 A. Yes.  
 12 **Q. Okay.**  
 13 **So would you agree with me that there's no**  
 14 **routing occurring -- occurring in the SOCKS server?**  
 15 A. Yes.  
 16 **Q. Does Aventail Connect require any special**  
 17 **functionality on the target computer?**  
 18 A. No.  
 19 **Q. Are there any specific capabilities that the**  
 20 **target computer must have?**  
 21 MR. KING: Objection, form.  
 22 THE WITNESS: None that I'm aware of.  
 23 **Q. BY MR. LIN: Does Aventail Connect require**  
 24 **the target computer to be able to perform encryption?**  
 25 A. No.

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1 **Q. Does Aventail Connect require the target**  
 2 **computer to be able to perform decryption?**  
 3 A. No.  
 4 **Q. Does Aventail Connect require the target**  
 5 **computer to be able to form part of a VPN?**  
 6 A. No.  
 7 **Q. Are you familiar with the concept of a**  
 8 **tunnel?**  
 9 A. Yes.  
 10 **Q. And what is your understanding of what a**  
 11 **tunnel is?**  
 12 A. A tunnel is used in different contexts. In a  
 13 routed context, it's used to encapsulate packets that are  
 14 going through to be routed. In a proxy context, it's  
 15 designed to encapsulate data one to one with a target.  
 16 **Q. And we've already established that Aventail**  
 17 **is not in a routed context; is that correct?**  
 18 A. That is correct, with Connect and SOCKS.  
 19 **Q. Does Aventail Connect tunnel IP packets**  
 20 **within IP packets?**  
 21 A. Yes.  
 22 **Q. Can you explain that?**  
 23 A. The SOCKS encapsulation is flowing over  
 24 TCP/IP. Then the application traffic, which also has IP,  
 25 could be TCP or UDP, is being transmitted as packets

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1 encapsulated within SOCKS. So IP in IP is true.  
 2 **Q. Does Aventail Connect tunnel network layer --**  
 3 A. You know what, let me -- actually, let --  
 4 hold on a second. Let me think about that a little more.  
 5 No, I answered that wrong. I'm sorry. I was  
 6 thinking of tunneling technology.  
 7 **Q. Can I ask that question again?**  
 8 A. Yes, please answer it again -- ask it again.  
 9 **Q. Does Aventail Connect tunnel IP packets**  
 10 **within IP packets?**  
 11 A. No.  
 12 **Q. Does Aventail Connect tunnel network layer**  
 13 **packets within network layer packets?**  
 14 A. No.  
 15 MS. BUCKNER: Counsel, can I just clarify  
 16 exactly what you're talking about in terms of the product  
 17 that you're asking about currently?  
 18 MR. LIN: We're talking about Aventail  
 19 Connect.  
 20 MS. BUCKNER: And the version is?  
 21 MR. LIN: Version 3.1.  
 22 MS. BUCKNER: Okay. Because currently  
 23 SonicWALL has a product which is called the Tunnel --  
 24 Aventail Tunnel.  
 25 MR. LIN: Okay.

(Pages 117 to 120)

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1 MS. BUCKNER: I don't even know if we're  
 2 branding it Aventail Connect Tunnel now, but I just want to  
 3 make sure that we're not currently talking about SonicWALL's  
 4 product, we're talking about the previous --  
 5 MR. LIN: Right.  
 6 MS. BUCKNER: And would you restate, I guess,  
 7 the version that you're asking about specifically?  
 8 MR. LIN: Sure. We're asking about Aventail  
 9 Connect Version 3.1.  
 10 MS. BUCKNER: Thank you.  
 11 MR. LIN: Thanks for the clarification.  
 12 Appreciate it.  
 13 **Q. And you understand that we've been talking**  
 14 **about Aventail Connect Version 3.1; is that correct?**  
 15 A. Yes. I -- I was thinking of one of our other  
 16 products which does that, but that's the reason I had to  
 17 retract that.  
 18 **Q. Thank you.**  
 19 **In the Aventail version -- in Aventail**  
 20 **Connect Version 3.1, what is being encapsulated within the**  
 21 **packets?**  
 22 A. The payload of the application traffic.  
 23 **Q. Is there anything else?**  
 24 A. Well, and it's also framed with, you know,  
 25 the encryption.

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1 **Q. So the payload packet has encryption**  
 2 **information and the actual encrypted content; is that**  
 3 **correct?**  
 4 MR. KING: Objection, form.  
 5 THE WITNESS: Yes. The payload is  
 6 encapsulated in SOCKS, and within SOCKS encryption  
 7 optionally, although typically employed, is also present  
 8 with, you know, the necessary cryptography wrapper.  
 9 **Q. BY MR. LIN: So an Aventail connection with**  
 10 **the SOCKS server is not always encrypted; is that correct?**  
 11 A. It's possible to configure it for non --  
 12 nonencryption.  
 13 **Q. So it's correct that the connections between**  
 14 **Aventail Connect and a SOCKS server are not always**  
 15 **encrypted?**  
 16 A. That is correct.  
 17 **Q. Do all connections made with Aventail Connect**  
 18 **via the SOCKS server require authorization?**  
 19 A. Yes.  
 20 (Discussion off the record.)  
 21 **Q. BY MR. LIN: Actually, let me just turn back**  
 22 **to something I was asking you about earlier, and was about**  
 23 **the tunneling in Aventail Connect Version 3.1. Now, in the**  
 24 **packets that are being sent between Aventail Connect and**  
 25 **SOCKS, is the payload -- excuse me -- is the packet that's**

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1 **being encapsulated the same as the packet that's being**  
 2 **encapsulated between the SOCKS server and the target**  
 3 **computer?**  
 4 MR. KING: Objection, form.  
 5 THE WITNESS: The application payload is the  
 6 same.  
 7 **Q. BY MR. LIN: Is -- if encryption is used**  
 8 **between the Aventail Connect software and the SOCKS server,**  
 9 **is the information being transmitted between the SOCKS**  
 10 **server and the target computer also encrypted?**  
 11 A. It's -- it's the -- whatever the plain text  
 12 of the data was is being transmitted.  
 13 **Q. So it's been encrypted; is that correct?**  
 14 A. It's -- yes. The VPN decryption is done at  
 15 the SOCKS server.  
 16 **Q. So the payload between Aventail Connect and**  
 17 **the SOCKS server is not the same as the payload between the**  
 18 **SOCKS server and the remote host; is that correct?**  
 19 A. The TCP payload is not the same between the  
 20 SOCKS server and the SOCKS client. The application payload  
 21 that's encapsulated inside it is encrypted normally.  
 22 **Q. This is between the SOCKS client and the**  
 23 **SOCKS server?**  
 24 A. Correct.  
 25 **Q. But it's not encrypted between the SOCKS**

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1 **server and the remote host; is that correct?**  
 2 A. Not unless the application encrypted it.  
 3 **Q. Okay.**  
 4 **What happens to the source and destination**  
 5 **information between the two connections? And by "two**  
 6 **connections" I mean between the SOCKS client, the SOCKS**  
 7 **server, and between the SOCKS server and the remote host.**  
 8 A. At the network layer, at the IP layer?  
 9 **Q. Yes.**  
 10 A. The source and destination IP addresses are  
 11 the actual IP address of the client, the real adapter  
 12 address, whichever it's gone out on --  
 13 **Q. Mm-hmm.**  
 14 A. -- and the IP address that the SOCKS client  
 15 contacted the SOCKS server on.  
 16 **Q. Okay.**  
 17 A. And between the SOCKS server and the target  
 18 server, it is the IP address of the adapter that we are  
 19 initiating from on the SOCKS server and the IP address of  
 20 the target server.  
 21 **Q. Okay. Thank you.**  
 22 **So I'd like to --**  
 23 **Is the Aventail Connect source information**  
 24 **transmitted to the target?**  
 25 A. No.

(Pages 121 to 124)

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<p>1 MR. KING: Objection, form.</p> <p>2 <b>Q. BY MR. LIN: So I believe earlier you</b></p> <p>3 <b>testified that all connections made with Aventail Connect</b></p> <p>4 <b>via the SOCKS server require authorization; is that correct?</b></p> <p>5 A. That is correct.</p> <p>6 <b>Q. Can you please turn to Exhibit 2, Bates</b></p> <p>7 <b>No. AVEN 0000052.</b></p> <p>8 <b>Actually, I may have given you the wrong</b></p> <p>9 <b>page.</b></p> <p>10 <b>Right. So that's Page 48 of Exhibit 2,</b></p> <p>11 <b>correct?</b></p> <p>12 A. Yes, administrator's guide 48.</p> <p>13 <b>Q. Do you see the table at the very top?</b></p> <p>14 A. Yes.</p> <p>15 <b>Q. Do you see in the second row, second column,</b></p> <p>16 <b>it states, "&lt;Null Auth&gt; indicates no authentication module</b></p> <p>17 <b>will be used"?</b></p> <p>18 A. Yes.</p> <p>19 <b>Q. Is this consistent with your testimony that</b></p> <p>20 <b>all connections made with Aventail Connect via the SOCKS</b></p> <p>21 <b>server require authorization?</b></p> <p>22 A. Yes.</p> <p>23 <b>Q. And how -- how is this consistent with what's</b></p> <p>24 <b>shown on Page 48?</b></p> <p>25 A. This is authentication. Authentication is</p>	<p>1 A. Oh, wait a second. This is the --</p> <p>2 Oh, it won't be in this document.</p> <p>3 <b>Q. Is there another -- would it be in Exhibit 3?</b></p> <p>4 A. Yes.</p> <p>5 <b>Q. Can you show me where in Exhibit 3 access</b></p> <p>6 <b>controls are discussed?</b></p> <p>7 A. Yeah, the first example's going to be on</p> <p>8 AVEN 00000143. There's a row that says "Deny, Anywhere,</p> <p>9 Anywhere, Anyone, Times Any." That would be an access</p> <p>10 control rule.</p> <p>11 That would be a pretty Draconian one</p> <p>12 but . . .</p> <p>13 <b>Q. Okay. Thank you.</b></p> <p>14 <b>In the context of Aventail Connect</b></p> <p>15 <b>Version 3.1, what is a channel?</b></p> <p>16 A. Where did you see that?</p> <p>17 <b>Q. It's not in the documents. That's just the</b></p> <p>18 <b>question.</b></p> <p>19 A. My understanding of the channel would be the</p> <p>20 TCP connection, but that -- that's how I've heard of it</p> <p>21 referred to.</p> <p>22 <b>Q. Is the TCP connection between the client and</b></p> <p>23 <b>the SOCKS server?</b></p> <p>24 A. Yes.</p> <p>25 <b>Q. In this context and based on your</b></p>
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<p>1 authenticating identity. Authorization is authorizing it to</p> <p>2 pass to a target.</p> <p>3 <b>Q. And how does -- how does Aventail Connect</b></p> <p>4 <b>require authorization to connect to the target?</b></p> <p>5 A. The SOCKS server enforces the authorization</p> <p>6 through access control rules.</p> <p>7 MS. BUCKNER: I think there might be some</p> <p>8 movement now where we might be going into some SonicWALL</p> <p>9 confidential information.</p> <p>10 MR. LIN: Okay.</p> <p>11 MS. BUCKNER: So I've just appraised Gary of</p> <p>12 noting to me when there are pieces that may be in our</p> <p>13 current product.</p> <p>14 MR. LIN: Okay.</p> <p>15 MS. BUCKNER: And he's just notified me that</p> <p>16 as we're moving forward --</p> <p>17 THE WITNESS: We might be.</p> <p>18 MS. BUCKNER: -- this might be a time where</p> <p>19 that may be at issue.</p> <p>20 MR. LIN: Okay. I understand.</p> <p>21 I'll try to restrict my questions to the</p> <p>22 document.</p> <p>23 MS. BUCKNER: Thank you.</p> <p>24 <b>Q. BY MR. LIN: Can you show me where in this</b></p> <p>25 <b>document the access controls are described?</b></p>	<p>1 <b>understanding, is a channel a network?</b></p> <p>2 A. No, it's a secure pathway over a network.</p> <p>3 <b>Q. Okay.</b></p> <p>4 <b>And you understand that different people</b></p> <p>5 <b>might have different interpretations of what a VPN is?</b></p> <p>6 A. Yes.</p> <p>7 <b>Q. Do you understand that different people might</b></p> <p>8 <b>have different interpretations of what a tunnel is?</b></p> <p>9 A. Yes.</p> <p>10 <b>Q. And do you understand that your definition of</b></p> <p>11 <b>a VPN might be different than someone else's definition of a</b></p> <p>12 <b>VPN?</b></p> <p>13 A. Yes.</p> <p>14 <b>Q. Do you understand that your definition of a</b></p> <p>15 <b>tunnel might be different from someone else's definition of</b></p> <p>16 <b>a tunnel?</b></p> <p>17 A. Yes.</p> <p>18 <b>Q. Okay.</b></p> <p>19 <b>If I could have you turn back to Exhibit 2.</b></p> <p>20 <b>If you could flip to Bates No. AVEN 0000120.</b></p> <p>21 A. 5120?</p> <p>22 <b>Q. I'm sorry. 120. 0000120.</b></p> <p>23 A. Okay.</p> <p>24 Yes, I'm there.</p> <p>25 <b>Q. Do you see the definition of "Virtual Private</b></p>

(Pages 125 to 128)



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1 **Network" at the top?**  
 2 A. I do.  
 3 **Q. Is this Aventail's definition of a virtual**  
 4 **private network?**  
 5 A. It is.  
 6 **Q. Is this also your definition of a virtual**  
 7 **private network?**  
 8 A. Yes.  
 9 Can I clarify that once?  
 10 **Q. Yeah, please.**  
 11 A. Yes, with respect to this -- with Connect  
 12 V3.1.  
 13 **Q. So you think this definition of VPN on**  
 14 **Page 116 of Exhibit 2 is a correct definition of VPN with**  
 15 **respect to this Aventail Connect 3.1?**  
 16 A. I do.  
 17 **Q. Do you believe that is an accurate definition**  
 18 **of VPN for other products other than Aventail Connect 3.1?**  
 19 A. In principle, yes.  
 20 **Q. Now, you testified earlier --**  
 21 **Strike that last question.**  
 22 **Is your previous testimony about what a**  
 23 **channel is consistent with "channel" as it's used in the**  
 24 **definition of VPN on Page 116 of Exhibit 2?**  
 25 A. I believe it is.

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1 **Q. Is the DNS server part of the Aventail**  
 2 **product line?**  
 3 A. No.  
 4 **Q. Is the DNS mentioned in the Aventail Connect**  
 5 **documents, such as Exhibit 2 and Exhibit 3, a DNS server**  
 6 **that's produced by Aventail?**  
 7 A. No.  
 8 **Q. Is the DNS that's mentioned in Exhibits 2 and**  
 9 **3 simply any standard DNS service?**  
 10 A. Yes, with respect to meeting IETF standard  
 11 protocol.  
 12 **Q. Yes.**  
 13 **Is a DNS proxy server part of the Aventail**  
 14 **product line?**  
 15 MR. KING: Objection, form.  
 16 THE WITNESS: Let me think of that.  
 17 No, not a general-purpose DNS proxy server.  
 18 **Q. BY MR. LIN: Is it reasonable to identify**  
 19 **some part of Aventail Connect as a DNS proxy server?**  
 20 A. Yes.  
 21 **Q. And which part would that be?**  
 22 A. The part that translates them into fake  
 23 entries.  
 24 **Q. And this runs on the client computer; is that**  
 25 **correct?**

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1 A. Correct.  
 2 **Q. It does not run on the target computer?**  
 3 A. It does not.  
 4 **Q. And it does not run on the SOCKS server**  
 5 **computer; is that correct?**  
 6 A. Well, actually, I can't ask for the target  
 7 computer, but -- it does not run on the SOCKS server.  
 8 **Q. And the redirection rules reside on the DNS**  
 9 **proxy server; is that correct?**  
 10 A. They reside on the client.  
 11 **Q. Okay.**  
 12 **And which is --**  
 13 A. The -- they reside as a component of Connect.  
 14 **Q. Is the DNS proxy server functionality**  
 15 **separate from the redirection rules?**  
 16 A. You're referring to the DNS resolution  
 17 Connect does?  
 18 **Q. Yes?**  
 19 MR. KING: Objection, form.  
 20 THE WITNESS: No, the redirection rules  
 21 are -- are part of the spoof translations that it operates  
 22 on.  
 23 **Q. BY MR. LIN: And, sir, what is your**  
 24 **definition of a tunnel in the context of Aventail Connect**  
 25 **Version 3.1?**

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1 A. It's -- it's a form of a channel.  
 2 **Q. Any particular --**  
 3 A. It's a one-to-one mapping of an application  
 4 connection to a proxied connection to a target server.  
 5 **Q. Okay.**  
 6 **Is it possible for an application to send a**  
 7 **nonstandard domain name to Aventail Connect?**  
 8 A. Yes.  
 9 **Q. And how does Aventail Connect respond to a**  
 10 **nonstandard domain name?**  
 11 A. It looks to see if it's a WINS name, which is  
 12 a Microsoft proprietary resolver, and it attempts to resolve  
 13 it via WINS.  
 14 **Q. Okay.**  
 15 **Aside from a WINS name, can Aventail Connect**  
 16 **respond to any other nonstandard domain name?**  
 17 A. No.  
 18 **Q. And can you explain further what Aventail**  
 19 **Connect Version 3.1 does with a WINS name?**  
 20 **Maybe we should start, what is a WINS name?**  
 21 A. Microsoft has its own proprietary name  
 22 service, called WINS. It's integrated with their networking  
 23 system. And the WINS name is forwarded to the SOCKS server,  
 24 just like a DNS name would be. And the SOCKS server is the  
 25 one who tries to discriminate it as being WINS.

(Pages 129 to 132)

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1 **Q. So in what context would an application use a**  
 2 **WINS request?**  
 3 A. A file share.  
 4 **Q. Is there anything else?**  
 5 A. Mostly it's Microsoft applications and older  
 6 ones that use it. I'm not familiar with all of them.  
 7 **Q. Okay.**  
 8 **Does the fact that Aventail Connect is**  
 9 **processing a WINS name mean that Aventail Connect is going**  
 10 **to create a secure connection to the SOCKS server?**  
 11 A. Yes.  
 12 **Q. Is that set forth in a redirection rule?**  
 13 A. WINS can be part of a redirection rule.  
 14 **Q. Is it necessarily part of a redirection rule?**  
 15 A. It doesn't have to be.  
 16 **Q. So WINS could be a request on the local**  
 17 **domain; is that correct?**  
 18 A. Correct.  
 19 **Q. And in that context, the connection is not**  
 20 **proxied by the SOCKS server; is that correct?**  
 21 A. That's correct.  
 22 **Q. Okay.**  
 23 **Could we go off the record, please.**  
 24 THE VIDEOGRAPHER: Going off record. The  
 25 time is 2:41 p.m.

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1 (Discussion off the record.)  
 2 (Short recess.)  
 3 THE VIDEOGRAPHER: This marks the beginning  
 4 of Tape No. 3. Back on the record. The time is 2:56 p.m.  
 5 MS. BUCKNER: Counsel, I wanted to state for  
 6 the record that the source code was provided to defendant's  
 7 counsel in response to the subpoena just this week, at the  
 8 same time that plaintiff's counsel did receive a carbon copy  
 9 of the letter that was sent to defendant's counsel  
 10 requesting him to share the source code with plaintiff's  
 11 counsel.  
 12 MR. LIN: Thank you.  
 13 MS. BUCKNER: Mm-hmm.  
 14 **Q. BY MR. LIN: Now, if I told you that a VPN**  
 15 **required routing, would Aventail Connect 3.1 still be part**  
 16 **of a VPN?**  
 17 MR. KING: Objection, form.  
 18 THE WITNESS: Boy.  
 19 Routing -- where is the routing done?  
 20 **Q. BY MR. LIN: The routing is done by the SOCKS**  
 21 **server.**  
 22 A. Yes.  
 23 **Q. You testified earlier that the SOCKS server**  
 24 **did not route connections from Aventail Connect. Do you**  
 25 **recall that testimony?**

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1 A. I do. The reason I said yes is that we have  
 2 routing on the server, it can route -- I mean, we can  
 3 establish routes for the outbound connection to the target  
 4 using routing. It's not routing packets through the VPN.  
 5 **Q. So your testimony is that the SOCKS server**  
 6 **does not route packets through VPN?**  
 7 A. That is correct.  
 8 **Q. So if the V -- definition of VPN stated that**  
 9 **packets need to be routed through the VPN, would Aventail**  
 10 **Connect 3.1 still form part of a VPN?**  
 11 A. No.  
 12 **Q. And throughout your testimony we've been**  
 13 **talking about Aventail Connect 3.1. I also understand that**  
 14 **Exhibit 2 covers Aventail Connect Version 2.6.**  
 15 A. Yes.  
 16 **Q. What are the key distinctions between**  
 17 **Aventail Version -- Aventail Connect Version 2.6 and**  
 18 **Aventail Connect Version 3.1?**  
 19 A. I do not know that.  
 20 **Q. Would you turn to Exhibit 2, Page 10.**  
 21 A. Yes.  
 22 **Q. Do you see the third paragraph from the**  
 23 **bottom?**  
 24 A. Third, "For those platforms"?  
 25 **Q. Excuse me. Third paragraph from the bottom,**

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1 **where it says, "The Aventail Connect 2.6."**  
 2 A. Oh, excuse me, yeah. I didn't notice it was  
 3 a paragraph.  
 4 Yes.  
 5 **Q. Does that refresh your recollection as to**  
 6 **what the differences between Aventail Connect 2.6 and**  
 7 **Aventail Connect 3.1 might be?**  
 8 A. Yes, I know what that means. So I -- if I  
 9 see that I -- I would -- I'd have to speculate, but I -- I  
 10 know what MultiProxy means.  
 11 **Q. Okay.**  
 12 **So is it your testimony that what you**  
 13 **testified to earlier would also apply to Aventail Connect**  
 14 **Version 2.6?**  
 15 A. I believe so.  
 16 **Q. Okay.**  
 17 **Can you also look at Page 11 for me.**  
 18 A. Yes.  
 19 **Q. Do you see the third column of the table at**  
 20 **the top, it says "Aventail Connect Version Installed"?**  
 21 A. Yes.  
 22 **Q. And Aventail Connect 2.6 is applied to**  
 23 **operating systems that support WinSock 1.1.**  
 24 A. Yes.  
 25 **Q. Does that -- does that refresh your**

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1 recollection as to any other differences there might be  
 2 between Aventail Connect 3.1 and 2.6?  
 3 A. Well, I don't know the limitations of the  
 4 WinSock 1.1. I'm not as familiar with WinSock 1.1 as  
 5 WinSock 2. I can't answer that.  
 6 **Q. Okay.**  
 7 **Do you know whether WinSock 1.1 also supports**  
 8 **encryption?**  
 9 A. Well, the Win -- the WinSock library itself  
 10 doesn't have a notion of encryption. 1.1 or 2.0.  
 11 **Q. Okay.**  
 12 **So while you were working at Novell with --**  
 13 **and you were experimenting with some of the Aventail Connect**  
 14 **products, did you ever use WINS names as part of your**  
 15 **testing?**  
 16 A. I don't believe so.  
 17 **Q. And can I ask you to turn to Exhibit 4,**  
 18 **please.**  
 19 A. Yes.  
 20 **Q. Did you prepare this document?**  
 21 A. I did not.  
 22 **Q. Have you seen this document before?**  
 23 A. Yes.  
 24 **Q. When is the first time you saw this document?**  
 25 A. When we were acquiring information for the

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1 subpoena.  
 2 **Q. Was that in 2007?**  
 3 A. Yes.  
 4 **Q. So is it your testimony that you had not seen**  
 5 **this document prior to 2007?**  
 6 A. I may have seen it earlier, as -- but, you  
 7 know, I don't -- I don't really recall.  
 8 **Q. Do you have any personal knowledge as to who**  
 9 **maintained custody of this document from the time it was**  
 10 **created until the time you joined Aventail?**  
 11 A. I only know who had it when I joined.  
 12 **Q. So you had no personal knowledge as to who**  
 13 **maintained custody of this document from when it was**  
 14 **created --**  
 15 A. I do not.  
 16 **Q. -- until it was -- until you joined Aventail;**  
 17 **is that correct?**  
 18 A. No.  
 19 **Q. Okay.**  
 20 **Do you have any personal knowledge as to when**  
 21 **this document was published?**  
 22 A. I do not.  
 23 **Q. Can you personally vouch for the accuracy of**  
 24 **Exhibit 4?**  
 25 A. Not completely by myself.

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1 **Q. Did you undertake to ensure that Exhibit 4**  
 2 **was complete and accurate?**  
 3 A. Yes.  
 4 **Q. And what did you do?**  
 5 A. We used the same strategy as with the other  
 6 two. We had a developer go through it, match it up.  
 7 I don't know all the criteria he used.  
 8 **Q. Okay.**  
 9 **Did you review Exhibit 4 on a page-by-page**  
 10 **basis and compare the features discussed therein with the**  
 11 **source code?**  
 12 A. I -- I did not. I sampled it only.  
 13 **Q. And how long did you undertake to compare the**  
 14 **contents of Exhibit 4 with what's in the source code?**  
 15 A. This was less than a day.  
 16 **Q. Okay.**  
 17 **And do you have any personal knowledge of any**  
 18 **sales of the product described in Exhibit 4?**  
 19 A. I don't. It's the same question as  
 20 Exhibit 5.  
 21 **Q. Okay.**  
 22 A. I mean, 2. Excuse me.  
 23 **Q. So is it your testimony that Exhibit 4**  
 24 **corresponds to the same product as Exhibit 2?**  
 25 A. To the best of my knowledge.

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1 **Q. Okay.**  
 2 **I'd direct your attention to Exhibit 6,**  
 3 **please.**  
 4 A. Yes.  
 5 **Q. And Exhibit 6 is the same as Exhibit 7; is**  
 6 **that correct?**  
 7 A. I -- I believe so. I can't do a diff here  
 8 but it looks like it is.  
 9 **Q. Okay.**  
 10 **Have you seen this document before today,**  
 11 **Exhibit 6?**  
 12 A. I -- I might have. I don't -- I don't recall  
 13 if we went through this particular part of the source.  
 14 **Q. Did you write the source code that is in**  
 15 **Exhibit 6?**  
 16 A. No, I did not.  
 17 **Q. Do you know what language the source code is**  
 18 **written in?**  
 19 A. Yes, C++.  
 20 **Q. Do you have any experience developing C++**  
 21 **code?**  
 22 A. I do.  
 23 **Q. So you can read C++ code?**  
 24 A. Not as well as I used to. Still somewhat.  
 25 **Q. When was the last time that you personally**

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1 developed C++ code?  
 2 A. 2001.  
 3 **Q. Did you develop any source code for Aventail**  
 4 **Connect Version 3.1 prior to February 15th, 2000?**  
 5 A. No.  
 6 **Q. And earlier we were talking about the concept**  
 7 **of a tunnel. Does a tunnel exist between the SOCKS server**  
 8 **and the target computer?**  
 9 A. No.  
 10 MR. LIN: Okay. That's all I have.  
 11 MR. KING: All right. Let me ask a few  
 12 follow-up questions, then.  
 13 THE WITNESS: Okay.  
 14  
 15 FURTHER EXAMINATION  
 16 BY MR. KING:  
 17 **Q. I want to talk to you for a few minutes about**  
 18 **your time at Novell.**  
 19 A. Okay.  
 20 **Q. Do you recall testifying that information**  
 21 **exchanged between Novell and Aventail was done pursuant to**  
 22 **nondisclosure agreements?**  
 23 A. I was not a party to -- to the NDAs, but I  
 24 believe they were in place, as we clearly were conveying  
 25 confidential information.

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1 **Q. Okay.**  
 2 **Did Aventail -- how did you obtain a copy**  
 3 **of -- of the Aventail -- the Aventail product that worked**  
 4 **with WinSock 2?**  
 5 A. We exchanged our products directly with each  
 6 other, development organization to development organization.  
 7 **Q. How -- can you tell me more? How did that**  
 8 **work?**  
 9 A. I think they probably came on CDs, you know,  
 10 that they would ship to us. I don't -- I'm trying to  
 11 remember. I don't think we were transferring them over the  
 12 Internet in that day, but we would take interim -- you know,  
 13 interim builds.  
 14 I was not part of QA itself so I'm not sure  
 15 what -- what happened after we thought it worked.  
 16 **Q. Did you -- so did you personally use these --**  
 17 **these interim builds that arrived on CD?**  
 18 A. I used -- yes, occasionally.  
 19 **Q. Okay.**  
 20 A. I mean, this wasn't a primary objective of  
 21 mine, but yes. I was part of working with Aventail.  
 22 **Q. Did you receive final builds from Aventail of**  
 23 **their product?**  
 24 **Strike that.**  
 25 **Let me ask you a question. Did you receive**

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1 **the -- the Aventail -- the final build of the Aventail**  
 2 **product that was com -- that was capable of using WinSock 2?**  
 3 A. No, I don't -- I actually don't remember.  
 4 MR. LIN: Object to form.  
 5 **Q. BY MR. KING: Okay.**  
 6 **When Aventail provided you with these interim**  
 7 **builds, were -- was Novell supposed to keep the interim**  
 8 **build confidential?**  
 9 A. Yes.  
 10 **Q. Do you have any sense as to when the first**  
 11 **Aventail product that was -- Aventail VPN product that was**  
 12 **compatible with WinSock 2 was actually released to the**  
 13 **public?**  
 14 MR. LIN: Object to form.  
 15 THE WITNESS: Compatible with WinSock 2.  
 16 WinSock 2 is a client --  
 17 Oh. Any Novell product or with Aventail?  
 18 **Q. BY MR. KING: Let me ask the question again.**  
 19 A. Okay.  
 20 **Q. This is sort of -- this is -- part of the**  
 21 **problem is that it's -- it's a little bit clunky to refer to**  
 22 **the first Aventail product that was compatible with**  
 23 **WinSock 2, so maybe --**  
 24 **Let me ask you a question. Do you know the**  
 25 **name of the first Aventail product that was compatible with**

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1 **WinSock 2?**  
 2 MR. LIN: Object to form.  
 3 THE WITNESS: I don't recall if it was 2.6 or  
 4 3.1.  
 5 **Q. BY MR. KING: Okay.**  
 6 **Was it one of those two products, though?**  
 7 MR. LIN: Object to form.  
 8 THE WITNESS: Well, we were compatible in  
 9 1997 at an interoperable level with some version of  
 10 Aventail.  
 11 **Q. BY MR. KING: Okay.**  
 12 A. I don't know which one.  
 13 **Q. Okay.**  
 14 **Was it public knowledge that Aventail --**  
 15 **Strike that.**  
 16 **Was it public knowledge in 1999 that Aventail**  
 17 **was building a Win -- WinSock 2 capable VPN client?**  
 18 MR. LIN: Object to form.  
 19 THE WITNESS: I -- I believe that it was. I  
 20 believe it was available, you know, public -- publicly  
 21 disclosed on their Web sites, but I -- I cannot, you know,  
 22 attest with absolute certainty that's true.  
 23 **Q. BY MR. KING: Why do you -- why do you**  
 24 **believe that it was publicly disclosed on their Web site?**  
 25 MR. LIN: Object to form.

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1 THE WITNESS: In working with our biz dev  
 2 people. I mean, you know, I don't -- I just recall it being  
 3 like a product that they were going out and co -- well,  
 4 doing whatever reference things with.  
 5 **Q. BY MR. KING: When you -- you're talking**  
 6 **about your interactions with your Novell biz dev people,**  
 7 **right?**  
 8 A. Yes.  
 9 MR. LIN: Objection. Leading.  
 10 **Q. BY MR. KING: Do you recall -- I'm going to**  
 11 **change subjects here for a second. Do you recall testifying**  
 12 **that Aventail Connect 3.1 does not create a direct**  
 13 **connection between the client and the ultimate target**  
 14 **computer?**  
 15 A. I do.  
 16 **Q. What would you call -- if it's not a direct**  
 17 **connection, what would you call the link between the client**  
 18 **computer and the target computer?**  
 19 MR. LIN: Objection. Leading, and form.  
 20 THE WITNESS: It's an indirect through a  
 21 proxy.  
 22 **Q. BY MR. KING: Can you describe that indirect**  
 23 **link through a proxy for me?**  
 24 MR. LIN: Objection to form.  
 25 THE WITNESS: Calls an intermediate system,

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1 who in turn calls the final target, and then links the two  
 2 together through a forwarding relationship.  
 3 **Q. BY MR. KING: Okay.**  
 4 **And is the VP -- is the SOCKS server the**  
 5 **intermediate system that you just referred to?**  
 6 A. Yes.  
 7 **Q. Where does the VPN -- where is the VPN**  
 8 **created in this scenario?**  
 9 MR. LIN: Object to form.  
 10 THE WITNESS: It is created between the  
 11 SOCKS -- I mean, the Connect client and the Connect server.  
 12 **Q. BY MR. KING: So logically there is a VPN**  
 13 **that sits between the Connect client and the target**  
 14 **computer, even though the VPN doesn't actually connect to**  
 15 **the target computer; is that right?**  
 16 MR. LIN: Objection. Leading and form.  
 17 THE WITNESS: Yes, that is true.  
 18 **Q. BY MR. KING: Let's take a look at Exhibit 2,**  
 19 **the very last page, where the glossary resides.**  
 20 A. Yes.  
 21 **Q. It's Page 25 of -- of the glossary.**  
 22 **Actually, you know what, I think I have the**  
 23 **wrong document. Let's take a look at Page 25 --**  
 24 A. Of which --  
 25 MR. LIN: It's also in this document.

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1 MR. KING: All right. I see my problem.  
 2 **Q. It's Page 116 of Exhibit 2.**  
 3 A. Okay. Thank you.  
 4 **Q. Too many glossaries in this world.**  
 5 **Do you see that -- the definition of VPN as**  
 6 **"a secure channel used to transmit data over a public**  
 7 **network"?**  
 8 A. I do.  
 9 **Q. Is any secure channel that transmits data**  
 10 **over a public network a VPN?**  
 11 A. No.  
 12 **Q. Why not?**  
 13 A. I would say that one is -- that is terminated  
 14 by the two end points on the public network as the ultimate  
 15 terminus is not a VPN.  
 16 **Q. Can you give me some examples of that?**  
 17 MR. LIN: Object to form.  
 18 THE WITNESS: Yes. For example, if you're  
 19 doing e-commerce with a Web site directly, I would say  
 20 that's not a VPN.  
 21 **Q. BY MR. KING: Can you give me some other --**  
 22 **some other examples?**  
 23 A. I think anytime applications are directly  
 24 communicating with each other, right, not going through some  
 25 kind of a secure intermediary, they're not a VPN.

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1 **Q. What about a voiceover IP connection that's**  
 2 **encrypted, would that be a VPN?**  
 3 MR. LIN: Object to form.  
 4 THE WITNESS: If it's direct to the -- the  
 5 other party, no.  
 6 **Q. BY MR. KING: Okay.**  
 7 **Okay, that's -- that's all that I have for**  
 8 **now.**  
 9 MR. LIN: All right. We're good.  
 10 MR. KING: Okay. I think we're finished.  
 11 Thank you very much.  
 12 MR. LIN: Thank you so much for your time.  
 13 THE WITNESS: Thank you, gentlemen.  
 14 THE VIDEOGRAPHER: This marks the end of  
 15 Videotape No. 3 in the deposition of Gary Tomlinson. Going  
 16 off the record. The time is 3:17 p.m.  
 17 (The videotape deposition of Gary  
 18 Tomlinson was concluded at  
 19 3:17 p.m.)  
 20 ---0---  
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(Pages 145 to 148)

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AFFIDAVIT

STATE OF WASHINGTON )  
                                  ) ss.  
COUNTY OF KING        )

I have read my within deposition, taken  
on Friday, February 27, 2009, and the same is true and  
correct, save and except for changes and/or corrections,  
if any, as indicated by me on the "CORRECTIONS" flyleaf  
page hereof.

\_\_\_\_\_  
GARY TOMLINSON

SUBSCRIBED AND SWORN to before me  
this \_\_\_\_\_ day of \_\_\_\_\_, 2009.

\_\_\_\_\_  
NOTARY PUBLIC in and for  
the State of Washington,  
residing at \_\_\_\_\_.  
My commission expires  
\_\_\_\_\_.

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CERTIFICATE

STATE OF WASHINGTON )  
                                  ) ss.  
COUNTY OF KING        )

I, the undersigned officer of the Court, under  
my commission as a Notary Public in and for the State of  
Washington, hereby certify that the foregoing deposition  
upon oral examination of the witness named herein was taken  
stenographically before me and thereafter transcribed under  
my direction;

That the witness before the examination was  
first duly sworn by me to testify truthfully; that the  
transcript of the deposition is a full, true and correct  
transcript of the testimony, including questions and answers  
and all objections, motions, and exceptions of counsel made  
and taken at the time of the foregoing examination;

That I am neither attorney for nor a relative  
or employee of any of the parties to the action; further,  
that I am not a relative or employee of any attorney or  
counsel employed by the parties hereto, nor financially  
interested in its outcome.

IN WITNESS WHEREOF, I have hereunto set my hand  
and seal this 13th day of March, 2009.

\_\_\_\_\_  
NOTARY PUBLIC in and for  
the State of Washington,  
residing at Redmond. My  
commission expires 04-6-10.

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## Electronic Patent Application Fee Transmittal

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<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Filer:</b>	Toby H. Kusmer./Kelly Ciarmataro
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)

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<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				
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<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
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**Information:**



8	Miscellaneous Incoming Letter	F2.pdf	495792	no	152
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9	Miscellaneous Incoming Letter	F3.pdf	442253	no	132
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10	Miscellaneous Incoming Letter	F4.pdf	502114	no	171
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11	Miscellaneous Incoming Letter	F5.pdf	416607	no	126
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<b>Information:</b>					
12	Miscellaneous Incoming Letter	F6.pdf	563388	no	192
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<b>Information:</b>					
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<b>Information:</b>					
14	Miscellaneous Incoming Letter	F8.pdf	596436	no	179
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**Information:**

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**Information:**

16	Miscellaneous Incoming Letter	F10.pdf	568806	no	168
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17	Miscellaneous Incoming Letter	F11.pdf	520664	no	154
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**Information:**

18	Miscellaneous Incoming Letter	F12.pdf	700893	no	204
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**Information:**

19	Miscellaneous Incoming Letter	ExG.pdf	1311128	no	49
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**Information:**

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<b>Total Files Size (in bytes):</b>	13661670
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>	

Subst. for form 1449/PTO				<b>Complete if Known</b>				
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	11/679,416			
				Filing Date	02/27/2007			
				First Named Inventor	Victor Larson			
				Art Unit	2453			
				Examiner Name	Lim, Krisna			
				Docket Number	077580-0015			
<b>U.S. PATENTS</b>								
EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			
<b>U.S. PATENT APPLICATION PUBLICATIONS</b>								
EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			
<b>FOREIGN PATENT DOCUMENTS</b>								
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes - Number + -Kind Codes (if known)	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation		
						Yes	No	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>								
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
	D86	Defendants' Preliminary Joint Invalidation Contentions dated July 1, 2011						
	D87	Appendix B: DNS References to Defendants' Preliminary Joint Invalidation Contentions dated July 1, 2011						
	D88	Appendix A to Defendants' Preliminary Joint Invalidation Contentions dated July 1, 2011						
	D89	Exhibit 1, IETF RFC 2065: Domain Name System Security Extensions; Published January 1997 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>						
	D90	Exhibit 2, IETF RFC 2065: Domain Name System Security Extensions; Published January 1997 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>						
	D91	Exhibit 3, RFC 2543 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>						
	D92	Exhibit 4, RFC 2543 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>						
	D93	Exhibit 5, RFC 2543 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>						
	D94	Exhibit 6, SIP Draft v.2 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>						
	D95	Exhibit 7, SIP Draft v.2 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>						

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D96	Exhibit 8, SIP Draft v.2 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D97	Exhibit 9, H.323 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D98	Exhibit 10, H.323 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
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	D100	Exhibit 12, SSL 3.0 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D101	Exhibit 13, SSL 3.0 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D102	Exhibit 14, SSL 3.0 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D103	Exhibit 15, RFC 2487 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D104	Exhibit 16, RFC 2487 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D105	Exhibit 17, RFC 2487 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D106	Exhibit 18, RFC 2595 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D107	Exhibit 19, RFC 2595 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D108	Exhibit 20, RFC 2595 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D109	Exhibit 21, iPass <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D110	Exhibit 22, iPASS <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
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	D112	Exhibit 24, "US '034" <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D113	Exhibit 25, US Patent No. 6,453,034 ("US '034") <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D114	Exhibit 26, US Patent No. 6,453,034 ("US '034") <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D115	Exhibit 27, US '287 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D116	Exhibit 28, US '287 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D117	Exhibit 29, US '287 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	

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		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D118	Exhibit 30, Overview of Access VPNs <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D119	Exhibit 31, Overview of Access VPNs <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D120	Exhibit 32, Overview of Access VPNs <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D121	Exhibit 34, RFC 1928 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D122	Exhibit 35, RFC 1928 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D123	Exhibit 36, RFC 1928 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
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	D126	Exhibit 39, RFC 2661 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D127	Exhibit 40, SecureConnect <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D129	Exhibit 42, SecureConnect <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D130	Exhibit 43, SFS-HTTP <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D131	Exhibit 44, SFS-HTTP <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D132	Exhibit 45, SFS-HTTP <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D133	Exhibit 46, US '883 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D134	Exhibit 47, US '883 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D135	Exhibit 48, US '883 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D136	Exhibit 49, US '132 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D137	Exhibit 50, US '132 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D138	Exhibit 51, US '132 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D139	Exhibit 52, US '213 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	

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		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D140	Exhibit 53, US '213 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D141	Exhibit 54, US '213 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D142	Exhibit 55, B&M VPNs <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D143	Exhibit 56, B&M VPNs <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D144	Exhibit 57, B&M VPNs <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D145	Exhibit 58, BorderManager <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D146	Exhibit 59, BorderManager <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D147	Exhibit 60, BorderManager <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D148	Exhibit 61, Prestige 128 Plus <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D151	Exhibit 64, RFC 2401 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D152	Exhibit 65, RFC 2401 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
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	D154	Exhibit 67, RFC 2486 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D156	Exhibit 69, RFC 2486 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D157	Exhibit 70, Understanding IPsec <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D159	Exhibit 72, Understanding IPsec <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D160	Exhibit 73, US '820 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D161	Exhibit 74, US '820 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	

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		Application Number	11/679,416
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D162	Exhibit 75, US '820 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D163	Exhibit 76, US '019 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D164	Exhibit 77, US '019 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D165	Exhibit 78, US '049 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D166	Exhibit 79, US '049 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D167	Exhibit 80, US '049 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D168	Exhibit 81, US '748 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D169	Exhibit 82, US '261 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D170	Exhibit 83, US '261 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D171	Exhibit 84, US '261 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D172	Exhibit 85, US '900 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D173	Exhibit 86, US '900 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D174	Exhibit 87, US '900 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D175	Exhibit 88, US '671 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D177	Exhibit 90, US '671 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D178	Exhibit 91, JP '704 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D179	Exhibit 92, JP '704 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D180	Exhibit 93, JP '704 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D181	Exhibit 94, GB '841 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D182	Exhibit 95, GB '841 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
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		Application Number	11/679,416
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D184	Exhibit 97, US '318 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D185	Exhibit 98, US '318 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D186	Exhibit 99, US '318 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D187	Exhibit 100, VPN/VLAN <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D188	Exhibit 101, Nikkei <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D189	Exhibit 102, NIKKEI <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D190	Exhibit 103, NIKKEI <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D191	Exhibit 104, Special Anthology <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D192	Exhibit 105, Omron <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D193	Exhibit 106, Gauntlet System <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D195	Exhibit 108, Gauntlet System <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
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	D198	Exhibit 111, Gauntlet System <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
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	D200	Exhibit 113, IntraPort System <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
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	D203	Exhibit 116, IntraPort System <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
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	D205	Exhibit 118, Altiga VPN System <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	

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				First Named Inventor	Victor Larson
				Art Unit	2453
				Examiner Name	Lim, Krisna
				Docket Number	077580-0015
	D206	Exhibit 119, Altiga VPN System <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>			
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	D208	Exhibit 121, Altiga VPN System <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>			
	D209	Exhibit 122, Altiga VPN System <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>			
	D210	Exhibit 123, Altiga VPN System <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>			
	D211	Exhibit 124, Kiuchi <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>			
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	D215	Exhibit 128, Kiuchi <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>			
	D216	Exhibit 129, Kiuchi <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>			
	D217	Exhibit 130, Overview of Access VPNs and Tunneling Technologies ("Overview") <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>			
	D218	Exhibit 131, Overview of Access VPNs and Tunneling Technologies ("Overview") <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>			
	D219	Exhibit 132, Overview of Access VPNs and Tunneling Technologies ("Overview") <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>			
	D220	Exhibit 133, Overview of Access VPNs and Tunneling Technologies ("Overview") <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>			
	D221	Exhibit 134, Overview of Access VPNs and Tunneling Technologies ("Overview") <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>			
	D222	Exhibit 135, Overview <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>			
	D223	Exhibit 136, RFC 2401 <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>			
	D224	Exhibit 137, Schulzrinne <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>			
	D225	Exhibit 138, Schulzrinne <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>			

**Complete if Known****INFORMATION DISCLOSURE STATEMENT BY APPLICANT***(Use as many sheets as necessary)*Application Number **11/679,416**Filing Date **02/27/2007**First Named Inventor **Victor Larson**Art Unit **2453**Examiner Name **Lim, Krisna**Docket Number **077580-0015**

	D226	Exhibit 139, Schulzrinne <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D227	Exhibit 140, Schulzrinne <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D228	Exhibit 141, Schulzrinne <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D229	Exhibit 142, Schulzrinne <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
	D230	Exhibit 143, Solana <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D231	Exhibit 144, Solana <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D232	Exhibit 145, Solana <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D233	Exhibit 146, Solana <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D234	Exhibit 147, Solana <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D235	Exhibit 148, Solana <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
	D236	Exhibit 149, Atkinson <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D237	Exhibit 150, Atkinson <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D238	Exhibit 151, Atkinson <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D239	Exhibit 152, Atkinson <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D240	Exhibit 153, Atkinson <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D241	Exhibit 154, Atkinson <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
	D242	Exhibit 155, Marino <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D243	Exhibit 156, Marino <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D244	Exhibit 157, Marino <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D245	Exhibit 158, Marino <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D246	Exhibit 159, Marino <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D247	Exhibit 160, Marino <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>
	D248	Exhibit 161, Aziz ('646) <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>			
	D249	Exhibit 162, Wesinger <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>			
	D250	Exhibit 163, Wesinger <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>			
	D251	Exhibit 164, Wesinger <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>			
	D252	Exhibit 165, Wesinger <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>			
	D253	Exhibit 166, Wesinger <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>			
	D254	Exhibit 167, Wesinger <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>			
	D255	Exhibit 168, Aziz ('234) <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>			
	D256	Exhibit 169, Aziz ('234) <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>			
	D257	Exhibit 170, Aziz ('234) <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>			
	D258	Exhibit 171, Aziz ('234) <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>			
	D259	Exhibit 172, Aziz ('234) <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>			
	D260	Exhibit 173, Aziz ('234) <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>			
	D261	Exhibit 174, Schneider <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>			
	D262	Exhibit 175, Valencia <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>			
	D263	Exhibit 176, Valencia <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>			
	D264	Exhibit 177, Valencia <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>			
	D265	Exhibit 178, Valencia <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>			
	D266	Exhibit 179, Valencia <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>			
	D267	Exhibit 180, RFC 2401 in Combination with U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>			
	D268	Exhibit 181, Davison <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>			
	D269	Exhibit 182, Davison <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>			

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		Application Number	11/679,416
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D270	Exhibit 183, Davison <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D271	Exhibit 184, Davison <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D272	Exhibit 185, Davison <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D273	Exhibit 186, Davison <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
	D274	Exhibit 187, AutoSOCKS v2.1 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D275	Exhibit 188, AutoSOCKS v2.1 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D276	Exhibit 189, AutoSOCKS v2.1 Administrator's Guide <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D277	Exhibit 190, AutoSOCKS <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
	D278	Exhibit 191, Aventail Connect 3.01/2.51 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D279	Exhibit 192, Aventail Connect v3.01/2.51 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D280	Exhibit 193, Aventail Connect 3.01/2.51 <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D281	Exhibit 194, Aventail Connect 3.01/2.51 <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
	D282	Exhibit 195, Aventail Connect 3.1/2.6 Administrator's Guide <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D283	Exhibit 196, Aventail Connect 3.1/2.6 Administrator's Guide <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D284	Exhibit 197, Aventail Connect 3.1/2.6 <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D285	Exhibit 198, Aventail Connect 3.1/2.6 <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
	D286	Exhibit 199, BinGO! User's User's Guide/Extended Features Reference <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D287	Exhibit 200, BinGO! User's User's Guide/Extended Features Reference <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D288	Exhibit 201, BinGO! vs. Claims of the '180 Patent <sup>2</sup>	
	D289	Exhibit 202, BinGO! vs. Claims of the '759 Patent <sup>2</sup>	

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		Application Number	11/679,416
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D290	Exhibit 203, Broadband Forum Technical Report TR-025 (Issue 1.0/5.0) <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D291	Exhibit 204, Domain Name System (DNS) Security <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D292	Exhibit 205, Domain Name System (DNS) Security <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D293	Exhibit 206, RFC 2230, Key Exchange Delegation Record for the DNS <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D294	Exhibit 207, RFC 2230, Key Exchange Delegation Record for the DNS <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D295	Exhibit 208, RFC 2538, Storing Certificates in the Domain Name System (DNS) <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D296	Exhibit 209, RFC 2538, Storing Certificates in the Domain Name System (DNS) <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D297	Exhibit 210, IETF RFC 2065: Domain Name System Security Extensions; Published January 1997 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D298	Exhibit 211, IETF RFC 2065: Domain Name System Security Extensions; Published January 1997 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D299	Exhibit 212, RFC 2486, RFC 2661, RFC 2401, and Internet-Draft, "Secure Remote Access with L2TP" <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D300	Exhibit 213, U.S. Patent No. 7,100,195 in Combination with RFC 2401 and U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D301	Exhibit 214, U.S. Patent No. 7,100,195 in Combination with RFC 2401 and U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D302	Exhibit 215, U.S. Patent No. 6,643,701 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D303	Exhibit 216, U.S. Patent No. 6,643,701 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D304	Exhibit 217, U.S. Patent No. 6,496,867 in Combination with RFC 2401 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D305	Exhibit 218, U.S. Patent No. 6,496,867 in Combination with RFC 2401 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D306	Exhibit 219, U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	<b>11/679,416</b>
		Filing Date	<b>02/27/2007</b>
		First Named Inventor	<b>Victor Larson</b>
		Art Unit	<b>2453</b>
		Examiner Name	<b>Lim, Krisna</b>
		Docket Number	<b>077580-0015</b>
	D307	Exhibit 220, U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D308	Exhibit 221, RFC 2486, RFC 2661, RFC 2401, and Internet-Draft, "Secure Remote Access with L2TP" <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D309	Exhibit 222, U.S. Patent No. 6,557,037 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D310	Exhibit 223, U.S. Patent No. 6,557,037 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D311	Exhibit 224, RFC 2230, Key Exchange Delegation Record for the DNS <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D312	Exhibit 225, RFC 2230, Key Exchange Delegation Record for the DNS <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D313	Exhibit Cisco-1, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '135 Patent	
	D314	Exhibit Cisco-2, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '151 Patent	
	D315	Exhibit Cisco-3, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '180 Patent	
	D316	Exhibit Cisco-4, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '211 Patent	
	D317	Exhibit Cisco-5, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '504 Patent	
	D318	Exhibit Cisco-6, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '759 Patent	
	D319	Exhibit Cisco-7, Cisco's Prior Art PIX System <sup>1</sup> vs. Claims of the '759 Patent	
EXAMINER		DATE CONSIDERED	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>

**CERTIFICATION STATEMENT**

Under 37 C.F.R. 1.98(d), copies of all patent, publication, pending U.S. application or other information that was previously submitted to, or cited by the USPTO in an earlier application are not required. Applicant will provide copies at the Examiner's request.

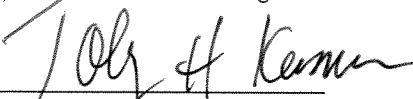
The present application [U.S. Patent Application Serial No.] relies on the following application(s) for an earlier effective filing date under 35 U.S.C. 120: [NOTE PRIORITY APPLICATION AND FILING DATE]

Please See 37 CFR 1.97 and 1.98 to make the appropriate selection(s)

- Information Disclosure Statement is being filed with the filing of the application or before the receipt of a first office action.
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**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

  
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Date: 7/11/11



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	10487380
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Toby H. Kusmer./Kerrie Jones
<b>Filer Authorized By:</b>	Toby H. Kusmer.
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	11-JUL-2011
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	12:40:38
<b>Application Type:</b>	Utility under 35 USC 111(a)

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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	556805 <small>0adbd65d0f889184489a1c2a847f21c193812ced</small>	no	13

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51	Non Patent Literature	Exhibit48.pdf	2611119	no	12
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**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

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## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	10487917
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Toby H. Kusmer./Kerrie Jones
<b>Filer Authorized By:</b>	Toby H. Kusmer.
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	11-JUL-2011
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	13:24:26
<b>Application Type:</b>	Utility under 35 USC 111(a)

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Submitted with Payment	no
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1	Non Patent Literature	Exhibit58.pdf	1050502 <small>c3d0816ac71dc10d1bc3775dde70f0c53ace07097</small>	no	5

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6	Non Patent Literature	Exhibit63.pdf	2569720	no	12
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7	Non Patent Literature	Exhibit64.pdf	1012180	no	5
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16	Non Patent Literature	Exhibit73.pdf	1043785	no	5
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26	Non Patent Literature	Exhibit83.pdf	2645849 132cd2265a3d2c97a1a32ffd6768fc918fc0e558	no	12
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27	Non Patent Literature	Exhibit84.pdf	2636588 8fbc19032cb47faad72ebd6cd9181e90a0229a4e	no	12
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29	Non Patent Literature	Exhibit86.pdf	2596540	no	12
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52	Non Patent Literature	Exhibit109.pdf	14550285 3f2604f223bba417b13092147e78ccf80c6de5d1	no	77
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**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

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## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	10490097
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Toby H. Kusmer./Kerrie Jones
<b>Filer Authorized By:</b>	Toby H. Kusmer.
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	11-JUL-2011
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	15:19:33
<b>Application Type:</b>	Utility under 35 USC 111(a)

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29	Non Patent Literature	Exhibit142.pdf	5577683	no	28
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30	Non Patent Literature	Exhibit143.pdf	5663828	no	28
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31	Non Patent Literature	Exhibit144.pdf	3060995	no	16
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32	Non Patent Literature	Exhibit145.pdf	6056981	no	27
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33	Non Patent Literature	Exhibit146.pdf	15290421	no	68
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34	Non Patent Literature	Exhibit147.pdf	15152582	no	67
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<b>Information:</b>					
36	Non Patent Literature	Exhibit149.pdf	4458215	no	23
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<b>Information:</b>					
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<b>Warnings:</b>					
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39	Non Patent Literature	Exhibit152.pdf	16810761	no	72
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42	Non Patent Literature	Exhibit155.pdf	3984459	no	20
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43	Non Patent Literature	Exhibit156.pdf	2299388	no	12
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<b>Information:</b>					
48	Non Patent Literature	Exhibit161.pdf	5102955	no	25
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<b>Information:</b>					
51	Non Patent Literature	Exhibit164.pdf	8585223	no	41
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<b>Information:</b>					
52	Non Patent Literature	Exhibit165.pdf	19365450	no	91
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The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
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56	Non Patent Literature	Exhibit169.pdf	3556322	no	18
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58	Non Patent Literature	Exhibit171.pdf	15829596	no	67
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59	Non Patent Literature	Exhibit172.pdf	17014656	no	73
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**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

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## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	10491783
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Toby H. Kusmer.
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	11-JUL-2011
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	16:31:45
<b>Application Type:</b>	Utility under 35 USC 111(a)

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	Exhibit215.pdf	1996829 <small>679bcf24aabfd88e9788e9a64083b7d747093b3db</small>	no	11

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2	Non Patent Literature	Exhibit216.pdf	1147752	no	7
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3	Non Patent Literature	Exhibit217.pdf	1893143	no	12
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4	Non Patent Literature	Exhibit218.pdf	3362350	no	19
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6	Non Patent Literature	Exhibit220.pdf	2837906	no	23
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8	Non Patent Literature	Exhibit222.pdf	3971783	no	21
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9	Non Patent Literature	Exhibit223.pdf	3816586	no	20
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11	Non Patent Literature	Exhibit225.pdf	1156662	no	7
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<b>Information:</b>					
12	Non Patent Literature	ExhibitC1.pdf	6855390	no	41
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13	Non Patent Literature	ExhibitC2.pdf	5423269	no	35
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15	Non Patent Literature	ExhibitC4.pdf	18411709	no	99
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16	Non Patent Literature	ExhibitC5.pdf	18299124	no	98
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17	Non Patent Literature	ExhibitC6.pdf	10789577	no	57
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18	Non Patent Literature	ExhibitC7.pdf	3758405	no	19
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<b>Total Files Size (in bytes):</b>			100124094		
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**National Stage of an International Application under 35 U.S.C. 371**

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## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	10491540
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Toby H. Kusmer.
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	11-JUL-2011
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	16:24:51
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	Exhibit174.pdf	3687100 <small>c4aa0bb838582fa7ad6185f33d2604ed6022f612</small>	no	17

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3	Non Patent Literature	Exhibit176.pdf	2853986	no	15
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<b>Information:</b>					
9	Non Patent Literature	Exhibit182.pdf	2764159	no	14
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10	Non Patent Literature	Exhibit183.pdf	5830918	no	27
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11	Non Patent Literature	Exhibit184.pdf	12028866	no	55
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12	Non Patent Literature	Exhibit185.pdf	11953124	no	55
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<b>Information:</b>					
13	Non Patent Literature	Exhibit186.pdf	6617133	no	32
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14	Non Patent Literature	Exhibit187.pdf	2439268	no	13
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15	Non Patent Literature	Exhibit188.pdf	961544	no	6
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16	Non Patent Literature	Exhibit189.pdf	3094846	no	16
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17	Non Patent Literature	Exhibit190.pdf	4245139	no	21
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18	Non Patent Literature	Exhibit191.pdf	3219891	no	17
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19	Non Patent Literature	Exhibit192.pdf	1473607	no	9
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20	Non Patent Literature	Exhibit193.pdf	3707298	no	19
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21	Non Patent Literature	Exhibit194.pdf	4244149 ae51e7dce00c65c7d1e25fe9fdeb399e6b1a c262	no	21
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22	Non Patent Literature	Exhibit195.pdf	6980165 80b64fc9c44e0b69756ac1d5b9f0f57c6fdac b32	no	36
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<b>Information:</b>					
23	Non Patent Literature	Exhibit196.pdf	3530663 ff3e8b50cbe867b80911649eea727fac60e3 ea36	no	21
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24	Non Patent Literature	Exhibit197.pdf	4672754 51a8acea5addef524c26318746fcf1613678 846e	no	24
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25	Non Patent Literature	Exhibit198.pdf	6698868 9d5ae526032eccc6cf391a3d186d93c0d8b 42033	no	30
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<b>Information:</b>					
26	Non Patent Literature	Exhibit199.pdf	4145255 8fafcd8461a141080435b033a38c363453d2 7e88	no	25
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27	Non Patent Literature	Exhibit200.pdf	4884494 2d4d988c1384d45831cdb8f9f719781643b d871d	no	27
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28	Non Patent Literature	Exhibit201.pdf	5565827	no	28
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29	Non Patent Literature	Exhibit202.pdf	1114882	no	39
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30	Non Patent Literature	Exhibit203.pdf	2642155	no	15
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31	Non Patent Literature	Exhibit204.pdf	4666302	no	25
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32	Non Patent Literature	Exhibit205.pdf	4639806	no	25
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33	Non Patent Literature	Exhibit206.pdf	4902275	no	27
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34	Non Patent Literature	Exhibit207.pdf	4897558	no	26
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35	Non Patent Literature	Exhibit208.pdf	4696674	no	26
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36	Non Patent Literature	Exhibit209.pdf	4749101	no	26
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37	Non Patent Literature	Exhibit210.pdf	2899828	no	23
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<b>Warnings:</b>					
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38	Non Patent Literature	Exhibit211.pdf	3372071	no	27
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<b>Warnings:</b>					
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<b>Information:</b>					
39	Non Patent Literature	Exhibit212.pdf	4823187	no	27
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<b>Warnings:</b>					
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<b>Information:</b>					
40	Non Patent Literature	Exhibit213.pdf	3691842	no	21
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41	Non Patent Literature	Exhibit214.pdf	1644170 f1d7ba8ea82714387d18e99afc59772253a392ec	no	11
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23630 7590 07/18/2011
McDermott Will & Emery
600 13th Street, NW
Washington, DC 20005-3096

EXAMINER
LIM, KRISNA
ART UNIT PAPER NUMBER

2453
DATE MAILED: 07/18/2011

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

11/679,416 02/27/2007 Victor Larson 77580-015 3528
(VRNK-1CP2DVCN)
TITLE OF INVENTION: METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

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(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/679,416 02/27/2007 Victor Larson 77580-015 3528

(VRNK-1CP2DVCN)

TITLE OF INVENTION: METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional NO \$1510 \$300 \$0 \$1810 10/18/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
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5. Change in Entity Status (from status indicated above)

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Row 1: 11/679,416, 02/27/2007, Victor Larson, 77580-015 (VRNK-1CP2DVCN), 3528
Row 2: 23630, 7590, 07/18/2011, EXAMINER LIM, KRISNA
Row 3: ART UNIT 2453, PAPER NUMBER

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600 13th Street, NW
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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**Notice of Allowability**

**Application No.**

11/679,416

**Examiner**

KRISNA LIM

**Applicant(s)**

LARSON ET AL.

**Art Unit**

2453

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1.  This communication is responsive to the communication filed 06/07/2011.
- 2.  The allowed claim(s) is/are 2-30.
- 3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All b)  Some\* c)  None of the:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  - 5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
    - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
- 6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- 1.  Notice of References Cited (PTO-892)
- 2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3.  Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
- 4.  Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5.  Notice of Informal Patent Application
- 6.  Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
- 7.  Examiner's Amendment/Comment
- 8.  Examiner's Statement of Reasons for Allowance
- 9.  Other \_\_\_\_\_.

/Krisna Lim/  
Primary Examiner, Art Unit 2453



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BIB DATA SHEET

CONFIRMATION NO. 3528

<b>SERIAL NUMBER</b> 11/679,416	<b>FILING or 371(c) DATE</b> 02/27/2007 <b>RULE</b>	<b>CLASS</b> 709	<b>GROUP ART UNIT</b> 2453	<b>ATTORNEY DOCKET NO.</b> 77580-015 (VRNK-1CP2DVCN)	
<b>APPLICANTS</b> Victor Larson, Fairfax, VA; Robert Dunham Short III, Leesburg, VA; Edmund Colby Munger, Crownsville, MD; Michael Williamson, South Riding, VA; <b>** CONTINUING DATA *****</b> This application is a CON of 10/702,486 11/07/2003 PAT 7,188,180 which is a DIV of 09/558,209 04/26/2000 ABN which is a CIP of 09/504,783 02/15/2000 PAT 6,502,135 which is a CIP of 09/429,643 10/29/1999 PAT 7,010,604 which claims benefit of 60/106,261 10/30/1998 <b>** FOREIGN APPLICATIONS *****</b> <b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **</b> 09/20/2007					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/KRISNA LIM/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	<b>STATE OR COUNTRY</b> VA	<b>SHEETS DRAWINGS</b> 40	<b>TOTAL CLAIMS</b> 1	<b>INDEPENDENT CLAIMS</b> 1
<b>ADDRESS</b> McDermott Will & Emery 600 13th Street, NW Washington, DC 20005-3096 UNITED STATES					
<b>TITLE</b> METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK					
<b>FILING FEE RECEIVED</b> 2128	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

Subst. for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>

## U.S. PATENTS

EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1036	4,920,484	04/24/1990	Ranade	
	A1037	5,164,988	11/17/1992	Matyas	
	A1038	5,790,548	08/04/1998	Sitaraman et al.	
	A1039	5,918,018	06/29/1999	Gooderum et al.	
	A1040	6,308,213	10/23/2001	Valencia	
	A1041	6,425,003	07/23/2002	Herzog et al.	
	A1042	6,606,708	08/12/2003	Devine et al.	
	A1043	6,751,738	06/15/2004	Wesinger, Jr. et al.	

## U.S. PATENT APPLICATION PUBLICATIONS

EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	B1	US2003/0196122	10/16/2003	Wesinger, Jr. et al.	
	B2	US2006/0059337	03/16/2006	Polyhonen et al.	

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes - Number + -Kind Codes (if known)	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	C8	EP836306	04/15/1998	Hewlett Packard Co.			

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	D13	PCT International Search Report for related PCT Application No.: PCT/US01/13261, 8 pages (Our Ref. No. 077580-0032)
	D14	PCT International Search Report for related PCT Application No.: PCT/US99/25323, 3 pages (Our Ref. No. 077580-0062)
	D15	PCT International Search Report for related PCT Application No.: PCT/US99/25325, 3 pages (Our Ref. No. 077580-0061)
	D16	Non-Final Office Action dated June 16, 2003 from corresponding US Application Number 09/429,643 (Our Ref. No.077580-0016)
	D17	Final Office Action dated February 11, 2004 from corresponding US Application Number 09/429,643 (Our Ref. No.077580-0016)
	D18	Notice of Allowance dated May 27, 2009 from corresponding US Application Number 11/839,969 (Our Ref. No.077580-0065)

Subst. for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>

	D19	Non-Final Office Action dated March 1, 2004 from corresponding US Application Number 10/401,888 (Our Ref. No. 077580-0038)	
	D20	Non-Final Office Action dated May 4, 2004 from corresponding US Application Number 09/429,643 (Our Ref. No.077580-0016)	
	D21	Non-Final Office Action dated June 24, 2004 from corresponding US Application Number 10/259,494 (Our Ref. No. 077580-0012)	
	D22	Notice of Allowance dated July 21, 2004 from corresponding US Application Number 10/401,888 (Our Ref. No. 077580-0038)	
	D23	Notice of Allowance dated August 16, 2004 from corresponding US Application Number 10/702,580 (Our Ref. No. 077580-0041)	
	D24	Notice of Allowance dated August 17, 2004 from corresponding US Application Number 10/702,522 (Our Ref. No. 077580-0040)	
	D25	Non-Final Office Action dated October 21, 2004 from corresponding US Application Number 10/401,551 (Our Ref. No.077580-0037)	
	D26	Final Office Action dated April 11,2005 from corresponding US Application Number 09/429,643 (Our Ref. No.077580-0016)	
	D27	Non-Final Office Action dated June 3, 2005 from corresponding US Application Number 10/401,551 (Our Ref. No.077580-0037)	
	D28	Notice of Allowance dated August 10, 2005 from corresponding US Application Number 09/429,643 (Our Ref. No.077580-0016)	
	D29	Non-Final Office Action dated October 18, 2005 from corresponding US Application Number 10/259,494 (Our Ref. No. 077580-0012)	
	D30	Notice of Allowance dated December 5, 2005 from corresponding US Application Number 09/429,643 (Our Ref. No.077580-0016)	
	D31	Final Office Action dated December 7, 2005 from corresponding US Application Number 10/401,551 (Our Ref. No.077580-0037)	
	D32	Notice of Allowance dated February 16, 2006 from corresponding US Application Number 10/401,551 (Our Ref. No.077580-0037)	
	D33	Notice of Allowance dated March 17, 2006 from corresponding US Application Number 10/401,551 (Our Ref. No.077580-0037)	
	D34	Non-Final Office Action dated March 28, 2006 from corresponding US Application Number 10/259,494 (Our Ref. No. 077580-0012)	

Subst. for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>

	D35	Notice of Allowance dated April 5, 2006 from corresponding US Application Number 10/401,551 (Our Ref. No.077580-0037)	
	D36	Notice of Allowance dated April 18, 2006 from corresponding US Application Number 10/401,551 (Our Ref. No.077580-0037)	
	D37	Notice of Allowance dated May 9, 2006 from corresponding US Application Number 10/401,551 (Our Ref. No.077580-0037)	
	D38	Non-Final Office Action dated May 19, 2006 from corresponding US Application Number 10/702,486 (Our Ref. No.077580-0039)	
	D39	Non-Final Office Action dated October 30, 2006 from corresponding US Application Number 10/259,494 (Our Ref. No. 077580-0012)	
	D40	Notice of Allowance dated November 21, 2006 from corresponding US Application Number 10/702,486 (Our Ref. No.077580-0039)	
	D41	Non-Final Office Action dated March 21, 2007 from corresponding US Application Number 10/714,849 (Our Ref. No. 077580-0042)	
	D42	Non-Final Office Action dated June 15, 2007 from corresponding US Application Number 10/259,494 (Our Ref. No. 077580-0012)	
	D43	Notice of Allowance dated October 29, 2007 from corresponding US Application Number 10/714,849 (Our Ref. No. 077580-0042)	
	D44	Notice of Allowance dated January 11, 2008 from corresponding US Application Number 10/259,494 (Our Ref. No. 077580-0012)	
	D45	Notice of Allowance dated April 10, 2008 from corresponding US Application Number 10/714,849 (Our Ref. No. 077580-0042)	
	D46	Notice of Allowance dated July 1, 2008 from corresponding US Application Number 10/259,494 (Our Ref. No. 077580-0012)	
	D47	Non-Final Office Action dated September 17, 2008 from corresponding US Application Number 11/839,969 (Our Ref. No.077580-0065)	
	D48	Deposition Transcript for Gary Tomlinson dated February 27, 2009	
	D49	Non-Final Office Action dated March 5, 2009 from corresponding US Application Number 11/301,022 (Our Ref. No.077580-0044)	
	D50	Notice of Allowance dated April 3, 2009 from corresponding US Application Number 11/839,969 (Our Ref. No.077580-0065)	

Subst. for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>

	D51	Non-Final Office Action dated June 9, 2009 from corresponding US Application Number 11/839,987 (Our Ref. No.077580-0066)	
	D52	Non-Final Office Action dated September 2, 2009 from corresponding US Application Number 11/924,460 (Our Ref. No.077580-0073)	
	D53	Notice of Allowance dated September 16, 2009 from corresponding US Application Number 11/839,969 (Our Ref. No.077580-0065)	
	D54	Notice of Allowance dated November 19, 2009 from corresponding US Application Number 11/839,969 (Our Ref. No.077580-0065)	
	D55	Final Office Action dated January 6, 2010 from corresponding US Application Number 11/839,987 (Our Ref. No.077580-0066)	
	D56	Notice of Allowance dated January 13, 2010 from corresponding US Application Number 11/839,969 (Our Ref. No.077580-0065)	
	D57	Notice of Allowance dated January 28, 2010 from corresponding US Application Number 11/840,508 (Our Ref. No.077580-0057)	
	D58	Final Office Action dated February 9, 2010 from corresponding US Application Number 11/301,022 (Our Ref. No.077580-0044)	
	D59	Notice of Allowance dated February 24, 2010 from corresponding US Application Number 11/839,987 (Our Ref. No.077580-0066)	
	D60	Non-Final Office Action dated March 19, 2010 from corresponding US Application Number 11/840,560 (Our Ref. No.077580-0063)	
	D61	Non-Final Office Action dated June 7, 2010 from corresponding US Application Number 11/924,460 (Our Ref. No.077580-0073)	
	D62	Non-Final Office Action dated June 9, 2010 from corresponding US Application Number 11/924,460 (Our Ref. No.077580-0073)	
	D63	Non-Final Office Action dated July 1, 2010 from corresponding US Application Number 11/839,969 (Our Ref. No.077580-0065)	
	D64	Non-Final Office Action dated July 8, 2010 from corresponding US Application Number 11/839,987 (Our Ref. No.077580-0066)	
	D65	Non-Final Office Action dated July 14, 2010 from corresponding US Application Number 11/840,508 (Our Ref. No.077580-0057)	
	D66	Final Office Action dated October 21, 2010 from corresponding US Application Number 11/840,560 (Our Ref. No.077580-0063)	




Subst. for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		Application Number	<b>11/679,416</b>
		Filing Date	<b>02/27/2007</b>
		First Named Inventor	<b>Victor Larson</b>
		Art Unit	<b>2453</b>
		Examiner Name	<b>Lim, Krisna</b>
		Docket Number	<b>077580-0015</b>

	D67	Non-Final Office Action dated December 14, 2010 from corresponding US Application Number 11/839,937 (Our Ref. No. 077580-0064)	
	D68	Notice of Allowance dated January 4, 2011 from corresponding US Application Number 11/301,022 (Our Ref. No. 077580-0044)	
	D69	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 10, 2010, 9:00 AM	
	D70	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 10, 2010, 1:00 PM	
	D71	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 11, 2010, 9:00 AM	
	D72	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 11, 2010, 1:30 PM	
	D73	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 12, 2010, 9:00 AM	
	D74	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 12, 2010, 1:15 PM	
	D75	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 15, 2010, 9:00 AM	
	D76	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 15, 2010, 12:35 PM	
	D77	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 8, 2010, 8:45 AM	
	D78	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 8, 2010, 1:30 PM	
	D79	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 9, 2010, 9:00 AM	
	D80	Trial Transcript, VirnetX vs. Microsoft Corporation dated March 9, 2010, 1:30 PM	
EXAMINER		/Krisna Lim/	DATE CONSIDERED
			07/12/2011

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered.

Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

<b>Index of Claims</b>  	<b>Application/Control No.</b>  11679416	<b>Applicant(s)/Patent Under Reexamination</b>  LARSON ET AL.
	<b>Examiner</b>  Krisna Lim	<b>Art Unit</b>  2453

✓	<b>Rejected</b>
=	<b>Allowed</b>


-	<b>Cancelled</b>
÷	<b>Restricted</b>

N	<b>Non-Elected</b>
I	<b>Interference</b>

A	<b>Appeal</b>
O	<b>Objected</b>

Claims renumbered in the same order as presented by applicant
  CPA
  T.D.
  R.1.47

CLAIM		DATE							
Final	Original	06/05/2009	03/27/2010	11/21/2010	07/12/2011				
	1	✓	-	-	=				
2	2		✓	✓	=				
3	3		✓	✓	=				
4	4		✓	✓	=				
5	5		✓	✓	=				
6	6		✓	✓	=				
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8	8		✓	✓	=				
9	9		✓	✓	=				
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26	26		✓	✓	=				
27	27		✓	✓	=				
28	28		✓	✓	=				
29	29		✓	✓	=				
1	30		✓	✓	=				


<b>Search Notes</b>  	<b>Application/Control No.</b>  11679416	<b>Applicant(s)/Patent Under Reexamination</b>  LARSON ET AL.
	<b>Examiner</b>  Krisna Lim	<b>Art Unit</b>  2453

SEARCHED			
Class	Subclass	Date	Examiner
709	225-229, 245	6/6/09	kl
709	225-229, 245	07/12/2011	kl

SEARCH NOTES		
Search Notes	Date	Examiner
Inventors, EAST	6/6/09	kl
Inventors	07/12/2011	kl

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
709	227, 228	07/12/2011	kl

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<b>Issue Classification</b> 	<b>Application/Control No.</b> 11679416	<b>Applicant(s)/Patent Under Reexamination</b> LARSON ET AL.
	<b>Examiner</b> KRISNA LIM	<b>Art Unit</b> 2453

ORIGINAL					INTERNATIONAL CLASSIFICATION											
CLASS		SUBCLASS			CLAIMED				NON-CLAIMED							
709		227			G	0	6	F	15 / 173 (2006.01.01)							
<b>CROSS REFERENCE(S)</b>																
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)															
709	228															

Claims renumbered in the same order as presented by applicant
  CPA
  T.D.
  R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	17	17												
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12	12	28	28												
13	13	29	29												
14	14	1	30												
15	15														
16	16														

NONE		<b>Total Claims Allowed:</b>	
		29	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/KRISNA LIM/ Primary Examiner. Art Unit 2453	07/12/2011	2	27
(Primary Examiner)	(Date)		

.Subst. for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>

**U.S. PATENTS**

EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1044	5,590,285	12/31/19996	Krause et al.	

**U.S. PATENT APPLICATION PUBLICATIONS**

EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes - Number 4 - Kind Codes (if known)	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	C9	WO9843396	10/01/1998	Northern Telecom Limited			

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	D81	European Search Report dated January 24, 2011 from corresponding European Application Number 10011949.4
	D82	European Search Report dated March 17, 2011 from corresponding European Application Number 10184502.2
	D83	Hollenbeck et al., "Registry Registrar Protocol (RRP) Version 1.1.0; Internet Engineering Task Force, 34 pages (1999)
	D84	Notice of Allowance dated March 14, 2011 from corresponding US Application Number 11/840,508 (Our Ref. No.077580-0057)
	D85	Tannenbaum, "Computer Networks," pages 202-219 (1996)

/Krisna Lim/

07/12/2011

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				Application Number	11/679,416			
				Filing Date	02/27/2007			
				First Named Inventor	Victor Larson			
				Art Unit	2453			
				Examiner Name	Lim, Krisna			
				Docket Number	077580-0015			
<b>U.S. PATENTS</b>								
EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			
<b>U.S. PATENT APPLICATION PUBLICATIONS</b>								
EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			
<b>FOREIGN PATENT DOCUMENTS</b>								
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes - Number + -Kind Codes (if known)	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation		
						Yes	No	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>								
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
	D86	Defendants' Preliminary Joint Invalidation Contentions dated July 1, 2011						
	D87	Appendix B: DNS References to Defendants' Preliminary Joint Invalidation Contentions dated July 1, 2011						
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	D90	Exhibit 2, IETF RFC 2065: Domain Name System Security Extensions; Published January 1997 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>						
	D91	Exhibit 3, RFC 2543 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>						
	D92	Exhibit 4, RFC 2543 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>						
	D93	Exhibit 5, RFC 2543 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>						
	D94	Exhibit 6, SIP Draft v.2 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>						
	D95	Exhibit 7, SIP Draft v.2 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>						

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		Art Unit	2453
		Examiner Name	Lim, Krisna
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D96	Exhibit 8, SIP Draft v.2 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D97	Exhibit 9, H.323 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D98	Exhibit 10, H.323 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D99	Exhibit 11, H.323 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D100	Exhibit 12, SSL 3.0 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D101	Exhibit 13, SSL 3.0 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D102	Exhibit 14, SSL 3.0 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D103	Exhibit 15, RFC 2487 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D104	Exhibit 16, RFC 2487 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D105	Exhibit 17, RFC 2487 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
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D107	Exhibit 19, RFC 2595 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D108	Exhibit 20, RFC 2595 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D109	Exhibit 21, iPass <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D110	Exhibit 22, iPASS <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D111	Exhibit 23, iPASS <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D112	Exhibit 24, "US '034" <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D113	Exhibit 25, US Patent No. 6,453,034 ("US '034") <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
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D117	Exhibit 29, US '287 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		

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		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D118	Exhibit 30, Overview of Access VPNs <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D119	Exhibit 31, Overview of Access VPNs <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D120	Exhibit 32, Overview of Access VPNs <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D121	Exhibit 34, RFC 1928 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D124	Exhibit 37, RFC 2661 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D127	Exhibit 40, SecureConnect <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D130	Exhibit 43, SFS-HTTP <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D131	Exhibit 44, SFS-HTTP <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D132	Exhibit 45, SFS-HTTP <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D133	Exhibit 46, US '883 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D134	Exhibit 47, US '883 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D135	Exhibit 48, US '883 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D136	Exhibit 49, US '132 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D137	Exhibit 50, US '132 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
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		Examiner Name	Lim, Krisna
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	D140	Exhibit 53, US '213 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D141	Exhibit 54, US '213 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D142	Exhibit 55, B&M VPNs <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D144	Exhibit 57, B&M VPNs <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
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	D147	Exhibit 60, BorderManager <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D148	Exhibit 61, Prestige 128 Plus <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D149	Exhibit 62, Prestige 128 Plus <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D150	Exhibit 63, Prestige 128 Plus <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D151	Exhibit 64, RFC 2401 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D156	Exhibit 69, RFC 2486 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D157	Exhibit 70, Understanding IPsec <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D158	Exhibit 71, Understanding IPsec <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D159	Exhibit 72, Understanding IPsec <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D160	Exhibit 73, US '820 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
	D162	Exhibit 75, US '820 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
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	D164	Exhibit 77, US '019 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D165	Exhibit 78, US '049 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D171	Exhibit 84, US '261 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D172	Exhibit 85, US '900 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D173	Exhibit 86, US '900 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D174	Exhibit 87, US '900 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D175	Exhibit 88, US '671 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D177	Exhibit 90, US '671 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D178	Exhibit 91, JP '704 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D181	Exhibit 94, GB '841 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D184	Exhibit 97, US '318 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D187	Exhibit 100, VPN/VLAN <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
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	D195	Exhibit 108, Gauntlet System <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D196	Exhibit 109, Gauntlet System <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D197	Exhibit 110, Gauntlet System <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D198	Exhibit 111, Gauntlet System <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
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	D201	Exhibit 114, IntraPort System <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D202	Exhibit 115, IntraPort System <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
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	D210	Exhibit 123, Altiga VPN System <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
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	D212	Exhibit 125, Kiuchi <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
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	D217	Exhibit 130, Overview of Access VPNs and Tunneling Technologies ("Overview") <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D218	Exhibit 131, Overview of Access VPNs and Tunneling Technologies ("Overview") <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
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	D242	Exhibit 155, Marino <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D243	Exhibit 156, Marino <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D244	Exhibit 157, Marino <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
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	D254	Exhibit 167, Wesinger <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
	D255	Exhibit 168, Aziz ('234) <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D256	Exhibit 169, Aziz ('234) <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
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	D258	Exhibit 171, Aziz ('234) <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
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	D260	Exhibit 173, Aziz ('234) <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>	
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	D262	Exhibit 175, Valencia <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D263	Exhibit 176, Valencia <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D264	Exhibit 177, Valencia <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D265	Exhibit 178, Valencia <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D266	Exhibit 179, Valencia <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D267	Exhibit 180, RFC 2401 in Combination with U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>	
	D268	Exhibit 181, Davison <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D269	Exhibit 182, Davison <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	

Subst. for form 1449/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	11/679,416
		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
D270	Exhibit 183, Davison <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>		
D271	Exhibit 184, Davison <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D272	Exhibit 185, Davison <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D273	Exhibit 186, Davison <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>		
D274	Exhibit 187, AutoSOCKS v2.1 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D275	Exhibit 188, AutoSOCKS v2.1 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>		
D276	Exhibit 189, AutoSOCKS v2.1 Administrator's Guide <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>		
D277	Exhibit 190, AutoSOCKS <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>		
D278	Exhibit 191, Aventail Connect 3.01/2.51 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D279	Exhibit 192, Aventail Connect v3.01/2.51 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>		
D280	Exhibit 193, Aventail Connect 3.01/2.51 <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>		
D281	Exhibit 194, Aventail Connect 3.01/2.51 <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>		
D282	Exhibit 195, Aventail Connect 3.1/2.6 Administrator's Guide <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D283	Exhibit 196, Aventail Connect 3.1/2.6 Administrator's Guide <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>		
D284	Exhibit 197, Aventail Connect 3.1/2.6 <sup>1</sup> vs. Claims of the '180 Patent <sup>2</sup>		
D285	Exhibit 198, Aventail Connect 3.1/2.6 <sup>1</sup> vs. Claims of the '759 Patent <sup>2</sup>		
D286	Exhibit 199, BinGO! User's User's Guide/Extended Features Reference <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>		
D287	Exhibit 200, BinGO! User's User's Guide/Extended Features Reference <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D288	Exhibit 201, BinGO! vs. Claims of the '180 Patent <sup>2</sup>		
D289	Exhibit 202, BinGO! vs. Claims of the '759 Patent <sup>2</sup>		

Subst. for form 1449/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	11/679,416
		Filing Date	02/27/2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Lim, Krisna
		Docket Number	077580-0015
D290	Exhibit 203, Broadband Forum Technical Report TR-025 (Issue 1.0/5.0) <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D291	Exhibit 204, Domain Name System (DNS) Security <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D292	Exhibit 205, Domain Name System (DNS) Security <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D293	Exhibit 206, RFC 2230, Key Exchange Delegation Record for the DNS <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D294	Exhibit 207, RFC 2230, Key Exchange Delegation Record for the DNS <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D295	Exhibit 208, RFC 2538, Storing Certificates in the Domain Name System (DNS) <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D296	Exhibit 209, RFC 2538, Storing Certificates in the Domain Name System (DNS) <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D297	Exhibit 210, IETF RFC 2065: Domain Name System Security Extensions; Published January 1997 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>		
D298	Exhibit 211, IETF RFC 2065: Domain Name System Security Extensions; Published January 1997 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		
D299	Exhibit 212, RFC 2486, RFC 2661, RFC 2401, and Internet-Draft, "Secure Remote Access with L2TP" <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D300	Exhibit 213, U.S. Patent No. 7,100,195 in Combination with RFC 2401 and U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D301	Exhibit 214, U.S. Patent No. 7,100,195 in Combination with RFC 2401 and U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>		
D302	Exhibit 215, U.S. Patent No. 6,643,701 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D303	Exhibit 216, U.S. Patent No. 6,643,701 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>		
D304	Exhibit 217, U.S. Patent No. 6,496,867 in Combination with RFC 2401 <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>		
D305	Exhibit 218, U.S. Patent No. 6,496,867 in Combination with RFC 2401 <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>		
D306	Exhibit 219, U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>		



Subst. for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	<b>11/679,416</b>
		Filing Date	<b>02/27/2007</b>
		First Named Inventor	<b>Victor Larson</b>
		Art Unit	<b>2453</b>
		Examiner Name	<b>Lim, Krisna</b>
		Docket Number	<b>077580-0015</b>
	D307	Exhibit 220, U.S. Patent No. 6,496,867 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D308	Exhibit 221, RFC 2486, RFC 2661, RFC 2401, and Internet-Draft, "Secure Remote Access with L2TP" <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D309	Exhibit 222, U.S. Patent No. 6,557,037 <sup>1</sup> vs. Claims of the '211 Patent <sup>2</sup>	
	D310	Exhibit 223, U.S. Patent No. 6,557,037 <sup>1</sup> vs. Claims of the '504 Patent <sup>2</sup>	
	D311	Exhibit 224, RFC 2230, Key Exchange Delegation Record for the DNS <sup>1</sup> vs. Claims of the '135 Patent <sup>2</sup>	
	D312	Exhibit 225, RFC 2230, Key Exchange Delegation Record for the DNS <sup>1</sup> vs. Claims of the '151 Patent <sup>2</sup>	
	D313	Exhibit Cisco-1, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '135 Patent	
	D314	Exhibit Cisco-2, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '151 Patent	
	D315	Exhibit Cisco-3, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '180 Patent	
	D316	Exhibit Cisco-4, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '211 Patent	
	D317	Exhibit Cisco-5, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '504 Patent	
	D318	Exhibit Cisco-6, Cisco's Prior Art Systems <sup>1</sup> vs. Claims of the '759 Patent	
	D319	Exhibit Cisco-7, Cisco's Prior Art PIX System <sup>1</sup> vs. Claims of the '759 Patent	
EXAMINER		/Krisna Lim/	DATE CONSIDERED
			07/12/2011

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

Subst. for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>

**CERTIFICATION STATEMENT**

Under 37 C.F.R. 1.98(d), copies of all patent, publication, pending U.S. application or other information that was previously submitted to, or cited by the USPTO in an earlier application are not required. Applicant will provide copies at the Examiner's request.

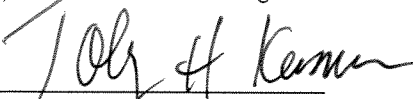
The present application [U.S. Patent Application Serial No.] relies on the following application(s) for an earlier effective filing date under 35 U.S.C. 120: [NOTE PRIORITY APPLICATION AND FILING DATE]

Please See 37 CFR 1.97 and 1.98 to make the appropriate selection(s)

- Information Disclosure Statement is being filed with the filing of the application or before the receipt of a first office action.
- That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or
- That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.
- The Commissioner is hereby authorized to charge the fee pursuant to 37 CFR 1.17(P) in the amount of \$180.00, or further fees which may be due, to Deposit Account 50-1133.
- Information Disclosure Statement is being filed with the Request for Continued Examination. The Commissioner is hereby authorized to charge the fee pursuant to 37 CFR 1.17(P) in the amount of \$810.00, or further fees which may be due, to Deposit Account 50-1133.
- None

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

  
 Toby H. Kusmer, Reg. No.: 26,418  
 McDermott Will & Emery LLP  
 28 State Street  
 Boston, MA 02109  
 Tel. (617) 535-4000  
 Fax (617) 535-3800

Date: 7/11/11

DM\_US 29284360-1.077580.0015

**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax (571) 273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address, and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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 28 State Street  
 Boston, Massachusetts 02109-1775

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/679,416	02/27/2007	Victor Larson	077580-0015	3528

TITLE OF INVENTION: METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	no	\$1,510.00	\$300.00	\$1,810.00	10/18/2011
EXAMINER		ART UNIT	CLASS-SUBCLASS		
K. Lim		2453	709-227		

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). <input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. <input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b>	2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.	1	McDermott Will & Emery LLP
		2	_____
		3	_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)  
 PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.  
 (A) NAME OF ASSIGNEE: VIRNETX, INC. (B) RESIDENCE: (CITY and STATE OR COUNTRY) Scotts Valley, CA

Please check the appropriate assignee category or categories (will not be printed on the patent):  
 Individual  Corporation or other private group entity  Government

4a. The following fee(s) are enclosed: <input checked="" type="checkbox"/> Issue Fee <input checked="" type="checkbox"/> Publication Fee (No small entity discount permitted) <input type="checkbox"/> Advance Order # of Copies _____	4b. Payment of Fee(s): <input type="checkbox"/> A check in the amount of the fee(s) is enclosed. <input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached. <input checked="" type="checkbox"/> The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 50-1133
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5. Change in Entity Status (from status indicated above)  
 a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.  
 NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ /Toby H. Kusmer/ Date July 27, 2011  
 Typed or printed name Toby H. Kusmer Registration No. 26,418

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	11679416
<b>Filing Date:</b>	27-Feb-2007
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Filer:</b>	Toby H. Kusmer./Kelly Ciarmataro
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)

Filed as Large Entity

### Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
Utility Appl issue fee	1501	1	1510	1510
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>1810</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	10611620
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Toby H. Kusmer./Kelly Ciarmataro
<b>Filer Authorized By:</b>	Toby H. Kusmer.
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	27-JUL-2011
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	16:56:44
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$1810
RAM confirmation Number	3514
Deposit Account	501133
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	PTOL85.pdf	91248 <small>cab80c26040e5ba2cb112b21c0194165727f2859</small>	no	1

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### Information:

2	Fee Worksheet (SB06)	fee-info.pdf	32355 <small>3188ca1d60d5d66fdc5b5cea81abff9d37f96b30</small>	no	2
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### Warnings:

### Information:

<b>Total Files Size (in bytes):</b>	123603
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#### **New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

#### **National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

#### **New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**



Subst. for form 1449/PTO <b>SUPPLEMENTAL          INFORMATION DISCLOSURE STATEMENT BY          APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>		
				Application Number	11/679,416	
				Filing Date	February 27, 2007	
				First Named Inventor	Victor Larson	
				Art Unit	2157	
Examiner Name	Not yet assigned					
Sheet	1	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1000	5,311,593	05/10/1994	Carmi	
	A1001	5,511,122	04/23/1996	Atkinson	
	A1003	5,805,803	09/08/1998	Birrell et al.	
	A1004	5,822,434	10/13/1998	Caronni et al.	
	A1005	5,898,830	04/27/1999	Wesinger, Jr. et al.	
	A1006	60/134,547	05/17/1999	Victor Sheymov	
	A1007	60/151,563	08/31/1999	Bryan Whittles	
	A1008	5,950,195	09/07/1999	Stockwell et al.	
	A1009	6,119,171	09/12/2000	Alkhatib	
	A1010	6,937,597	08/30/2005	Rosenberg et al.	
	A1011	7,072,964	07/04/2006	Whittle et al.	
	A1012	09/399,753	09/22/1998	Graig Miller et al.	
	A1013	6,079,020	06/20/2000	Liu	
	A1014	6,173,399	01/09/2001	Gilbrech	
	A1015	6,226,748	05/01/2001	Bots et al.	
	A1016	6,226,751	05/01/2001	Arrow et al.	
	A1017	6,701,437	03/02/2004	Hoke et al.	
	A1018	6,055,574	04/25/2000	Smorodinsky et al.	

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes - Number 4 - Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	B1000	WO 001/17775	03-30-2000	Science Applications International Corporation		Yes	No
	B1001	WO 00/70458	11-23-2000	Comsec Corporation			
	B1002	WO 01/016766	03-08-2001	Science Applications International Corporation			

EXAMINER /Krisna Lim/	DATE CONSIDERED 06/04/2009
--------------------------	-------------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.  
 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.



Subst. for form 1449/PTO <b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	11/679,416
				Filing Date	February 27, 2007
				First Named Inventor	Victor Larson
				Art Unit	2157
				Examiner Name	Not yet assigned
Sheet	2	of	17	Docket Number	77580-015 (VRNK-1CP2DVCM)
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>					
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
	C998	Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009, VirnetX Inc. and Science Applications International Corp. v. Microsoft Corporation,			
	C999	Appendix A of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.			
	C1000	Concordance Table For the References Cited in Tables on pages 6-15, 71-80 and 116-124 of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.			
	C1001	1. P. Mockapetris, "DNS Encoding of Network Names and Other Types," Network Working Group, RFC 1101 (April 1989) (RFC1101, DNS SRV)			
	C1002	DNS-related correspondence dated September 7, 1993 to September 20, 1993. (Pre KX, KX Records) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1003	R. Atkinson, "An Internetwork Authentication Architecture," Naval Research Laboratory, Center for High Assurance Computing Systems (8/5/93). (Atkinson NRL, KX Records)			
	C1004	Henning Schulzrinne, <i>Personal Mobility For Multimedia Services In The Internet</i> , Proceedings of the Interactive Distributed Multimedia Systems and Services European Workshop at 143 (1996). (Schulzrinne 96)			
	C1005	Microsoft Corp., <i>Microsoft Virtual Private Networking: Using Point-to-Point Tunneling Protocol for Low-Cost, Secure, Remote Access Across the Internet</i> (1996) (printed from 1998 PDC DVD-ROM). (Point to Point, Microsoft Prior Art VPN Technology)			
	C1006	"Safe Surfing: How to Build a Secure World Wide Web Connection," IBM Technical Support Organization, (March 1996). (Safe Surfing, WEBSITE ART)			
	C1007	Goldschlag, et al., "Hiding Routing Information," Workshop on Information Hiding, Cambridge, UK (May 1996). (Goldschlag II, Onion Routing)			
	C1008	"IPSec Minutes From Montreal", IPSEC Working Group Meeting Notes, <a href="http://www.sandleman.ca/ipsec/1996/08/msg00018.html">http://www.sandleman.ca/ipsec/1996/08/msg00018.html</a> (June 1996). (IPSec Minutes, FreeS/WAN)			
	C1009	J. M. Galvin, "Public Key Distribution with Secure DNS," Proceedings of the Sixth USENIX UNIX Security Symposium, San Jose, California, July 1996. (Galvin, DNSSEC)			
	C1010	J. Gilmore, et al. "Re: Key Management, anyone? (DNS Keying)," IPsec Working Group Mailing List Archives (8/96). (Gilmore DNS, FreeS/WAN)			
	C1011	H. Orman, et al. "Re: 'Re: DNS? was Re: Key Management, anyone?'" IETF IPsec Working Group Mailing List Archive (8/96-9/96). (Orman DNS, FreeS/WAN)			
	C1012	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2052 (October 1996). (RFC 2052, DNS SRV)			
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				Application Number	11/679,416
				Filing Date	February 27, 2007
				First Named Inventor	Victor Larson
				Art Unit	2157
				Examiner Name	Not yet assigned
Sheet	3	Of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)
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	C1013	Freier, et al. "The SSL Protocol Version 3.0," Transport Layer Security Working Group (November 18, 1996). (SSL, UNDERLYING SECURITY TECHNOLOGY)			
	C1014	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/02/1996). (RFC 2543 Internet Draft 1) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1015	M.G. Reed, et al. "Proxies for Anonymous Routing," 12th Annual Computer Security Applications Conference, San Diego, CA, Dec. 9-13, 1996. (Reed, Onion Routing)			
	C1016	Kenneth F. Alden & Edward P. Wobber, <i>The AltaVista Tunnel: Using the Internet to Extend Corporate Networks</i> , Digital Technical Journal (1997) (Alden, AltaVista)			
	C1017	Automotive Industry Action Group, "ANX Release 1 Document Publication," AIAG (1997). (AIAG, ANX)			
	C1018	Automotive Industry Action Group, "ANX Release 1 Draft Document Publication," AIAG Publications (1997). (AIAG Release, ANX)			
	C1019	Aventail Corp., "AutoSOCKS v. 2.1 Datasheet," available at <a href="http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html">http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html</a> (1997). (AutoSOCKS, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1020	Aventail Corp. "Aventail VPN Data Sheet," available at <a href="http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html">http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html</a> (1997). (Data Sheet, Aventail)			
	C1021	Aventail Corp., "Directed VPN Vs. Tunnel," available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/directvpn.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/directvpn.html</a> (1997). (Directed VPN, Aventail)			
	C1022	Aventail Corp., "Managing Corporate Access to the Internet," Aventail AutoSOCKS White Paper available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/ipmwp.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/ipmwp.html</a> (1997). (Corporate Access, Aventail)			
	C1023	Aventail Corp., "Socks Version 5," Aventail Whitepaper, available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/soc kswp.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/soc kswp.html</a> (1997). (Socks, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1024	Aventail Corp., "VPN Server V2.0 Administration Guide," (1997). (VPN, Aventail)			
	C1025	Goldschlag, et al. "Privacy on the Internet," Naval Research Laboratory, Center for High Assurance Computer Systems (1997). (Goldschlag I, Onion Routing)			
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	C1026	Microsoft Corp., <i>Installing Configuring and Using PPTP with Microsoft Clients and Servers</i> (1997). (Using PPTP, Microsoft Prior Art VPN Technology)					
	C1027	Microsoft Corp., <i>IP Security for Microsoft Windows NT Server 5.0</i> (1997) (printed from 1998 PDC DVD-ROM). (IP Security, Microsoft Prior Art VPN Technology)					
	C1028	Microsoft Corp., <i>Microsoft Windows NT Active Directory: An Introduction to the Next Generation Directory Services</i> (1997) (printed from 1998 PDC DVD-ROM). (Directory, Microsoft Prior Art VPN Technology)					
	C1029	Microsoft Corp., <i>Routing and Remote Access Service for Windows NT Server New Opportunities Today and Looking Ahead</i> (1997) (printed from 1998 PDC DVD-ROM). (Routing, Microsoft Prior Art VPN Technology)					
	C1030	Microsoft Corp., <i>Understanding Point-to-Point Tunneling Protocol PPTP</i> (1997) (printed from 1998 PDC DVD-ROM). (Understanding PPTP, Microsoft Prior Art VPN Technology)					
	C1031	J. Mark Smith et al., <i>Protecting a Private Network: The AltaVista Firewall</i> , Digital Technical Journal (1997). (Smith, AltaVista)					
	C1032	Naganand Doraswamy <i>Implementation of Virtual Private Networks (VPNs) with IP Security</i> , <draft-ietf-ipsec-vpn-00.txt> (March 12, 1997). (Doraswamy)					
	C1033	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (03/27/1997). (RFC 2543 Internet Draft 2) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1034	Aventail Corp., "Aventail and Cybersafe to Provide Secure Authentication For Internet and Intranet Communication," Press Release, April 3, 1997. (Secure Authentication, Aventail)					
	C1035	D. Wagner, et al. "Analysis of the SSL 3.0 Protocol," (April 15, 1997). (Analysis, UNDERLYING SECURITY TECHNOLOGIES)					
	C1036	Automotive Industry Action Group, "ANXO Certification Authority Service and Directory Service Definition for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (May 9, 1997). (AIAG Definition, ANX)					
	C1037	Automotive Industry Action Group, "ANXO Certification Process and ANX Registration Process Definition for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (May 9, 1997). (AIAG Certification, ANX)					
	C1038	Aventail Corp., "Aventail Announces the First VPN Solution to Assure Interoperability Across Emerging Security Protocols," June 2, 1997. (First VPN, Aventail)					
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	C1039	Syverson, et al. "Private Web Browsing," Naval Research Laboratory, Center for High 8 Assurance Computer Systems (June 2, 1997). (Syverson, Onion Routing)					
	C1040	Bellcore, "Metrics, Criteria, and Measurement Technique Requirements for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (June 16, 1997). (AIAG Requirements, ANX)					
	C1041	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/31/1997). (RFC 2543 Internet Draft 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1042	R. Atkinson, "Key Exchange Delegation Record for the DNS," Network Working Group, RFC 2230 (November 1997). (RFC 2230, KX Records)					
	C1043	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/11/1997). (RFC 2543 Internet Draft 4) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1044	1998 Microsoft Professional Developers Conference DVD ("1998 PDC DVD-ROM") (including screenshots captured therefrom and produced as MSFTVX 00018827-00018832). (Conference, Microsoft Prior Art VPN Technology)					
	C1045	Microsoft Corp., <i>Virtual Private Networking An Overview</i> (1998) (printed from 1998 PDC DVD-ROM) (Overview, Microsoft Prior Art VPN Technology)					
	C1046	Microsoft Corp., <i>Windows NT 5.0 Beta Has Public Premiere at Seattle Mini-Camp Seminar attendees get first look at the performance and capabilities of Windows NT 5.0</i> (1998) (available at <a href="http://www.microsoft.com/presspass/features/1998/10-19nt5.mspxpfrue">http://www.microsoft.com/presspass/features/1998/10-19nt5.mspxpfrue</a> ). (NT Beta, Microsoft Prior Art VPN Technology)					
	C1047	"What ports does SSL use" available at <a href="http://stason.org/TULARC/security/ssl-talk/3-4-What-ports-does-ssl-use.html">stason.org/TULARC/security/ssl-talk/3-4-What-ports-does-ssl-use.html</a> (1998). (Ports, DNS SRV)					
	C1048	Aventail Corp., "Aventail VPN V2.6 Includes Support for More Than Ten Authentication Methods Making Extranet VPN Development Secure and Simple," Press Release, January 19, 1998. (VPN V2.6, Aventail)					
	C1049	R. G. Moskowitz, "Network Address Translation Issues with IPsec," Internet Draft, Internet Engineering Task Force, February 6, 1998. (Moskowitz)					
	C1050	H. Schulzrinne, et al, "Internet Telephony Gateway Location," Proceedings of IEEE INfocom '98, The Conference on Computer Communications, Vol. 2 ( March 29 - April 2, 1998). (Gateway, Schulzrinne)					
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	C1051	C. Huitema, 45 al. "Simple Gateway Control Protocol," Version 1.0 (May 5, 1998). (SGCP)					
	C1052	DISA "Secret Internet Protocol Router Network," SIPRNET Program Management Office (D3113) DISN Networks, DISN Transmission Services (May 8, 1998). (DISA, SIPRNET)					
	C1053	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (05/14/1998). (RFC 2543 Internet Draft 5) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1054	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (06/17/1998). (RFC 2543 Internet Draft 6) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1055	D. McDonald, et al. "PF_KEY Key Management API, Version 2," Network Working Group, RFC 2367 (July 1998). (RFC 2367)					
	C1056	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/16/1998). (RFC 2543 Internet Draft 7) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1057	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (08/07/1998). (RFC 2543 Internet Draft 8) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1058	Microsoft Corp., <i>Company Focuses on Quality and Customer Feedback</i> (August 18, 1998). (Focus, Microsoft Prior Art VPN Technology)					
	C1059	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (09/18/1998). (RFC 2543 Internet Draft 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1060	Atkinson, et al. "Security Architecture for the Internet Protocol," Network Working Group, RFC 2401 (November 1998). (RFC 2401, UNDERLYING SECURITY TECHNOLOGIES)					
	C1061	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/12/1998). (RFC 2543 Internet Draft 10) 9 <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1062	Donald Eastlake, <i>Domain Name System Security Extensions</i> , IETF DNS Security Working Group (December 1998). (DNSSEC-7)					
	C1063	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/15/1998). (RFC 2543 Internet Draft 11) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
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	C1064	Aventail Corp., "Aventail Connect 3.1/2.6 Administrator's Guide," (1999). (Aventail Administrator 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1065	Aventail Corp., "Aventail Connect 3.1/2.6 User's Guide," (1999). (Aventail User 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1066	Aventail Corp., "Aventail ExtraWeb Server v3.2 Administrator's Guide," (1999). (Aventail ExtraWeb 3.2, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1067	Kaufman et al, "Implementing IPsec," (Copyright 1999). (Implementing IPSEC, VPN REFERENCES)			
	C1068	Network Solutions, Inc. "Enabling SSL," NSI Registry (1999). (Enabling SSL, UNDERLYING SECURITY TECHNOLOGIES)			
	C1069	Check Point Software Technologies Ltd. (1999) (Check Point, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1070	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , <draft-ietf-dnsind-frc2052bis-02.txt> (January 1999). (Gulbrandsen 99, DNS SRV)			
	C1071	C. Scott, et al. <i>Virtual Private Networks</i> , O'Reilly and Associates, Inc., 2nd ed. (Jan. 1999). (Scott VPNs)			
	C1072	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (01/15/1999). (RFC 2543 Internet Draft 12) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1073	Goldschlag, et al., "Onion Routing for Anonymous and Private Internet Connections," Naval Research Laboratory, Center for High Assurance Computer Systems (January 28, 1999). (Goldschlag III, Onion Routing)			
	C1074	H. Schulzrinne, "Internet Telephony: architecture and protocols – an IETF perspective," <i>Computer Networks</i> , Vol. 31, No. 3 (February 1999). (Telephony, Schulzrinne)			
	C1075	M. Handley, et al. "SIP: Session Initiation Protocol," Network Working Group, RFC 2543 and Internet Drafts (12/96-3/99). (Handley, RFC 2543)			
	C1076	FreeSWAN Project, <i>Linux FreeSWAN Compatibility Guide</i> (March 4, 1999). (FreeSWAN Compatibility Guide, FreeSWAN)			
	C1077	Telcordia Technologies, "ANX Release 1 Document Corrections," AIAG (May 11, 1999). (Telcordia, ANX)			
	C1078	Ken Hornstein & Jeffrey Altman, <i>Distributing Kerberos KDC and Realm Information with DNS</i> <draft-eitf-cat-krb-dns-locate-oo.txt> (June 21, 1999). (Hornstein, DNS SRV)			
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	C1079	Bhattacharya et. al. "An LDAP Schema for Configuration and Administration of IPSec Based Virtual Private Networks (VPNs)", IETF Internet Draft (October 1999). (Bhattacharya LDAP VPN)					
	C1080	B. Patel, et al. "DHCP Configuration of IPSEC Tunnel Mode," IPSEC Working Group, Internet Draft 02 (10/15/1999). (Patel)					
	C1081	Goncalves, et al. <i>Check Point FireWall -1 Administration Guide</i> , McGraw-Hill Companies (2000). (Goncalves, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1082	"Building a Microsoft VPN: A Comprehensive Collection of Microsoft Resources," FirstVPN, (Jan 2000). (FirstVPN Microsoft)					
	C1083	Gulbrandsen, Vixie, & Esibov, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2782 (February 2000). (RFC 2782, DNS SRV)					
	C1084	MITRE Organization, "Technical Description," Collaborative Operations in Joint Expeditionary Force Experiment (JEFX) 99 (February 2000). (MITRE, SIPRNET)					
	C1085	H. Schulzrinne, et al. "Application-Layer Mobility Using SIP," <i>Mobile Computing and Communications Review</i> , Vol. 4, No. 3. pp. 47-57 (July 2000). (Application, SIP)					
	C1086	Kindred et al, "Dynamic VPN Communities: Implementation and Experience," DARPA Information Survivability Conference and Exposition II (June 2001). (DARPA, VPN SYSTEMS)					
	C1087	ANX 101: Basic ANX Service Outline. (Outline, ANX)					
	C1088	ANX 201: Advanced ANX Service. (Advanced, ANX)					
	C1089	Appendix A: Certificate Profile for ANX IPsec Certificates. (Appendix, ANX)					
	C1090	Assured Digital Products. (Assured Digital) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1091	Aventail Corp., "Aventail AutoSOCKS the Client Key to Network Security," Aventail Corporation White Paper. (Network Security, Aventail)					
	C1092	Cindy Moran, "DISN Data Networks: Secret Internet Protocol Router Network (SIPRNet)." (Moran, SIPRNET)					
	C1093	Data Fellows F-Secure VPN+ (F-Secure VPN+)					
	C1094	"Interim Operational Systems Doctrine for the Remote Access Security Program (RASP) Secret Dial-In Solution. (RASP, SIPRNET)					
	C1095	<i>Onion Routing</i> , "Investigation of Route Selection Algorithms," available at <a href="http://www.onion-router.net/Archives/Route/index.html">http://www.onion-router.net/Archives/Route/index.html</a> . (Route Selection, Onion Routing)					
	C1096	Secure Computing, "Bullet-Proofing an Army Net," Washington Technology. (Secure, SIPRNET)					
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	C1097	SPARTA "Dynamic Virtual Private Network." (Sparta, VPN SYSTEMS)					
	C1098	Standard Operation Procedure for Using the 1910 Secure Modems. (Standard, SIPRNET)					
	C1099	Publicly available emails relating to FreeSWAN (MSFTVX00018833-MSFTVX00019206). (FreeS/WAN emails, FreeS/WAN)					
	C1100	Kaufman et al., "Implementing IPsec," (Copyright 1999) (Implementing IPsec)					
	C1101	Network Associates <i>Gauntlet Firewall For Unix User's Guide Version 5.0</i> (1999). (Gauntlet User's Guide – Unix, Firewall Products)					
	C1102	Network Associates <i>Gauntlet Firewall For Windows NT Getting Started Guide Version 5.0</i> (1999) (Gauntlet Getting Started Guide – NT, Firewall Products)					
	C1103	Network Associates <i>Gauntlet Firewall For Unix Getting Started Guide Version 5.0</i> (1999) (Gauntlet Unix Getting Started Guide, Firewall Products)					
	C1104	Network Associates <i>Release Notes Gauntlet Firewall for Unix 5.0</i> (March 19, 1999) (Gauntlet Unix Release Notes, Firewall Products)					
	C1105	Network Associates <i>Gauntlet Firewall For Windows NT Administrator's Guide Version 5.0</i> (1999) (Gauntlet NT Administrator's Guide, Firewall Products)					
	C1106	Trusted Information Systems, Inc. <i>Gauntlet Internet Firewall Firewall-to-Firewall Encryption Guide Version 3.1</i> (1996) (Gauntlet Firewall-to-Firewall, Firewall Products)					
	C1107	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)					
	C1108	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)					
	C1109	Dan Sterne <i>Dynamic Virtual Private Networks</i> (May 23, 2000) (Sterne DVPN, DVPN)					
	C1110	Darrell Kindred <i>Dynamic Virtual Private Networks (DVPN)</i> (December 21, 1999) (Kindred DVPN, DVPN)					
	C1111	Dan Sterne <i>et al. TIS Dynamic Security Perimeter Research Project Demonstration</i> (March 9, 1998) (Dynamic Security Perimeter, DVPN)					
	C1112	Darrell Kindred <i>Dynamic Virtual Private Networks Capability Description</i> (January 5, 2000) (Kindred DVPN Capability, DVPN) 11					
EXAMINER				DATE CONSIDERED			
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				Application Number	11/679,416	
				Filing Date	February 27, 2007	
				First Named Inventor	Victor Larson	
				Art Unit	2157	
				Examiner Name	Not yet assigned	
Sheet	10	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C1113	October 7, and 28 1997 email from Domenic J. Turchi Jr. (SPARTA00001712-1714, 1808-1811) (Turchi DVPN email, DVPN)				
	C1114	James Just & Dan Sterne <i>Security Quickstart Task Update</i> (February 5, 1997) (Security Quickstart, DVPN)				
	C1115	Virtual Private Network Demonstration dated March 21, 1998 (SPARTA00001844-54) (DVPN Demonstration, DVPN)				
	C1116	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.1 Plan</i> (March 10, 1998) (IFD 1.1, DVPN)				
	C1117	Microsoft Corp. Windows NT Server Product Documentation: Administration Guide – Connection Point Services, available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx</a> (Connection Point Services) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1118	Microsoft Corp. Windows NT Server Product Documentation: Administration Kit Guide – Connection Manager, available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.msp</a> (Connection Manager) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1119	Microsoft Corp. Autodial Heuristics, available at <a href="http://support.microsoft.com/kb/164249">http://support.microsoft.com/kb/164249</a> (Autodial Heuristics) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1120	Microsoft Corp., Cariplo: Distributed Component Object Model, (1996) available at <a href="http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx</a> (Cariplo I)				
	C1121	Marc Levy, COM Internet Services (Apr. 23, 1999), available at <a href="http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx</a> (Levy)				
	C1122	Markus Horstmann and Mary Kirtland, DCOM Architecture (July 23, 1997), available at <a href="http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx</a> (Horstmann)				
	C1123	Microsoft Corp., DCOM: A Business Overview (Apr. 1997), available at <a href="http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx</a> (DCOM Business Overview I)				
	C1124	Microsoft Corp., DCOM Technical Overview (Nov. 1996), available at <a href="http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx</a> (DCOM Technical Overview I)				
	C1125	Microsoft Corp., DCOM Architecture White Paper (1998) available in PDC DVD-ROM (DCOM Architecture)				
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(10)  
ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.L./  
Petitioner Apple Inc. - Exhibit 1026, p. 3353

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Examiner Name		Not yet assigned					
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	C1126	Microsoft Corp, DCOM – The Distributed Component Object Model, A Business Overview White Paper (Microsoft 1997) <i>available in</i> PDC DVD-ROM (DCOM Business Overview II)					
	C1127	Microsoft Corp., DCOM—Cariplo Home Banking Over The Internet White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (Cariplo II)					
	C1128	Microsoft Corp., DCOM Solutions in Action White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (DCOM Solutions in Action)					
	C1129	Microsoft Corp., DCOM Technical Overview White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (DCOM Technical Overview II)					
	C1130	125. Scott Suhy & Glenn Wood, DNS and Microsoft Windows NT 4.0, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx</a> (Suhy)					
	C1131	126. Aaron Skonnard, <i>Essential Winlnet</i> 313-423 (Addison Wesley Longman 1998) (Essential Winlnet)					
	C1132	Microsoft Corp. Installing, Configuring, and Using PPTP with Microsoft Clients and Servers, (1998) <i>available at</i> <a href="http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx">http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx</a> (Using PPTP)					
	C1133	Microsoft Corp., Internet Connection Services for MS RAS, Standard Edition, <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp</a> (Internet Connection Services I)					
	C1134	Microsoft Corp., Internet Connection Services for RAS, Commercial Edition, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp</a> (Internet Connection Services II)					
	C1135	Microsoft Corp., Internet Explorer 5 Corporate Deployment Guide – Appendix B: Enabling Connections with the Connection Manager Administration Kit, <i>available at</i> <a href="http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp">http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp</a> (IE5 Corporate Development)					
	C1136	Mark Minasi, <i>Mastering Windows NT Server 4</i> 1359-1442 (6th ed., January 15, 1999) (Mastering Windows NT Server)					
	C1137	<i>Hands On, Self-Paced Training for Supporting Version 4.0</i> 371-473 (Microsoft Press 1998) (Hands On)					
	C1138	Microsoft Corp., MS Point-to-Point Tunneling Protocol (Windows NT 4.0), <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp">http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp</a> (MS PPTP)					
	C1139	Kenneth Gregg, <i>et al.</i> , <i>Microsoft Windows NT Server Administrator's Bible</i> 173-206, 883-911, 974-1076 (IDG Books Worldwide 1999) (Gregg)					
	C1140	Microsoft Corp., Remote Access (Windows), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/bb545687(VS.85.printer).aspx">http://msdn2.microsoft.com/en-us/library/bb545687(VS.85.printer).aspx</a> (Remote Access)					
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	C1141	Microsoft Corp., Understanding PPTP (Windows NT 4.0), available at <a href="http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.mspx">http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.mspx</a> (Understanding PPTP NT 4) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1142	Microsoft Corp., Windows NT 4.0: Virtual Private Networking, available at <a href="http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.mspx">http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.mspx</a> (NT4 VPN) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1143	Anthony Northrup, <i>NT Network Plumbing: Routers, Proxies, and Web Services</i> 299-399 (IDG Books Worldwide 1998) (Network Plumbing)			
	C1144	Microsoft Corp., Chapter 1 – Introduction to Windows NT Routing with Routing and Remote Access Service, Available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch01.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch01.mspx</a> (Intro to RRAS) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.) 13			
	C1145	Microsoft Corp., Windows NT Server Product Documentation: Chapter 5 – Planning for Large-Scale Configurations, available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.mspx</a> (Large-Scale Configurations) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1146	F-Secure, <i>F-Secure Evaluation Kit</i> (May 1999) (FSECURE 00000003) (Evaluation Kit 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1147	F-Secure, <i>F-Secure NameSurfer</i> (May 1999) (from FSECURE 00000003) (NameSurfer 3)			
	C1148	F-Secure, <i>F-Secure VPN Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (F-Secure VPN 3)			
	C1149	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (SSH Guide 3)			
	C1150	F-Secure, <i>F-Secure SSH2.0 for Windows NT and 95</i> (May 1999) (from FSECURE 00000003) (SSH 2.0 Guide 3)			
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	C1151	F-Secure, <i>F-Secure VPN+ Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (VPN+ Guide 3)				
	C1152	F-Secure, <i>F-Secure VPN+ 4.1</i> (1999) (from FSECURE 00000006) (VPN+ 4.1 Guide 6)				
	C1153	F-Secure, <i>F-Secure SSH</i> (1996) (from FSECURE 00000006) (F-Secure SSH 6)				
	C1154	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (1998) (from FSECURE 00000006) (F-Secure SSH 2.0 Guide 6)				
	C1155	F-Secure, <i>F-Secure Evaluation Kit</i> (Sept. 1998) (FSECURE 00000009) (Evaluation Kit 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1156	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (Sept. 1998) (from FSECURE 00000009) (SSH Guide 9)				
	C1157	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (Sept. 1998) (from FSECURE 00000009) (F-Secure SSH 2.0 Guide 9)				
	C1158	F-Secure, <i>F-Secure VPN+</i> (Sept. 1998) (from FSECURE 00000009) (VPN+ Guide 9)				
	C1159	F-Secure, <i>F-Secure Management Tools, Administrator's Guide</i> (1999) (from FSECURE 00000003) (F-Secure Management Tools)				
	C1160	F-Secure, <i>F-Secure Desktop, User's Guide</i> (1997) (from FSECURE 00000009) (FSecure Desktop User's Guide)				
	C1161	SafeNet, Inc., <i>VPN Policy Manager</i> (January 2000) (VPN Policy Manager)				
	C1162	F-Secure, <i>F-Secure VPN+ for Windows NT 4.0</i> (1998) (from FSECURE 00000009) (FSecure VPN+)				
	C1163	IRE, Inc., <i>SafeNet/Soft-PK Version 4</i> (March 28, 2000) (Soft-PK Version 4) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1164	IRE/SafeNet Inc., <i>VPN Technologies Overview</i> (March 28, 2000) (Safenet VPN Overview) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1165	IRE, Inc., <i>SafeNet / Security Center Technical Reference Addendum</i> (June 22, 1999) (Safenet Addendum)				
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	C1166	IRE, Inc., <i>System Description for VPN Policy Manager and SafeNet/SoftPK</i> (March 30, 2000) (VPN Policy Manager System Description)			
	C1167	IRE, Inc., <i>About SafeNet / VPN Policy Manager</i> (1999) (About Safenet VPN Policy Manager)			
	C1168	IRE, Inc., <i>SafeNet/VPN Policy Manager Quick Start Guide Version 1</i> (1999) (SafeNet VPN Policy Manager) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1169	Trusted Information Systems, Inc., <i>Gauntlet Internet Firewall, Firewall Product Functional Summary</i> (July 22, 1996) (Gauntlet Functional Summary)			
	C1170	Trusted Information Systems, Inc., <i>Running the Gauntlet Internet Firewall, An Administrator's Guide to Gauntlet Version 3.0</i> (May 31, 1995) (Running the Gauntlet Internet Firewall)			
	C1171	Ted Harwood, <i>Windows NT Terminal Server and Citrix Metaframe</i> (New Riders 1999) (Windows NT Harwood) 79			
	C1172	Todd W. Mathers and Shawn P. Genoway, <i>Windows NT Thing Client Solutions: Implementing Terminal Server and Citrix MetaFrame</i> (Macmillan Technical Publishing 1999) (Windows NT Mathers)			
	C1173	Bernard Aboba et al., <i>Securing L2TP using IPSEC</i> (February 2, 1999)			
	C1174	156. <i>Finding Your Way Through the VPN Maze</i> (1999) ("PGP")			
	C1175	Linux FreeSWAN Overview (1999) (Linux FreeSWAN) Overview			
	C1176	TimeStep, <i>The Business Case for Secure VPNs</i> (1998) ("TimeStep")			
	C1177	WatchGuard Technologies, Inc., <i>WatchGuard Firebox System Powerpoint</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1178	WatchGuard Technologies, Inc., <i>MSS Firewall Specifications</i> (1999) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1179	WatchGuard Technologies, Inc., <i>Request for Information, Security Services</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1180	WatchGuard Technologies, Inc., <i>Protecting the Internet Distributed Enterprise, White Paper</i> (February 2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
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	C1181	WatchGuard Technologies, Inc., <i>WatchGuard LiveSecurity for MSS Powerpoint</i> (Feb. 14 2000)			
	C1182	WatchGuard Technologies, Inc., <i>MSS Version 2.5, Add-On for WatchGuard SOHO Release Notes</i> (July 21, 2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1183	Air Force Research Laboratory, <i>Statement of Work for Information Assurance System Architecture and Integration, PR No. N-8-6106 (Contract No. F30602-98-C-0012)</i> (January 29, 1998)			
	C1184	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.2 Report, Rev. 1.0</i> (September 21, 1998)			
	C1185	BBN Information Assurance Contract, <i>TIS Labs Monthly Status Report</i> (March 16-April 30, 1998)			
	C1186	DARPA, <i>Dynamic Virtual Private Network (VPN) Powerpoint</i>			
	C1187	GTE Internetworking, <i>Contractor's Program Progress Report</i> (March 16-April 30, 1998)			
	C1188	Darrell Kindred, <i>Dynamic Virtual Private Networks (DVPN) Countermeasure Characterization</i> (January 30, 2001)			
	C1189	<i>Virtual Private Networking Countermeasure Characterization</i> (March 30, 2000)			
	C1190	<i>Virtual Private Network Demonstration</i> (March 21, 1998)			
	C1191	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks (VPNs) and Integrated Security Management</i> (2000)			
	C1192	Information Assurance/NAI Labs, <i>Create/Add DVPN Enclave</i> (2000)			
	C1193	NAI Labs, <i>IFE 3.1 Integration Demo</i> (2000)			
	C1194	Information Assurance, <i>Science Fair Agenda</i> (2000)			
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EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C1195	Darrell Kindred et al., <i>Proposed Threads for IFE 3.1</i> (January 13, 2000)				
	C1196	<i>IFE 3.1 Technology Dependencies</i> (2000)				
	C1197	<i>IFE 3.1 Topology</i> (February 9, 2000)				
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	C1199	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation</i> (2000)				
	C1200	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.2</i> (2000)				
	C1201	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.3</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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	C1203	Network Associates Products – <i>PGP Total Network Security Suite, Dynamic Virtual Private Networks</i> (1999)				
	C1204	Microsoft Corporation, <i>Microsoft Proxy Server 2.0</i> (1997) (Proxy Server 2.0, Microsoft Prior Art VPN Technology)				
	C1205	David Johnson et. al., <i>A Guide To Microsoft Proxy Server 2.0</i> (1999) (Johnson, Microsoft Prior Art VPN Technology)				
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	C1207	Kevin Schuler, <i>Microsoft Proxy Server 2</i> (1998) (Schuler, Microsoft Prior Art VPN Technology)				
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EXAMINER			/Krisna Lim/	DATE CONSIDERED		
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				Application Number	11/679,416	
				Filing Date	February 27, 2007	
				First Named Inventor	Victor Larson	
				Art Unit	2157	
Examiner Name	Not yet assigned					
Sheet	17	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
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	C1209	M. Shane Stigler & Mark A Linsenbardt, <i>IIS 4 and Proxy Server 2</i> (1999) (Stigler, Microsoft Prior Art VPN Technology)				
	C1210	David G. Schaer, <i>MCSE Test Success: Proxy Server 2</i> (1998) (Schaer, Microsoft Prior Art VPN Technology)				
	C1211	John Savill, <i>The Windows NT and Windows 2000 Answer Book</i> (1999) (Savill, Microsoft Prior Art VPN Technology)				
	C1212	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)				
	C1213	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)				
	C1214	File History for U.S. Application Serial No. 09/653,201, Applicant(s): Whittle Bryan, et al., Filing Date 08/31/2000.				
	C1215	<i>AutoSOCKS v2.1</i> , Datasheet, <a href="http://web.archive.org/web/19970212013409/www.aventail.com/prod/autoskds.html">http://web.archive.org/web/19970212013409/www.aventail.com/prod/autoskds.html</a>				
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	C1221	Virtual Private Networks – Assured Digital Incorporated – ADI 4500; <a href="http://web.archive.org/web/19990224050035/www.assured-digital.com/products/prodvpn/adia4500.htm">http://web.archive.org/web/19990224050035/www.assured-digital.com/products/prodvpn/adia4500.htm</a>				
	C1222	Accessware – The Third Wave in Network Security, Conclave from Internet Dynamics; <a href="http://web.archive.org/web/11980210013830/interdyn.com/Accessware.html">http://web.archive.org/web/11980210013830/interdyn.com/Accessware.html</a>				
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(17)  
ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.L./  
Petitioner Apple Inc. - Exhibit 1026, p. 3360





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Subst. for form 1449/PTO			<b>Complete if Known</b>		
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			Art Unit	2157	
			Examiner Name	Not yet assigned	
Sheet	1	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1000	5,311,593	05/10/1994	Carmi	
	A1001	5,511,122	04/23/1996	Atkinson	
	A1003	5,805,803	09/08/1998	Birrell et al.	
	A1004	5,822,434	10/13/1998	Caronni et al.	
	A1005	5,898,830	04/27/1999	Wesinger, Jr. et al.	
	A1006	60/134,547	05/17/1999	Victor Sheymov	
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	A1008	5,950,195	09/07/1999	Stockwell et al.	
	A1009	6,119,171	09/12/2000	Alkhatib	
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	A1018	6,055,574	04/25/2000	Smorodinsky et al.	

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes-Number + Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	B1000	WO 001/17775	03-30-2000	Science Applications International Corporation		Yes	No
	B1001	WO 00/70458	11-23-2000	Comsec Corporation			
	B1002	WO 01/016766	03-08-2001	Science Applications International Corporation			

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(1)  
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 Petitioner Apple Inc. - Exhibit 1026, p. 3361

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<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>					
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	C998	Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009, VirnetX Inc. and Science Applications International Corp. v. Microsoft Corporation,			
	C999	Appendix A of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.			
	C1000	Concordance Table For the References Cited in Tables on pages 6-15, 71-80 and 116-124 of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.			
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	C1002	DNS-related correspondence dated September 7, 1993 to September 20, 1993. (Pre KX, KX Records) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1003	R. Atkinson, "An Internetwork Authentication Architecture," Naval Research Laboratory, Center for High Assurance Computing Systems (8/5/93). (Atkinson NRL, KX Records)			
	C1004	Henning Schulzrinne, <i>Personal Mobility For Multimedia Services In The Internet</i> , Proceedings of the Interactive Distributed Multimedia Systems and Services European Workshop at 143 (1996). (Schulzrinne 96)			
	C1005	Microsoft Corp., <i>Microsoft Virtual Private Networking: Using Point-to-Point Tunneling Protocol for Low-Cost, Secure, Remote Access Across the Internet</i> (1996) (printed from 1998 PDC DVD-ROM). (Point to Point, Microsoft Prior Art VPN Technology)			
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	C1007	Goldschlag, et al., "Hiding Routing Information," Workshop on Information Hiding, Cambridge, UK (May 1996). (Goldschlag II, Onion Routing)			
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	C1009	J. M. Galvin, "Public Key Distribution with Secure DNS," Proceedings of the Sixth USENIX UNIX Security Symposium, San Jose, California, July 1996. (Galvin, DNSSEC)			
	C1010	J. Gilmore, et al. "Re: Key Management, anyone? (DNS Keying)," IPsec Working Group Mailing List Archives (8/96). (Gilmore DNS, FreeSWAN)			
	C1011	H. Orman, et al. "Re: 'Re: DNS? was Re: Key Management, anyone?'" IETF IPsec Working Group Mailing List Archive (8/96-9/96). (Orman DNS, FreeSWAN)			
	C1012	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2052 (October 1996). (RFC 2052, DNS SRV)			
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	C1013	Freier, et al. "The SSL Protocol Version 3.0," Transport Layer Security Working Group (November 18, 1996). (SSL, UNDERLYING SECURITY TECHNOLOGY)					
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	C1015	M.G. Reed, et al. "Proxies for Anonymous Routing," 12th Annual Computer Security Applications Conference, San Diego, CA, Dec. 9-13, 1996. (Reed, Onion Routing)					
	C1016	Kenneth F. Alden & Edward P. Wobber, <i>The AltaVista Tunnel: Using the Internet to Extend Corporate Networks</i> , Digital Technical Journal (1997) (Alden, AltaVista)					
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	C1019	Aventail Corp., "AutoSOCKS v. 2.1 Datasheet," available at <a href="http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html">http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html</a> (1997). (AutoSOCKS, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1020	Aventail Corp. "Aventail VPN Data Sheet," available at <a href="http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html">http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html</a> (1997). (Data Sheet, Aventail)					
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	C1023	Aventail Corp., "Socks Version 5," Aventail Whitepaper, available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/sockswp.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/sockswp.html</a> (1997). (Socks, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1024	Aventail Corp., "VPN Server V2.0 Administration Guide," (1997). (VPN, Aventail)					
	C1025	Goldschlag, et al. "Privacy on the Internet," Naval Research Laboratory, Center for High Assurance Computer Systems (1997). (Goldschlag I, Onion Routing)					
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			Examiner Name		Not yet assigned	
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	C1026	Microsoft Corp., <i>Installing Configuring and Using PPTP with Microsoft Clients and Servers</i> (1997). (Using PPTP, Microsoft Prior Art VPN Technology)				
	C1027	Microsoft Corp., <i>IP Security for Microsoft Windows NT Server 5.0</i> (1997) (printed from 1998 PDC DVD-ROM). (IP Security, Microsoft Prior Art VPN Technology)				
	C1028	Microsoft Corp., <i>Microsoft Windows NT Active Directory: An Introduction to the Next Generation Directory Services</i> (1997) (printed from 1998 PDC DVD-ROM). (Directory, Microsoft Prior Art VPN Technology)				
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	C1033	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (03/27/1997). (RFC 2543 Internet Draft 2) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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	C1039	Syverson, et al. "Private Web Browsing," Naval Research Laboratory, Center for High 8 Assurance Computer Systems (June 2, 1997). (Syverson, Onion Routing)			
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	C1047	"What ports does SSL use" available at <a href="http://stason.org/TULARC/security/ssl-talk/3-4-What-ports-does-ssl-use.html">stason.org/TULARC/security/ssl-talk/3-4-What-ports-does-ssl-use.html</a> (1998). (Ports, DNS SRV)			
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			Application Number		11/679,416	
			Filing Date		February 27, 2007	
			First Named Inventor		Victor Larson	
			Art Unit		2157	
			Examiner Name		Not yet assigned	
Sheet	6	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C1051	C. Huitema, 45 al. "Simple Gateway Control Protocol," Version 1.0 (May 5, 1998). (SGCP)				
	C1052	DISA "Secret Internet Protocol Router Network," SIPRNET Program Management Office (D3113) DISN Networks, DISN Transmission Services (May 8, 1998). (DISA, SIPRNET)				
	C1053	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (05/14/1998). (RFC 2543 Internet Draft 5) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1054	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (06/17/1998). (RFC 2543 Internet Draft 6) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1055	D. McDonald, et al. "PF_KEY Key Management API, Version 2," Network Working Group, RFC 2367 (July 1998). (RFC 2367)				
	C1056	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/16/1998). (RFC 2543 Internet Draft 7) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1057	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (08/07/1998). (RFC 2543 Internet Draft 8) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1058	Microsoft Corp., <i>Company Focuses on Quality and Customer Feedback</i> (August 18, 1998). (Focus, Microsoft Prior Art VPN Technology)				
	C1059	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (09/18/1998). (RFC 2543 Internet Draft 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1060	Atkinson, et al. "Security Architecture for the Internet Protocol," Network Working Group, RFC 2401 (November 1998). (RFC 2401, UNDERLYING SECURITY TECHNOLOGIES)				
	C1061	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/12/1998). (RFC 2543 Internet Draft 10) 9 <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1062	Donald Eastlake, <i>Domain Name System Security Extensions</i> , IETF DNS Security Working Group (December 1998). (DNSSEC-7)				
	C1063	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/15/1998). (RFC 2543 Internet Draft 11) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
EXAMINER /Krisna Lim/			DATE CONSIDERED 06/04/2009			

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	C1064	Aventail Corp., "Aventail Connect 3.1/2.6 Administrator's Guide," (1999). (Aventail Administrator 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1065	Aventail Corp., "Aventail Connect 3.1/2.6 User's Guide," (1999). (Aventail User 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1066	Aventail Corp., "Aventail ExtraWeb Server v3.2 Administrator's Guide," (1999). (Aventail ExtraWeb 3.2, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1067	Kaufman et al, "Implementing IPsec," (Copyright 1999). (Implementing IPSEC, VPN REFERENCES)					
	C1068	Network Solutions, Inc. "Enabling SSL," NSI Registry (1999). (Enabling SSL, UNDERLYING SECURITY TECHNOLOGIES)					
	C1069	Check Point Software Technologies Ltd. (1999) (Check Point, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1070	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , <draft-ietf-dnsind-frc2052bis-02.txt> (January 1999). (Gulbrandsen 99, DNS SRV)					
	C1071	C. Scott, et al. <i>Virtual Private Networks</i> , O'Reilly and Associates, Inc., 2nd ed. (Jan. 1999). (Scott VPNs)					
	C1072	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (01/15/1999). (RFC 2543 Internet Draft 12) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1073	Goldschlag, et al., "Onion Routing for Anonymous and Private Internet Connections," Naval Research Laboratory, Center for High Assurance Computer Systems (January 28, 1999). (Goldschlag III, Onion Routing)					
	C1074	H. Schulzrinne, "Internet Telephony: architecture and protocols – an IETF perspective," <i>Computer Networks</i> , Vol. 31, No. 3 (February 1999). (Telephony, Schulzrinne)					
	C1075	M. Handley, et al. "SIP: Session Initiation Protocol," Network Working Group, RFC 2543 and Internet Drafts (12/96-3/99). (Handley, RFC 2543)					
	C1076	FreeSWAN Project, <i>Linux FreeSWAN Compatibility Guide</i> (March 4, 1999). (FreeSWAN Compatibility Guide, FreeSWAN)					
	C1077	Telcordia Technologies, "ANX Release 1 Document Corrections," AIAG (May 11, 1999). (Telcordia, ANX)					
	C1078	Ken Hornstein & Jeffrey Altman, <i>Distributing Kerberos KDC and Realm Information with DNS</i> <draft-eitf-cat-krb-dns-locate-oo.txt> (June 21, 1999). (Hornstein, DNS SRV)					
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	C1079	Bhattacharya et. al. "An LDAP Schema for Configuration and Administration of IPsec Based Virtual Private Networks (VPNs)", IETF Internet Draft (October 1999). (Bhattacharya LDAP VPN)			
	C1080	B. Patel, et al. "DHCP Configuration of IPSEC Tunnel Mode," IPSEC Working Group, Internet Draft 02 (10/15/1999). (Patel)			
	C1081	Goncalves, et al. <i>Check Point FireWall -1 Administration Guide</i> , McGraw-Hill Companies (2000). (Goncalves, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1082	"Building a Microsoft VPN: A Comprehensive Collection of Microsoft Resources," FirstVPN, (Jan 2000). (FirstVPN Microsoft)			
	C1083	Gulbrandsen, Vixie, & Esibov, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2782 (February 2000). (RFC 2782, DNS SRV)			
	C1084	MITRE Organization, "Technical Description," Collaborative Operations in Joint Expeditionary Force Experiment (JEFX) 99 (February 2000). (MITRE, SIPRNET)			
	C1085	H. Schulzrinne, et al. "Application-Layer Mobility Using SIP," <i>Mobile Computing and Communications Review</i> , Vol. 4, No. 3. pp. 47-57 (July 2000). (Application, SIP)			
	C1086	Kindred et al, "Dynamic VPN Communities: Implementation and Experience," DARPA Information Survivability Conference and Exposition II (June 2001). (DARPA, VPN SYSTEMS)			
	C1087	ANX 101: Basic ANX Service Outline. (Outline, ANX)			
	C1088	ANX 201: Advanced ANX Service. (Advanced, ANX)			
	C1089	Appendix A: Certificate Profile for ANX IPsec Certificates. (Appendix, ANX)			
	C1090	Assured Digital Products. (Assured Digital) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1091	Aventail Corp., "Aventail AutoSOCKS the Client Key to Network Security," Aventail Corporation White Paper. (Network Security, Aventail)			
	C1092	Cindy Moran, "DISN Data Networks: Secret Internet Protocol Router Network (SIPRNet)." (Moran, SIPRNET)			
	C1093	Data Fellows F-Secure VPN+ (F-Secure VPN+)			
	C1094	"Interim Operational Systems Doctrine for the Remote Access Security Program (RASP) Secret Dial-In Solution. (RASP, SIPRNET)			
	C1095	<i>Onion Routing</i> , "Investigation of Route Selection Algorithms," available at <a href="http://www.onion-router.net/Archives/Route/index.html">http://www.onion-router.net/Archives/Route/index.html</a> . (Route Selection, Onion Routing)			
	C1096	Secure Computing, "Bullet-Proofing an Army Net," Washington Technology. (Secure, SIPRNET)			
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	C1097	SPARTA "Dynamic Virtual Private Network." (Sparta, VPN SYSTEMS)				
	C1098	Standard Operation Procedure for Using the 1910 Secure Modems. (Standard, SIPRNET)				
	C1099	Publicly available emails relating to FreeSWAN (MSFTVX00018833-MSFTVX00019206). (FreeSWAN emails, FreeSWAN)				
	C1100	Kaufman et al., "Implementing IPsec," (Copyright 1999) (Implementing IPsec)				
	C1101	Network Associates <i>Gauntlet Firewall For Unix User's Guide Version 5.0</i> (1999). (Gauntlet User's Guide – Unix, Firewall Products)				
	C1102	Network Associates <i>Gauntlet Firewall For Windows NT Getting Started Guide Version 5.0</i> (1999) (Gauntlet Getting Started Guide – NT, Firewall Products)				
	C1103	Network Associates <i>Gauntlet Firewall For Unix Getting Started Guide Version 5.0</i> (1999) (Gauntlet Unix Getting Started Guide, Firewall Products)				
	C1104	Network Associates <i>Release Notes Gauntlet Firewall for Unix 5.0</i> (March 19, 1999) (Gauntlet Unix Release Notes, Firewall Products)				
	C1105	Network Associates <i>Gauntlet Firewall For Windows NT Administrator's Guide Version 5.0</i> (1999) (Gauntlet NT Administrator's Guide, Firewall Products)				
	C1106	Trusted Information Systems, Inc. <i>Gauntlet Internet Firewall Firewall-to-Firewall Encryption Guide Version 3.1</i> (1996) (Gauntlet Firewall-to-Firewall, Firewall Products)				
	C1107	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)				
	C1108	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)				
	C1109	Dan Sterne <i>Dynamic Virtual Private Networks</i> (May 23, 2000) (Sterne DVPN, DVPN)				
	C1110	Darrell Kindred <i>Dynamic Virtual Private Networks (DVPN)</i> (December 21, 1999) (Kindred DVPN, DVPN)				
	C1111	Dan Sterne <i>et al. TIS Dynamic Security Perimeter Research Project Demonstration</i> (March 9, 1998) (Dynamic Security Perimeter, DVPN)				
	C1112	Darrell Kindred <i>Dynamic Virtual Private Networks Capability Description</i> (January 5, 2000) (Kindred DVPN Capability, DVPN) 11				
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	C1113	October 7, and 28 1997 email from Domenic J. Turchi Jr. (SPARTA00001712-1714, 1808-1811) (Turchi DVPN email, DVPN)			
	C1114	James Just & Dan Sterne <i>Security Quickstart Task Update</i> (February 5, 1997) (Security Quickstart, DVPN)			
	C1115	Virtual Private Network Demonstration dated March 21, 1998 (SPARTA00001844-54) (DVPN Demonstration, DVPN)			
	C1116	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.1 Plan</i> (March 10, 1998) (IFD 1.1, DVPN)			
	C1117	Microsoft Corp. Windows NT Server Product Documentation: Administration Guide – Connection Point Services, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx</a> (Connection Point Services) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows. Accordingly, upon information and belief, this reference is prior art to the patents-insuit.)			
	C1118	Microsoft Corp. Windows NT Server Product Documentation: Administration Kit Guide – Connection Manager, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.mspx</a> (Connection Manager) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1119	Microsoft Corp. Autodial Heuristics, <i>available at</i> <a href="http://support.microsoft.com/kb/164249">http://support.microsoft.com/kb/164249</a> (Autodial Heuristics) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1120	Microsoft Corp., Cariplo: Distributed Component Object Model, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx</a> (Cariplo I)			
	C1121	Marc Levy, COM Internet Services (Apr. 23, 1999), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx</a> (Levy)			
	C1122	Markus Horstmann and Mary Kirtland, DCOM Architecture (July 23, 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx</a> (Horstmann)			
	C1123	Microsoft Corp., DCOM: A Business Overview (Apr. 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx</a> (DCOM Business Overview I)			
	C1124	Microsoft Corp., DCOM Technical Overview (Nov. 1996), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx</a> (DCOM Technical Overview I)			
	C1125	Microsoft Corp., DCOM Architecture White Paper (1998) <i>available in</i> PDC DVD-ROM (DCOM Architecture)			
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(10)

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Petitioner Apple Inc. - Exhibit 1026, p. 3370

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	C1126	Microsoft Corp, DCOM – The Distributed Component Object Model, A Business Overview White Paper (Microsoft 1997) <i>available in</i> PDC DVD-ROM (DCOM Business Overview II)					
	C1127	Microsoft Corp., DCOM—Cariplo Home Banking Over The Internet White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (Cariplo II)					
	C1128	Microsoft Corp., DCOM Solutions in Action White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (DCOM Solutions in Action)					
	C1129	Microsoft Corp., DCOM Technical Overview White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (DCOM Technical Overview II)					
	C1130	125. Scott Suhy & Glenn Wood, DNS and Microsoft Windows NT 4.0, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx</a> (Suhy)					
	C1131	126. Aaron Skonnard, <i>Essential Winlnet</i> 313-423 (Addison Wesley Longman 1998) (Essential Winlnet)					
	C1132	Microsoft Corp. Installing, Configuring, and Using PPTP with Microsoft Clients and Servers, (1998) <i>available at</i> <a href="http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx">http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx</a> (Using PPTP)					
	C1133	Microsoft Corp., Internet Connection Services for MS RAS, Standard Edition, <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp</a> (Internet Connection Services I)					
	C1134	Microsoft Corp., Internet Connection Services for RAS, Commercial Edition, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrc.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrc.msp</a> (Internet Connection Services II)					
	C1135	Microsoft Corp., Internet Explorer 5 Corporate Deployment Guide – Appendix B:Enabling Connections with the Connection Manager Administration Kit, <i>available at</i> <a href="http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp">http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp</a> (IE5 Corporate Development)					
	C1136	Mark Minasi, <i>Mastering Windows NT Server 4</i> 1359-1442 (6th ed., January 15, 1999)(Mastering Windows NT Server)					
	C1137	<i>Hands On, Self-Paced Training for Supporting Version 4.0</i> 371-473 (Microsoft Press 1998) (Hands On)					
	C1138	Microsoft Corp., MS Point-to-Point Tunneling Protocol (Windows NT 4.0), <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp">http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp</a> (MS PPTP)					
	C1139	Kenneth Gregg, <i>et al.</i> , <i>Microsoft Windows NT Server Administrator's Bible</i> 173-206, 883-911, 974-1076 (IDG Books Worldwide 1999) (Gregg)					
	C1140	Microsoft Corp., Remote Access (Windows), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx">http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx</a> (Remote Access)					
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 Petitioner Apple Inc. - Exhibit 1026, p. 3371

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	C1141	Microsoft Corp., Understanding PPTP (Windows NT 4.0), <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.msp">http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.msp</a> (Understanding PPTP NT 4) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)					
	C1142	Microsoft Corp., Windows NT 4.0: Virtual Private Networking, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.msp">http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.msp</a> (NT4 VPN) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)					
	C1143	Anthony Northrup, <i>NT Network Plumbing: Routers, Proxies, and Web Services</i> 299-399 (IDG Books Worldwide 1998) (Network Plumbing)					
	C1144	Microsoft Corp., Chapter 1 – Introduction to Windows NT Routing with Routing and Remote Access Service, <i>Available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/ras40/rrasch01.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/ras40/rrasch01.msp</a> (Intro to RRAS) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.) 13					
	C1145	Microsoft Corp., Windows NT Server Product Documentation: Chapter 5 – Planning for Large-Scale Configurations, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.msp</a> (Large-Scale Configurations) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)					
	C1146	F-Secure, <i>F-Secure Evaluation Kit</i> (May 1999) (FSECURE 00000003) (Evaluation Kit 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1147	F-Secure, <i>F-Secure NameSurfer</i> (May 1999) (from FSECURE 00000003) (NameSurfer 3)					
	C1148	F-Secure, <i>F-Secure VPN Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (F-Secure VPN 3)					
	C1149	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (SSH Guide 3)					
	C1150	F-Secure, <i>F-Secure SSH2.0 for Windows NT and 95</i> (May 1999) (from FSECURE 00000003) (SSH 2.0 Guide 3)					
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				Application Number	11/679,416	
				Filing Date	February 27, 2007	
				First Named Inventor	Victor Larson	
				Art Unit	2157	
Sheet	13	of	17	Examiner Name	Not yet assigned	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C1151	F-Secure, <i>F-Secure VPN+ Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (VPN+ Guide 3)				
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	C1157	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (Sept. 1998) (from FSECURE 00000009) (F-Secure SSH 2.0 Guide 9)				
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	C1161	SafeNet, Inc., <i>VPN Policy Manager</i> (January 2000) (VPN Policy Manager)				
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	C1163	IRE, Inc., <i>SafeNet/Soft-PK Version 4</i> (March 28, 2000) (Soft-PK Version 4) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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Sheet	14	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
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	C1168	IRE, Inc., <i>SafeNet/VPN Policy Manager Quick Start Guide Version 1</i> (1999) (SafeNet VPN Policy Manager) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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	C1171	Ted Harwood, <i>Windows NT Terminal Server and Citrix Metaframe</i> (New Riders 1999) (Windows NT Harwood) 79				
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	C1174	156. <i>Finding Your Way Through the VPN Maze</i> (1999) ("PGP")				
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	C1178	WatchGuard Technologies, Inc., <i>MSS Firewall Specifications</i> (1999) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1179	WatchGuard Technologies, Inc., <i>Request for Information, Security Services</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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				Examiner Name	Not yet assigned
Sheet	15	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)
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	C1181	WatchGuard Technologies, Inc., <i>WatchGuard LiveSecurity for MSS Powerpoint</i> (Feb. 14 2000)			
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	C1186	DARPA, <i>Dynamic Virtual Private Network (VPN) Powerpoint</i>			
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	C1190	<i>Virtual Private Network Demonstration</i> (March 21, 1998)			
	C1191	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks (VPNs) and Integrated Security Management</i> (2000)			
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	C1195	Darrell Kindred et al., <i>Proposed Threads for IFE 3.1</i> (January 13, 2000)			
	C1196	<i>IFE 3.1 Technology Dependencies</i> (2000)			
	C1197	<i>IFE 3.1 Topology</i> (February 9, 2000)			
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	C1199	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation</i> (2000)			
	C1200	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.2</i> (2000)			
	C1201	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.3</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
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	C1205	David Johnson et. al., <i>A Guide To Microsoft Proxy Server 2.0</i> (1999) (Johnson, Microsoft Prior Art VPN Technology)			
	C1206	Microsoft Corporation, <i>Setting Server Parameters</i> (1997 (copied from Proxy Server 2.0 CD labeled MSFTVX00157288) (Setting Server Parameters, Microsoft Prior Art VPN Technology)			
	C1207	Kevin Schuler, <i>Microsoft Proxy Server 2</i> (1998) (Schuler, Microsoft Prior Art VPN Technology)			
	C1208	Erik Rozell et. al., <i>MCSE Proxy Server 2 Study Guide</i> (1998) (Rozell, Microsoft Prior 15 Art VPN Technology)			
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				First Named Inventor	Victor Larson
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				Examiner Name	Not yet assigned
Sheet	17	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)
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	C1209	M. Shane Stigler & Mark A Linsenbardt, <i>IIS 4 and Proxy Server 2</i> (1999) (Stigler, Microsoft Prior Art VPN Technology)			
	C1210	David G. Schaer, <i>MCSE Test Success: Proxy Server 2</i> (1998) (Schaer, Microsoft Prior Art VPN Technology)			
	C1211	John Savill, <i>The Windows NT and Windows 2000 Answer Book</i> (1999) (Savill, Microsoft Prior Art VPN Technology)			
	C1212	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)			
	C1213	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)			
	C1214	File History for U.S. Application Serial No. 09/653,201, Applicant(s): Whittle Bryan, et al., Filing Date 08/31/2000.			
	C1215	<i>AutoSOCKS v2.1</i> , Datasheet, <a href="http://web.archive.org/web/19970212013409/www.aventail.com/prod/autoskds.html">http://web.archive.org/web/19970212013409/www.aventail.com/prod/autoskds.html</a>			
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	C1218	Chapter 1: Introduction to Firewall Technology, Administration Guide; 12/19/07, <a href="http://www.books24x7.com/book/id_762/viewer_r.asp?bookid=762&amp;chunked=41065062">http://www.books24x7.com/book/id_762/viewer_r.asp?bookid=762&amp;chunked=41065062</a>			
	C1219	The TLS Protocol Version 1.0; January 1999; page 65 of 71.			
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	C1221	Virtual Private Networks – Assured Digital Incorporated – ADI 4500; <a href="http://web.archive.org/web/19990224050035/www.assured-digital.com/products/prodvpn/adia4500.htm">http://web.archive.org/web/19990224050035/www.assured-digital.com/products/prodvpn/adia4500.htm</a>			
	C1222	Accessware – The Third Wave in Network Security, Conclave from Internet Dynamics; <a href="http://web.archive.org/web/11980210013830/interdyn.com/Accessware.html">http://web.archive.org/web/11980210013830/interdyn.com/Accessware.html</a>			
	C1223	Extended System Press Release, Sept. 2, 1997; <i>Extended VPN Uses The Internet to Create Virtual Private Networks</i> , <a href="http://www.extendedsystems.com">www.extendedsystems.com</a>			
	C1224	Socks Version 5; Executive Summary; <a href="http://web.archive.org/web/199970620031945/www.aventail.com/educate/whitepaper/socks_wp.html">http://web.archive.org/web/199970620031945/www.aventail.com/educate/whitepaper/socks_wp.html</a>			
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	C1226	Emails from various individuals to Linux IPsec re: DNS-LDAP Splicing			
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BST99 1618785-1.077580.0015



5-5-09

11679416 - GAU: [Signature]

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	Art Unit	2157
Examiner Name	Not yet assigned	
Sheet 1 of 17	Docket Number	77580-015 (VRNK-1CP2DVCM)

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1000	5,311,593	05/10/1994	Carmi	
	A1001	5,511,122	04/23/1996	Atkinson	
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**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Code <sup>1</sup> -Number <sup>1</sup> -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	B1000	WO 001/17775	03-30-2000	Science Applications International Corporation			
	B1001	WO 00/70458	11-23-2000	Comsec Corporation			
	B1002	WO 01/016766	03-08-2001	Science Applications International Corporation			

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(1)  
 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.L./  
 Petitioner Apple Inc. - Exhibit 1026, p. 3378

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	C998	Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009, VirnetX Inc. and Science Applications International Corp. v. Microsoft Corporation,			
	C999	Appendix A of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.			
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	C1004	Henning Schulzrinne, <i>Personal Mobility For Multimedia Services In The Internet</i> , Proceedings of the Interactive Distributed Multimedia Systems and Services European Workshop at 143 (1996). (Schulzrinne 96)			
	C1005	Microsoft Corp., <i>Microsoft Virtual Private Networking: Using Point-to-Point Tunneling Protocol for Low-Cost, Secure, Remote Access Across the Internet</i> (1996) (printed from 1998 PDC DVD-ROM). (Point to Point, Microsoft Prior Art VPN Technology)			
	C1006	"Safe Surfing: How to Build a Secure World Wide Web Connection," IBM Technical Support Organization, (March 1996). (Safe Surfing, WEBSITE ART)			
	C1007	Goldschlag, et al., "Hiding Routing Information," Workshop on Information Hiding, Cambridge, UK (May 1996). (Goldschlag II, Onion Routing)			
	C1008	"IPSec Minutes From Montreal", IPSEC Working Group Meeting Notes, <a href="http://www.sandleman.ca/ipsec/1996/08/msg00018.html">http://www.sandleman.ca/ipsec/1996/08/msg00018.html</a> (June 1996). (IPSec Minutes, FreeS/WAN)			
	C1009	J. M. Galvin, "Public Key Distribution with Secure DNS," Proceedings of the Sixth USENIX UNIX Security Symposium, San Jose, California, July 1996. (Galvin, DNSSEC)			
	C1010	J. Gilmore, et al. "Re: Key Management, anyone? (DNS Keying)," IPsec Working Group Mailing List Archives (8/96). (Gilmore DNS, FreeS/WAN)			
	C1011	H. Orman, et al. "Re: 'Re: DNS? was Re: Key Management, anyone?'" IETF IPsec Working Group Mailing List Archive (8/96-9/96). (Orman DNS, FreeS/WAN)			
	C1012	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2052 (October 1996). (RFC 2052, DNS SRV)			
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Petitioner Apple Inc. - Exhibit 1026, p. 3379

Subst. for form 1449/PTO <b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				<b>Complete if Known</b>		
				Application Number	11/679,416	
				Filing Date	February 27, 2007	
				First Named Inventor	Victor Larson	
				Art Unit	2157	
				Examiner Name	Not yet assigned	
Sheet	3	Of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
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	C1013	Freier, et al. "The SSL Protocol Version 3.0," Transport Layer Security Working Group (November 18, 1996). (SSL, UNDERLYING SECURITY TECHNOLOGY)				
	C1014	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/02/1996). (RFC 2543 Internet Draft 1) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1015	M.G. Reed, et al. "Proxies for Anonymous Routing," 12th Annual Computer Security Applications Conference, San Diego, CA, Dec. 9-13, 1996. (Reed, Onion Routing)				
	C1016	Kenneth F. Alden & Edward P. Wobber, <i>The AltaVista Tunnel: Using the Internet to Extend Corporate Networks</i> , Digital Technical Journal (1997) (Alden, AltaVista)				
	C1017	Automotive Industry Action Group, "ANX Release 1 Document Publication," AIAG (1997). (AIAG, ANX)				
	C1018	Automotive Industry Action Group, "ANX Release 1 Draft Document Publication," AIAG Publications (1997). (AIAG Release, ANX)				
	C1019	Aventail Corp., "AutoSOCKS v. 2.1 Datasheet," available at <a href="http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html">http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html</a> (1997). (AutoSOCKS, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1020	Aventail Corp. "Aventail VPN Data Sheet," available at <a href="http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html">http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html</a> (1997). (Data Sheet, Aventail)				
	C1021	Aventail Corp., "Directed VPN Vs. Tunnel," available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/directvpn.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/directvpn.html</a> (1997). (Directed VPN, Aventail)				
	C1022	Aventail Corp., "Managing Corporate Access to the Internet," Aventail AutoSOCKS White Paper available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/ipmwp.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/ipmwp.html</a> (1997). (Corporate Access, Aventail)				
	C1023	Aventail Corp., "Socks Version 5," Aventail Whitepaper, available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/soc kswp.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/soc kswp.html</a> (1997). (Socks, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1024	Aventail Corp., "VPN Server V2.0 Administration Guide," (1997). (VPN, Aventail)				
	C1025	Goldschlag, et al. "Privacy on the Internet," Naval Research Laboratory, Center for High Assurance Computer Systems (1997). (Goldschlag I, Onion Routing)				
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				Examiner Name		Not yet assigned	
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	C1026	Microsoft Corp., <i>Installing Configuring and Using PPTP with Microsoft Clients and Servers</i> (1997). (Using PPTP, Microsoft Prior Art VPN Technology)					
	C1027	Microsoft Corp., <i>IP Security for Microsoft Windows NT Server 5.0</i> (1997) (printed from 1998 PDC DVD-ROM). (IP Security, Microsoft Prior Art VPN Technology)					
	C1028	Microsoft Corp., <i>Microsoft Windows NT Active Directory: An Introduction to the Next Generation Directory Services</i> (1997) (printed from 1998 PDC DVD-ROM). (Directory, Microsoft Prior Art VPN Technology)					
	C1029	Microsoft Corp., <i>Routing and Remote Access Service for Windows NT Server New Opportunities Today and Looking Ahead</i> (1997) (printed from 1998 PDC DVD-ROM). (Routing, Microsoft Prior Art VPN Technology)					
	C1030	Microsoft Corp., <i>Understanding Point-to-Point Tunneling Protocol PPTP</i> (1997) (printed from 1998 PDC DVD-ROM). (Understanding PPTP, Microsoft Prior Art VPN Technology)					
	C1031	J. Mark Smith et al., <i>Protecting a Private Network: The AltaVista Firewall</i> , Digital Technical Journal (1997). (Smith, AltaVista)					
	C1032	Naganand Doraswamy <i>Implementation of Virtual Private Networks (VPNs) with IP Security</i> , <draft-ietf-ipsec-vpn-00.txt> (March 12, 1997). (Doraswamy)					
	C1033	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (03/27/1997). (RFC 2543 Internet Draft 2) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1034	Aventail Corp., "Aventail and Cybersafe to Provide Secure Authentication For Internet and Intranet Communication," Press Release, April 3, 1997. (Secure Authentication, Aventail)					
	C1035	D. Wagner, et al. "Analysis of the SSL 3.0 Protocol," (April 15, 1997). (Analysis, UNDERLYING SECURITY TECHNOLOGIES)					
	C1036	Automotive Industry Action Group, "ANXO Certification Authority Service and Directory Service Definition for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (May 9, 1997). (AIAG Definition, ANX)					
	C1037	Automotive Industry Action Group, "ANXO Certification Process and ANX Registration Process Definition for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (May 9, 1997). (AIAG Certification, ANX)					
	C1038	Aventail Corp., "Aventail Announces the First VPN Solution to Assure Interoperability Across Emerging Security Protocols," June 2, 1997. (First VPN, Aventail)					
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	C1039	Syverson, et al. "Private Web Browsing," Naval Research Laboratory, Center for High 8 Assurance Computer Systems (June 2, 1997). (Syverson, Onion Routing)			
	C1040	Bellcore, "Metrics, Criteria, and Measurement Technique Requirements for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (June 16, 1997). (AIAG Requirements, ANX)			
	C1041	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/31/1997). (RFC 2543 Internet Draft 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1042	R. Atkinson, "Key Exchange Delegation Record for the DNS," Network Working Group, RFC 2230 (November 1997). (RFC 2230, KX Records)			
	C1043	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/11/1997). (RFC 2543 Internet Draft 4) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1044	1998 Microsoft Professional Developers Conference DVD ("1998 PDC DVD-ROM") (including screenshots captured therefrom and produced as MSFTVX 00018827-00018832). (Conference, Microsoft Prior Art VPN Technology)			
	C1045	Microsoft Corp., <i>Virtual Private Networking An Overview</i> (1998) (printed from 1998 PDC DVD-ROM) (Overview, Microsoft Prior Art VPN Technology)			
	C1046	Microsoft Corp., <i>Windows NT 5.0 Beta Has Public Premiere at Seattle Mini-Camp Seminar attendees get first look at the performance and capabilities of Windows NT 5.0</i> (1998) (available at <a href="http://hap/www.microsoft.com/presspass/features/1998/10-19nt5.mspxpfalse">hap/www.microsoft.com/presspass/features/1998/10-19nt5.mspxpfalse</a> ). (NT Beta, Microsoft Prior Art VPN Technology)			
	C1047	"What ports does SSL use" available at <a href="http://stason.org/TULARC/security/ssl-talk/3-4-What-ports-does-ssl-use.html">stason.org/TULARC/security/ssl-talk/3-4-What-ports-does-ssl-use.html</a> (1998). (Ports, DNS SRV)			
	C1048	Aventail Corp., "Aventail VPN V2.6 Includes Support for More Than Ten Authentication Methods Making Extranet VPN Development Secure and Simple," Press Release, January 19, 1998. (VPN V2.6, Aventail)			
	C1049	R. G. Moskowitz, "Network Address Translation Issues with IPsec," Internet Draft, Internet Engineering Task Force, February 6, 1998. (Moskowitz)			
	C1050	H. Schulzrinne, et al, "Internet Telephony Gateway Location," Proceedings of IEEE INfocom '98, The Conference on Computer Communications, Vol. 2 ( March 29 - April 2, 1998). (Gateway, Schulzrinne)			
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	C1051	C. Huitema, 45 al. "Simple Gateway Control Protocol," Version 1.0 (May 5, 1998). (SGCP)					
	C1052	DISA "Secret Internet Protocol Router Network," SIPRNET Program Management Office (D3113) DISN Networks, DISN Transmission Services (May 8, 1998). (DISA, SIPRNET)					
	C1053	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (05/14/1998). (RFC 2543 Internet Draft 5) [Due to difficulty locating this reference, a copy has not been provided]					
	C1054	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (06/17/1998). (RFC 2543 Internet Draft 6) [Due to difficulty locating this reference, a copy has not been provided]					
	C1055	D. McDonald, et al. "PF_KEY Key Management API, Version 2," Network Working Group, RFC 2367 (July 1998). (RFC 2367)					
	C1056	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/16/1998). (RFC 2543 Internet Draft 7) [Due to difficulty locating this reference, a copy has not been provided]					
	C1057	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (08/07/1998). (RFC 2543 Internet Draft 8) [Due to difficulty locating this reference, a copy has not been provided]					
	C1058	Microsoft Corp., <i>Company Focuses on Quality and Customer Feedback</i> (August 18, 1998). (Focus, Microsoft Prior Art VPN Technology)					
	C1059	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (09/18/1998). (RFC 2543 Internet Draft 9) [Due to difficulty locating this reference, a copy has not been provided]					
	C1060	Atkinson, et al. "Security Architecture for the Internet Protocol," Network Working Group, RFC 2401 (November 1998). (RFC 2401, UNDERLYING SECURITY TECHNOLOGIES)					
	C1061	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/12/1998). (RFC 2543 Internet Draft 10) 9 [Due to difficulty locating this reference, a copy has not been provided]					
	C1062	Donald Eastlake, <i>Domain Name System Security Extensions</i> , IETF DNS Security Working Group (December 1998). (DNSSEC-7)					
	C1063	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/15/1998). (RFC 2543 Internet Draft 11) [Due to difficulty locating this reference, a copy has not been provided]					
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	C1064	Aventail Corp., "Aventail Connect 3.1/2.6 Administrator's Guide," (1999). (Aventail Administrator 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1065	Aventail Corp., "Aventail Connect 3.1/2.6 User's Guide," (1999). (Aventail User 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1066	Aventail Corp., "Aventail ExtraWeb Server v3.2 Administrator's Guide," (1999). (Aventail ExtraWeb 3.2, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1067	Kaufman et al, "Implementing IPsec," (Copyright 1999). (Implementing IPSEC, VPN REFERENCES)					
	C1068	Network Solutions, Inc. "Enabling SSL," NSI Registry (1999). (Enabling SSL, UNDERLYING SECURITY TECHNOLOGIES)					
	C1069	Check Point Software Technologies Ltd. (1999) (Check Point, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1070	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , <draft-ietf-dnsind-frc2052bis-02.txt> (January 1999). (Gulbrandsen 99, DNS SRV)					
	C1071	C. Scott, et al. <i>Virtual Private Networks</i> , O'Reilly and Associates, Inc., 2nd ed. (Jan. 1999). (Scott VPNs)					
	C1072	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (01/15/1999). (RFC 2543 Internet Draft 12) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1073	Goldschlag, et al., "Onion Routing for Anonymous and Private Internet Connections," Naval Research Laboratory, Center for High Assurance Computer Systems (January 28, 1999). (Goldschlag III, Onion Routing)					
	C1074	H. Schulzrinne, "Internet Telephony: architecture and protocols – an IETF perspective," <i>Computer Networks</i> , Vol. 31, No. 3 (February 1999). (Telephony, Schulzrinne)					
	C1075	M. Handley, et al. "SIP: Session Initiation Protocol," Network Working Group, RFC 2543 and Internet Drafts (12/96-3/99). (Handley, RFC 2543)					
	C1076	FreeSWAN Project, <i>Linux FreeSWAN Compatibility Guide</i> (March 4, 1999). (FreeSWAN Compatibility Guide, FreeSWAN)					
	C1077	Telcordia Technologies, "ANX Release 1 Document Corrections," AIAG (May 11, 1999). (Telcordia, ANX)					
	C1078	Ken Hornstein & Jeffrey Altman, <i>Distributing Kerberos KDC and Realm Information with DNS</i> <draft-ietf-cat-krb-dns-locate-oo.txt> (June 21, 1999). (Hornstein, DNS SRV)					
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	C1079	Bhattacharya et. al. "An LDAP Schema for Configuration and Administration of IPsec Based Virtual Private Networks (VPNs)", IETF Internet Draft (October 1999). (Bhattacharya LDAP VPN)						
	C1080	B. Patel, et al. "DHCP Configuration of IPSEC Tunnel Mode," IPSEC Working Group, Internet Draft 02 (10/15/1999). (Patel)						
	C1081	Goncalves, et al. <i>Check Point FireWall -1 Administration Guide</i> , McGraw-Hill Companies (2000). (Goncalves, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>						
	C1082	"Building a Microsoft VPN: A Comprehensive Collection of Microsoft Resources," FirstVPN, (Jan 2000). (FirstVPN Microsoft)						
	C1083	Gulbrandsen, Vixie, & Esibov, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2782 (February 2000). (RFC 2782, DNS SRV)						
	C1084	MITRE Organization, "Technical Description," Collaborative Operations in Joint Expeditionary Force Experiment (JEFX) 99 (February 2000). (MITRE, SIPRNET)						
	C1085	H. Schulzrinne, et al. "Application-Layer Mobility Using SIP," <i>Mobile Computing and Communications Review</i> , Vol. 4, No. 3. pp. 47-57 (July 2000). (Application, SIP)						
	C1086	Kindred et al, "Dynamic VPN Communities: Implementation and Experience," DARPA Information Survivability Conference and Exposition II (June 2001). (DARPA, VPN SYSTEMS)						
	C1087	ANX 101: Basic ANX Service Outline. (Outline, ANX)						
	C1088	ANX 201: Advanced ANX Service. (Advanced, ANX)						
	C1089	Appendix A: Certificate Profile for ANX IPsec Certificates. (Appendix, ANX)						
	C1090	Assured Digital Products. (Assured Digital) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>						
	C1091	Aventail Corp., "Aventail AutoSOCKS the Client Key to Network Security," Aventail Corporation White Paper. (Network Security, Aventail)						
	C1092	Cindy Moran, "DISN Data Networks: Secret Internet Protocol Router Network (SIPRNet)." (Moran, SIPRNET)						
	C1093	Data Fellows F-Secure VPN+ (F-Secure VPN+)						
	C1094	"Interim Operational Systems Doctrine for the Remote Access Security Program (RASP) Secret Dial-In Solution. (RASP, SIPRNET)						
	C1095	<i>Onion Routing</i> , "Investigation of Route Selection Algorithms," available at <a href="http://www.onion-router.net/Archives/Route/index.html">http://www.onion-router.net/Archives/Route/index.html</a> . (Route Selection, Onion Routing)						
	C1096	Secure Computing, "Bullet-Proofing an Army Net," Washington Technology. (Secure, SIPRNET)						
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	C1097	SPARTA "Dynamic Virtual Private Network." (Sparta, VPN SYSTEMS)			
	C1098	Standard Operation Procedure for Using the 1910 Secure Modems. (Standard, SIPRNET)			
	C1099	Publicly available emails relating to FreeSWAN (MSFTVX00018833-MSFTVX00019206). (FreeSWAN emails, FreeSWAN)			
	C1100	Kaufman et al., "Implementing IPsec," (Copyright 1999) (Implementing IPsec)			
	C1101	Network Associates <i>Gauntlet Firewall For Unix User's Guide Version 5.0</i> (1999). (Gauntlet User's Guide - Unix, Firewall Products)			
	C1102	Network Associates <i>Gauntlet Firewall For Windows NT Getting Started Guide Version 5.0</i> (1999) (Gauntlet Getting Started Guide - NT, Firewall Products)			
	C1103	Network Associates <i>Gauntlet Firewall For Unix Getting Started Guide Version 5.0</i> (1999) (Gauntlet Unix Getting Started Guide, Firewall Products)			
	C1104	Network Associates <i>Release Notes Gauntlet Firewall for Unix 5.0</i> (March 19, 1999) (Gauntlet Unix Release Notes, Firewall Products)			
	C1105	Network Associates <i>Gauntlet Firewall For Windows NT Administrator's Guide Version 5.0</i> (1999) (Gauntlet NT Administrator's Guide, Firewall Products)			
	C1106	Trusted Information Systems, Inc. <i>Gauntlet Internet Firewall Firewall-to-Firewall Encryption Guide Version 3.1</i> (1996) (Gauntlet Firewall-to-Firewall, Firewall Products)			
	C1107	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)			
	C1108	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)			
	C1109	Dan Sterne <i>Dynamic Virtual Private Networks</i> (May 23, 2000) (Sterne DVPN, DVPN)			
	C1110	Darrell Kindred <i>Dynamic Virtual Private Networks (DVPN)</i> (December 21, 1999) (Kindred DVPN, DVPN)			
	C1111	Dan Sterne <i>et. al. TIS Dynamic Security Perimeter Research Project Demonstration</i> (March 9, 1998) (Dynamic Security Perimeter, DVPN)			
	C1112	Darrell Kindred <i>Dynamic Virtual Private Networks Capability Description</i> (January 5, 2000) (Kindred DVPN Capability, DVPN) 11			
EXAMINER /Krisna Lim/			DATE CONSIDERED 06/04/2009		

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				First Named Inventor	Victor Larson	
				Art Unit	2157	
Examiner Name	Not yet assigned					
Sheet	10	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C1113	October 7, and 28 1997 email from Domenic J. Turchi Jr. (SPARTA00001712-1714, 1808-1811) (Turchi DVPN email, DVPN)				
	C1114	James Just & Dan Sterne <i>Security Quickstart Task Update</i> (February 5, 1997) (Security Quickstart, DVPN)				
	C1115	Virtual Private Network Demonstration dated March 21, 1998 (SPARTA00001844-54) (DVPN Demonstration, DVPN)				
	C1116	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.1 Plan</i> (March 10, 1998) (IFD 1.1, DVPN)				
	C1117	Microsoft Corp. Windows NT Server Product Documentation: Administration Guide – Connection Point Services, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx</a> (Connection Point Services) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1118	Microsoft Corp. Windows NT Server Product Documentation: Administration Kit Guide – Connection Manager, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.msp</a> (Connection Manager) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1119	Microsoft Corp. Autodial Heuristics, <i>available at</i> <a href="http://support.microsoft.com/kb/164249">http://support.microsoft.com/kb/164249</a> (Autodial Heuristics) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1120	Microsoft Corp., Cariplo: Distributed Component Object Model, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx</a> (Cariplo I)				
	C1121	Marc Levy, COM Internet Services (Apr. 23, 1999), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx</a> (Levy)				
	C1122	Markus Horstmann and Mary Kirtland, DCOM Architecture (July 23, 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx</a> (Horstmann)				
	C1123	Microsoft Corp., DCOM: A Business Overview (Apr. 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx</a> (DCOM Business Overview I)				
	C1124	Microsoft Corp., DCOM Technical Overview (Nov. 1996), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx</a> (DCOM Technical Overview I)				
	C1125	Microsoft Corp., DCOM Architecture White Paper (1998) <i>available in</i> PDC DVD-ROM (DCOM Architecture)				
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(10)  
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 Petitioner Apple Inc. - Exhibit 1026, p. 3387

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				Art Unit	2157	
				Examiner Name	Not yet assigned	
Sheet	11	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
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	C1126	Microsoft Corp, DCOM – The Distributed Component Object Model, A Business Overview White Paper (Microsoft 1997) <i>available in</i> PDC DVD-ROM (DCOM Business Overview II)				
	C1127	Microsoft Corp., DCOM—Cariplo Home Banking Over The Internet White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (Cariplo II)				
	C1128	Microsoft Corp., DCOM Solutions in Action White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (DCOM Solutions in Action)				
	C1129	Microsoft Corp., DCOM Technical Overview White Paper (Microsoft 1996) <i>available in</i> 12 PDC DVD-ROM (DCOM Technical Overview II)				
	C1130	125. Scott Suhy & Glenn Wood, DNS and Microsoft Windows NT 4.0, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx</a> (Suhy)				
	C1131	126. Aaron Skonnard, <i>Essential Winlnet</i> 313-423 (Addison Wesley Longman 1998) (Essential Winlnet)				
	C1132	Microsoft Corp. Installing, Configuring, and Using PPTP with Microsoft Clients and Servers, (1998) <i>available at</i> <a href="http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx">http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx</a> (Using PPTP)				
	C1133	Microsoft Corp., Internet Connection Services for MS RAS, Standard Edition, <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp</a> (Internet Connection Services I)				
	C1134	Microsoft Corp., Internet Connection Services for RAS, Commercial Edition, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp</a> (Internet Connection Services II)				
	C1135	Microsoft Corp., Internet Explorer 5 Corporate Deployment Guide – Appendix B: Enabling Connections with the Connection Manager Administration Kit, <i>available at</i> <a href="http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp">http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp</a> (IE5 Corporate Development)				
	C1136	Mark Minasi, <i>Mastering Windows NT Server 4</i> 1359-1442 (6th ed., January 15, 1999)(Mastering Windows NT Server)				
	C1137	<i>Hands On, Self-Paced Training for Supporting Version 4.0</i> 371-473 (Microsoft Press 1998) (Hands On)				
	C1138	Microsoft Corp., MS Point-to-Point Tunneling Protocol (Windows NT 4.0), <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp">http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp</a> (MS PPTP)				
	C1139	Kenneth Gregg, <i>et al.</i> , <i>Microsoft Windows NT Server Administrator's Bible</i> 173-206, 883-911, 974-1076 (IDG Books Worldwide 1999) (Gregg)				
	C1140	Microsoft Corp., Remote Access (Windows), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx">http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx</a> (Remote Access)				
EXAMINER /Krisna Lim/				DATE CONSIDERED 06/04/2009		

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(11)

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 Petitioner Apple Inc. - Exhibit 1026, p. 3388

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				Filing Date		February 27, 2007	
				First Named Inventor		Victor Larson	
				Art Unit		2157	
				Examiner Name		Not yet assigned	
Sheet	12	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)		
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	C1141	Microsoft Corp., Understanding PPTP (Windows NT 4.0), available at <a href="http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.mspx">http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.mspx</a> (Understanding PPTP NT 4) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)					
	C1142	Microsoft Corp., Windows NT 4.0: Virtual Private Networking, available at <a href="http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.mspx">http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.mspx</a> (NT4 VPN) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)					
	C1143	Anthony Northrup, <i>NT Network Plumbing: Routers, Proxies, and Web Services</i> 299-399 (IDG Books Worldwide 1998) (Network Plumbing)					
	C1144	Microsoft Corp., Chapter 1 – Introduction to Windows NT Routing with Routing and Remote Access Service, Available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch01.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch01.mspx</a> (Intro to RRAS) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.) 13					
	C1145	Microsoft Corp., Windows NT Server Product Documentation: Chapter 5 – Planning for Large-Scale Configurations, available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.mspx</a> (Large-Scale Configurations) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)					
	C1146	F-Secure, <i>F-Secure Evaluation Kit</i> (May 1999) (FSECURE 00000003) (Evaluation Kit 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1147	F-Secure, <i>F-Secure NameSurfer</i> (May 1999) (from FSECURE 00000003) (NameSurfer 3)					
	C1148	F-Secure, <i>F-Secure VPN Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (F-Secure VPN 3)					
	C1149	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (SSH Guide 3)					
	C1150	F-Secure, <i>F-Secure SSH2.0 for Windows NT and 95</i> (May 1999) (from FSECURE 00000003) (SSH 2.0 Guide 3)					
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	C1151	F-Secure, <i>F-Secure VPN+ Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (VPN+ Guide 3)					
	C1152	F-Secure, <i>F-Secure VPN+ 4.1</i> (1999) (from FSECURE 00000006) (VPN+ 4.1 Guide 6)					
	C1153	F-Secure, <i>F-Secure SSH</i> (1996) (from FSECURE 00000006) (F-Secure SSH 6)					
	C1154	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (1998) (from FSECURE 00000006) (F-Secure SSH 2.0 Guide 6)					
	C1155	F-Secure, <i>F-Secure Evaluation Kit</i> (Sept. 1998) (FSECURE 00000009) (Evaluation Kit 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1156	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (Sept. 1998) (from FSECURE 00000009) (SSH Guide 9)					
	C1157	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (Sept. 1998) (from FSECURE 00000009) (F-Secure SSH 2.0 Guide 9)					
	C1158	F-Secure, <i>F-Secure VPN+</i> (Sept. 1998) (from FSECURE 00000009) (VPN+ Guide 9)					
	C1159	F-Secure, <i>F-Secure Management Tools, Administrator's Guide</i> (1999) (from FSECURE 00000003) (F-Secure Management Tools)					
	C1160	F-Secure, <i>F-Secure Desktop, User's Guide</i> (1997) (from FSECURE 00000009) (FSecure Desktop User's Guide)					
	C1161	SafeNet, Inc., <i>VPN Policy Manager</i> (January 2000) (VPN Policy Manager)					
	C1162	F-Secure, <i>F-Secure VPN+ for Windows NT 4.0</i> (1998) (from FSECURE 00000009) (FSecure VPN+)					
	C1163	IRE, Inc., <i>SafeNet/Soft-PK Version 4</i> (March 28, 2000) (Soft-PK Version 4) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1164	IRE/SafeNet Inc., <i>VPN Technologies Overview</i> (March 28, 2000) (Safenet VPN Overview) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1165	IRE, Inc., <i>SafeNet / Security Center Technical Reference Addendum</i> (June 22, 1999) (Safenet Addendum)					
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	C1166	IRE, Inc., <i>System Description for VPN Policy Manager and SafeNet/SoftPK</i> (March 30, 2000) (VPN Policy Manager System Description)							
	C1167	IRE, Inc., <i>About SafeNet / VPN Policy Manager</i> (1999) (About Safenet VPN Policy Manager)							
	C1168	IRE, Inc., <i>SafeNet/VPN Policy Manager Quick Start Guide Version 1</i> (1999) (SafeNet VPN Policy Manager) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>							
	C1169	Trusted Information Systems, Inc., <i>Gauntlet Internet Firewall, Firewall Product Functional Summary</i> (July 22, 1996) (Gauntlet Functional Summary)							
	C1170	Trusted Information Systems, Inc., <i>Running the Gauntlet Internet Firewall, An Administrator's Guide to Gauntlet Version 3.0</i> (May 31, 1995) (Running the Gauntlet Internet Firewall)							
	C1171	Ted Harwood, <i>Windows NT Terminal Server and Citrix Metaframe</i> (New Riders 1999) (Windows NT Harwood) 79							
	C1172	Todd W. Mathers and Shawn P. Genoway, <i>Windows NT Thing Client Solutions: Implementing Terminal Server and Citrix MetaFrame</i> (Macmillan Technical Publishing 1999) (Windows NT Mathers)							
	C1173	Bernard Aboba et al., <i>Securing L2TP using IPSEC</i> (February 2, 1999)							
	C1174	156. <i>Finding Your Way Through the VPN Maze</i> (1999) ("PGP")							
	C1175	Linux FreeSWAN Overview (1999) (Linux FreeSWAN) Overview)							
	C1176	TimeStep, <i>The Business Case for Secure VPNs</i> (1998) ("TimeStep")							
	C1177	WatchGuard Technologies, Inc., <i>WatchGuard Firebox System Powerpoint</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>							
	C1178	WatchGuard Technologies, Inc., <i>MSS Firewall Specifications</i> (1999) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>							
	C1179	WatchGuard Technologies, Inc., <i>Request for Information, Security Services</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>							
	C1180	WatchGuard Technologies, Inc., <i>Protecting the Internet Distributed Enterprise, White Paper</i> (February 2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>							
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	C1181	WatchGuard Technologies, Inc., <i>WatchGuard LiveSecurity for MSS Powerpoint</i> (Feb. 14 2000)					
	C1182	WatchGuard Technologies, Inc., <i>MSS Version 2.5, Add-On for WatchGuard SOHO Release Notes</i> (July 21, 2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1183	Air Force Research Laboratory, <i>Statement of Work for Information Assurance System Architecture and Integration, PR No. N-8-6106 (Contract No. F30602-98-C-0012)</i> (January 29, 1998)					
	C1184	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.2 Report, Rev. 1.0</i> (September 21, 1998)					
	C1185	BBN Information Assurance Contract, <i>TIS Labs Monthly Status Report</i> (March 16-April 30, 1998)					
	C1186	DARPA, <i>Dynamic Virtual Private Network (VPN) Powerpoint</i>					
	C1187	GTE Internetworking, <i>Contractor's Program Progress Report</i> (March 16-April 30, 1998)					
	C1188	Darrell Kindred, <i>Dynamic Virtual Private Networks (DVPN) Countermeasure Characterization</i> (January 30, 2001)					
	C1189	<i>Virtual Private Networking Countermeasure Characterization</i> (March 30, 2000)					
	C1190	<i>Virtual Private Network Demonstration</i> (March 21, 1998)					
	C1191	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks (VPNs) and Integrated Security Management</i> (2000)					
	C1192	Information Assurance/NAI Labs, <i>Create/Add DVPN Enclave</i> (2000)					
	C1193	NAI Labs, <i>IFE 3.1 Integration Demo</i> (2000)					
	C1194	Information Assurance, <i>Science Fair Agenda</i> (2000)					
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Subst. for form 1449/PTO <b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>		
				Application Number	11/679,416	
				Filing Date	February 27, 2007	
				First Named Inventor	Victor Larson	
				Art Unit	2157	
Examiner Name	Not yet assigned					
Sheet	16	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
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	C1196	<i>IFE 3.1 Technology Dependencies</i> (2000)				
	C1197	<i>IFE 3.1 Topology</i> (February 9, 2000)				
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	C1199	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation</i> (2000)				
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	C1201	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.3</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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	C1203	Network Associates Products – <i>PGP Total Network Security Suite, Dynamic Virtual Private Networks</i> (1999)				
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	C1205	David Johnson et. al., <i>A Guide To Microsoft Proxy Server 2.0</i> (1999) (Johnson, Microsoft Prior Art VPN Technology)				
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	C1207	Kevin Schuler, <i>Microsoft Proxy Server 2</i> (1998) (Schuler, Microsoft Prior Art VPN Technology)				
	C1208	Erik Rozell et. al., <i>MCSE Proxy Server 2 Study Guide</i> (1998) (Rozell, Microsoft Prior 15 Art VPN Technology)				
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	C1213	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)					
	C1214	File History for U.S. Application Serial No. 09/653,201, Applicant(s): Whittle Bryan, et al., Filing Date 08/31/2000.					
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	C1221	Virtual Private Networks – Assured Digital Incorporated – ADI 4500; <a href="http://web.archive.org/web/19990224050035/www.assured-digital.com/products/prodvpn/adia4500.htm">http://web.archive.org/web/19990224050035/www.assured-digital.com/products/prodvpn/adia4500.htm</a>					
	C1222	Accessware – The Third Wave in Network Security, Conclave from Internet Dynamics; <a href="http://web.archive.org/web/11980210013830/interdyn.com/Accessware.html">http://web.archive.org/web/11980210013830/interdyn.com/Accessware.html</a>					
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				Art Unit	2157	
Examiner Name	Not yet assigned					
Sheet	1	of	17	Docket Number	77580-015 (VRNK-1CP2DVCM)	

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Codez (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1000	5,311,593	05/10/1994	Carmi	
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	A1003	5,805,803	09/08/1998	Birrell et al.	
	A1004	5,822,434	10/13/1998	Caronni et al.	
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	A1007	60/151,563	08/31/1999	Bryan Whittles	
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	A1017	6,701,437	03/02/2004	Hoke et al.	
	A1018	6,055,574	04/25/2000	Smorodinsky et al.	

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes-Number -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	B1000	WO 001/17775	03-30-2000	Science Applications International Corporation		Yes	No
	B1001	WO 00/70458	11-23-2000	Comsec Corporation			
	B1002	WO 01/016766	03-08-2001	Science Applications International Corporation			

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	C998	Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009, VirnetX Inc. and Science Applications International Corp. v. Microsoft Corporation,				
	C999	Appendix A of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.				
	C1000	Concordance Table For the References Cited in Tables on pages 6-15, 71-80 and 116-124 of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.				
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	C1002	DNS-related correspondence dated September 7, 1993 to September 20, 1993. (Pre KX, KX Records) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1003	R. Atkinson, "An Internetwork Authentication Architecture," Naval Research Laboratory, Center for High Assurance Computing Systems (8/5/93). (Atkinson NRL, KX Records)				
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	C1009	J. M. Galvin, "Public Key Distribution with Secure DNS," Proceedings of the Sixth USENIX UNIX Security Symposium, San Jose, California, July 1996. (Galvin, DNSSEC)				
	C1010	J. Gilmore, et al. "Re: Key Management, anyone? (DNS Keying)," IPsec Working Group Mailing List Archives (8/96). (Gilmore DNS, FreeSWAN)				
	C1011	H. Orman, et al. "Re: 'Re: DNS? was Re: Key Management, anyone?'" IETF IPsec Working Group Mailing List Archive (8/96-9/96). (Orman DNS, FreeSWAN)				
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(2)  
ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.L./  
Petitioner Apple Inc. - Exhibit 1026, p. 3396

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	C1015	M.G. Reed, et al. "Proxies for Anonymous Routing," 12th Annual Computer Security Applications Conference, San Diego, CA, Dec. 9-13, 1996. (Reed, Onion Routing)				
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	C1019	Aventail Corp., "AutoSOCKS v. 2.1 Datasheet," available at <a href="http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html">http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html</a> (1997). (AutoSOCKS, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1020	Aventail Corp. "Aventail VPN Data Sheet," available at <a href="http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html">http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html</a> (1997). (Data Sheet, Aventail)				
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	C1027	Microsoft Corp., <i>IP Security for Microsoft Windows NT Server 5.0</i> (1997) (printed from 1998 PDC DVD-ROM). (IP Security, Microsoft Prior Art VPN Technology)			
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	C1033	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (03/27/1997). (RFC 2543 Internet Draft 2) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
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Subst. for form 1449/PTO <b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>			
				Application Number		11/679,416	
				Filing Date		February 27, 2007	
				First Named Inventor		Victor Larson	
				Art Unit		2157	
				Examiner Name		Not yet assigned	
Sheet	6	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)		
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
	C1051	C. Huitema, 45 al. "Simple Gateway Control Protocol," Version 1.0 (May 5, 1998). (SGCP)					
	C1052	DISA "Secret Internet Protocol Router Network," SIPRNET Program Management Office (D3113) DISN Networks, DISN Transmission Services (May 8, 1998). (DISA, SIPRNET)					
	C1053	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (05/14/1998). (RFC 2543 Internet Draft 5) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1054	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (06/17/1998). (RFC 2543 Internet Draft 6) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1055	D. McDonald, et al. "PF_KEY Key Management API, Version 2," Network Working Group, RFC 2367 (July 1998). (RFC 2367)					
	C1056	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/16/1998). (RFC 2543 Internet Draft 7) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1057	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (08/07/1998). (RFC 2543 Internet Draft 8) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1058	Microsoft Corp., <i>Company Focuses on Quality and Customer Feedback</i> (August 18, 1998). (Focus, Microsoft Prior Art VPN Technology)					
	C1059	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (09/18/1998). (RFC 2543 Internet Draft 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1060	Atkinson, et al. "Security Architecture for the Internet Protocol," Network Working Group, RFC 2401 (November 1998). (RFC 2401, UNDERLYING SECURITY TECHNOLOGIES)					
	C1061	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/12/1998). (RFC 2543 Internet Draft 10) 9 <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1062	Donald Eastlake, <i>Domain Name System Security Extensions</i> , IETF DNS Security Working Group (December 1998). (DNSSEC-7)					
	C1063	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/15/1998). (RFC 2543 Internet Draft 11) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
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				Art Unit	2157	
				Examiner Name	Not yet assigned	
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	C1064	Aventail Corp., "Aventail Connect 3.1/2.6 Administrator's Guide," (1999). (Aventail Administrator 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1065	Aventail Corp., "Aventail Connect 3.1/2.6 User's Guide," (1999). (Aventail User 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1066	Aventail Corp., "Aventail ExtraWeb Server v3.2 Administrator's Guide," (1999). (Aventail ExtraWeb 3.2, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1067	Kaufman et al, "Implementing IPsec," (Copyright 1999). (Implementing IPSEC, VPN REFERENCES)				
	C1068	Network Solutions, Inc. "Enabling SSL," NSI Registry (1999). (Enabling SSL, UNDERLYING SECURITY TECHNOLOGIES)				
	C1069	Check Point Software Technologies Ltd. (1999) (Check Point, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1070	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS          SRV)</i> , <draft-ietf-dnsind-frc2052bis-02.txt> (January 1999). (Gulbrandsen 99, DNS SRV)				
	C1071	C. Scott, et al. <i>Virtual Private Networks</i> , O'Reilly and Associates, Inc., 2nd ed. (Jan. 1999). (Scott VPNs)				
	C1072	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (01/15/1999). (RFC 2543 Internet Draft 12) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1073	Goldschlag, et al., "Onion Routing for Anonymous and Private Internet Connections," Naval Research Laboratory, Center for High Assurance Computer Systems (January 28, 1999). (Goldschlag III, Onion Routing)				
	C1074	H. Schulzrinne, "Internet Telephony: architecture and protocols – an IETF perspective," Computer Networks, Vol. 31, No. 3 (February 1999). (Telephony, Schulzrinne)				
	C1075	M. Handley, et al. "SIP: Session Initiation Protocol," Network Working Group, RFC 2543 and Internet Drafts (12/96-3/99). (Handley, RFC 2543)				
	C1076	FreeSWAN Project, <i>Linux FreeSWAN Compatibility Guide</i> (March 4, 1999). (FreeSWAN Compatibility Guide, FreeSWAN)				
	C1077	Telcordia Technologies, "ANX Release 1 Document Corrections," AIAG (May 11, 1999). (Telcordia, ANX)				
	C1078	Ken Hornstein & Jeffrey Altman, <i>Distributing Kerberos KDC and Realm Information with          DNS</i> <draft-ietf-cat-krb-dns-locate-oo.txt> (June 21, 1999). (Hornstein, DNS SRV)				
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	C1079	Bhattacharya et. al. "An LDAP Schema for Configuration and Administration of IPsec Based Virtual Private Networks (VPNs)", IETF Internet Draft (October 1999). (Bhattacharya LDAP VPN)			
	C1080	B. Patel, et al. "DHCP Configuration of IPSEC Tunnel Mode," IPSEC Working Group, Internet Draft 02 (10/15/1999). (Patel)			
	C1081	Goncalves, et al. <i>Check Point FireWall -1 Administration Guide</i> , McGraw-Hill Companies (2000). (Goncalves, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1082	"Building a Microsoft VPN: A Comprehensive Collection of Microsoft Resources," FirstVPN, (Jan 2000). (FirstVPN Microsoft)			
	C1083	Gulbrandsen, Vixie, & Esibov, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2782 (February 2000). (RFC 2782, DNS SRV)			
	C1084	MITRE Organization, "Technical Description," Collaborative Operations in Joint Expeditionary Force Experiment (JEFX) 99 (February 2000). (MITRE, SIPRNET)			
	C1085	H. Schulzrinne, et al. "Application-Layer Mobility Using SIP," <i>Mobile Computing and Communications Review</i> , Vol. 4, No. 3. pp. 47-57 (July 2000). (Application, SIP)			
	C1086	Kindred et al, "Dynamic VPN Communities: Implementation and Experience," DARPA Information Survivability Conference and Exposition II (June 2001). (DARPA, VPN SYSTEMS)			
	C1087	ANX 101: Basic ANX Service Outline. (Outline, ANX)			
	C1088	ANX 201: Advanced ANX Service. (Advanced, ANX)			
	C1089	Appendix A: Certificate Profile for ANX IPsec Certificates. (Appendix, ANX)			
	C1090	Assured Digital Products. (Assured Digital) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1091	Aventail Corp., "Aventail AutoSOCKS the Client Key to Network Security," Aventail Corporation White Paper. (Network Security, Aventail)			
	C1092	Cindy Moran, "DISN Data Networks: Secret Internet Protocol Router Network (SIPRNet)." (Moran, SIPRNET)			
	C1093	Data Fellows F-Secure VPN+ (F-Secure VPN+)			
	C1094	"Interim Operational Systems Doctrine for the Remote Access Security Program (RASP) Secret Dial-In Solution. (RASP, SIPRNET)			
	C1095	<i>Onion Routing</i> , "Investigation of Route Selection Algorithms," available at <a href="http://www.onion-router.net/Archives/Route/index.html">http://www.onion-router.net/Archives/Route/index.html</a> . (Route Selection, Onion Routing)			
	C1096	Secure Computing, "Bullet-Proofing an Army Net," Washington Technology. (Secure, SIPRNET)			
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	C1097	SPARTA "Dynamic Virtual Private Network." (Sparta, VPN SYSTEMS)			
	C1098	Standard Operation Procedure for Using the 1910 Secure Modems. (Standard, SIPRNET)			
	C1099	Publicly available emails relating to FreeSWAN (MSFTVX00018833-MSFTVX00019206). (FreeSWAN emails, FreeSWAN)			
	C1100	Kaufman et al., "Implementing IPsec," (Copyright 1999) (Implementing IPsec)			
	C1101	Network Associates <i>Gauntlet Firewall For Unix User's Guide Version 5.0</i> (1999). (Gauntlet User's Guide – Unix, Firewall Products)			
	C1102	Network Associates <i>Gauntlet Firewall For Windows NT Getting Started Guide Version 5.0</i> (1999) (Gauntlet Getting Started Guide – NT, Firewall Products)			
	C1103	Network Associates <i>Gauntlet Firewall For Unix Getting Started Guide Version 5.0</i> (1999) (Gauntlet Unix Getting Started Guide, Firewall Products)			
	C1104	Network Associates <i>Release Notes Gauntlet Firewall for Unix 5.0</i> (March 19, 1999) (Gauntlet Unix Release Notes, Firewall Products)			
	C1105	Network Associates <i>Gauntlet Firewall For Windows NT Administrator's Guide Version 5.0</i> (1999) (Gauntlet NT Administrator's Guide, Firewall Products)			
	C1106	Trusted Information Systems, Inc. <i>Gauntlet Internet Firewall Firewall-to-Firewall Encryption Guide Version 3.1</i> (1996) (Gauntlet Firewall-to-Firewall, Firewall Products)			
	C1107	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)			
	C1108	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)			
	C1109	Dan Sterne <i>Dynamic Virtual Private Networks</i> (May 23, 2000) (Sterne DVPN, DVPN)			
	C1110	Darrell Kindred <i>Dynamic Virtual Private Networks (DVPN)</i> (December 21, 1999) (Kindred DVPN, DVPN)			
	C1111	Dan Sterne <i>et. al. TIS Dynamic Security Perimeter Research Project Demonstration</i> (March 9, 1998) (Dynamic Security Perimeter, DVPN)			
	C1112	Darrell Kindred <i>Dynamic Virtual Private Networks Capability Description</i> (January 5, 2000) (Kindred DVPN Capability, DVPN) 11			
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	C1113	October 7, and 28 1997 email from Domenic J. Turchi Jr. (SPARTA00001712-1714, 1808-1811) (Turchi DVPN email, DVPN)					
	C1114	James Just & Dan Sterne <i>Security Quickstart Task Update</i> (February 5, 1997) (Security Quickstart, DVPN)					
	C1115	Virtual Private Network Demonstration dated March 21, 1998 (SPARTA00001844-54) (DVPN Demonstration, DVPN)					
	C1116	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.1 Plan</i> (March 10, 1998) (IFD 1.1, DVPN)					
	C1117	Microsoft Corp. Windows NT Server Product Documentation: Administration Guide -- Connection Point Services, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx</a> (Connection Point Services) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows. Accordingly, upon information and belief, this reference is prior art to the patents-insuit.)					
	C1118	Microsoft Corp. Windows NT Server Product Documentation: Administration Kit Guide -- Connection Manager, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.mspk">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.mspk</a> (Connection Manager) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)					
	C1119	Microsoft Corp. Autodial Heuristics, <i>available at</i> <a href="http://support.microsoft.com/kb/164249">http://support.microsoft.com/kb/164249</a> (Autodial Heuristics) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)					
	C1120	Microsoft Corp., Cariplo: Distributed Component Object Model, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx</a> (Cariplo I)					
	C1121	Marc Levy, COM Internet Services (Apr. 23, 1999), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx</a> (Levy)					
	C1122	Markus Horstmann and Mary Kirtland, DCOM Architecture (July 23, 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx</a> (Horstmann)					
	C1123	Microsoft Corp., DCOM: A Business Overview (Apr. 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx</a> (DCOM Business Overview I)					
	C1124	Microsoft Corp., DCOM Technical Overview (Nov. 1996), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx</a> (DCOM Technical Overview I)					
	C1125	Microsoft Corp., DCOM Architecture White Paper (1998) <i>available in</i> PDC DVD-ROM (DCOM Architecture)					
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Petitioner Apple Inc. - Exhibit 1026, p. 3404

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	C1126	Microsoft Corp, DCOM – The Distributed Component Object Model, A Business Overview White Paper (Microsoft 1997) <i>available in</i> PDC DVD-ROM (DCOM Business Overview II)			
	C1127	Microsoft Corp., DCOM—Cariplo Home Banking Over The Internet White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (Cariplo II)			
	C1128	Microsoft Corp., DCOM Solutions in Action White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (DCOM Solutions in Action)			
	C1129	Microsoft Corp., DCOM Technical Overview White Paper (Microsoft 1996) <i>available in</i> 12 PDC DVD-ROM (DCOM Technical Overview II)			
	C1130	125. Scott Suhy & Glenn Wood, DNS and Microsoft Windows NT 4.0, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx</a> (Suhy)			
	C1131	126. Aaron Skonnard, <i>Essential Winlnet</i> 313-423 (Addison Wesley Longman 1998) (Essential Winlnet)			
	C1132	Microsoft Corp. Installing, Configuring, and Using PPTP with Microsoft Clients and Servers, (1998) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms811078(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms811078(printer).aspx</a> (Using PPTP)			
	C1133	Microsoft Corp., Internet Connection Services for MS RAS, Standard Edition, <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp</a> (Internet Connection Services I)			
	C1134	Microsoft Corp., Internet Connection Services for RAS, Commercial Edition, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp</a> (Internet Connection Services II)			
	C1135	Microsoft Corp., Internet Explorer 5 Corporate Deployment Guide – Appendix B: Enabling Connections with the Connection Manager Administration Kit, <i>available at</i> <a href="http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp">http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp</a> (IE5 Corporate Development)			
	C1136	Mark Minasi, <i>Mastering Windows NT Server 4</i> 1359-1442 (6th ed., January 15, 1999)(Mastering Windows NT Server)			
	C1137	<i>Hands On, Self-Paced Training for Supporting Version 4.0</i> 371-473 (Microsoft Press 1998) (Hands On)			
	C1138	Microsoft Corp., MS Point-to-Point Tunneling Protocol (Windows NT 4.0), <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp">http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp</a> (MS PPTP)			
	C1139	Kenneth Gregg, <i>et al.</i> , <i>Microsoft Windows NT Server Administrator's Bible</i> 173-206, 883-911, 974-1076 (IDG Books Worldwide 1999) (Gregg)			
	C1140	Microsoft Corp., Remote Access (Windows), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx">http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx</a> (Remote Access)			
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Petitioner Apple Inc. - Exhibit 1026, p. 3405

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	C1141	Microsoft Corp., Understanding PPTP (Windows NT 4.0), available at <a href="http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.msp">http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.msp</a> (Understanding PPTP NT 4) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1142	Microsoft Corp., Windows NT 4.0: Virtual Private Networking, available at <a href="http://www.microsoft.com/technet/archive/winntas/ deploy/confeat/vpntwk.msp">http://www.microsoft.com/technet/archive/winntas/ deploy/confeat/vpntwk.msp</a> (NT4 VPN) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1143	Anthony Northrup, <i>NT Network Plumbing: Routers, Proxies, and Web Services</i> 299-399 (IDG Books Worldwide 1998) (Network Plumbing)			
	C1144	Microsoft Corp., Chapter 1 – Introduction to Windows NT Routing with Routing and Remote Access Service, Available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/ rras40/rrasch01.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/ rras40/rrasch01.msp</a> (Intro to RRAS) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.) 13			
	C1145	Microsoft Corp., Windows NT Server Product Documentation: Chapter 5 – Planning for Large-Scale Configurations, available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.msp</a> (Large-Scale Configurations) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1146	F-Secure, <i>F-Secure Evaluation Kit</i> (May 1999) (FSECURE 00000003) (Evaluation Kit 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1147	F-Secure, <i>F-Secure NameSurfer</i> (May 1999) (from FSECURE 00000003) (NameSurfer 3)			
	C1148	F-Secure, <i>F-Secure VPN Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (F-Secure VPN 3)			
	C1149	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (SSH Guide 3)			
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EXAMINER				DATE CONSIDERED	
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				Application Number	11/679,416	
				Filing Date	February 27, 2007	
				First Named Inventor	Victor Larson	
				Art Unit	2157	
				Examiner Name	Not yet assigned	
Sheet	13	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
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	C1151	F-Secure, <i>F-Secure VPN+ Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (VPN+ Guide 3)				
	C1152	F-Secure, <i>F-Secure VPN+ 4.1</i> (1999) (from FSECURE 00000006) (VPN+ 4.1 Guide 6)				
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	C1154	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (1998) (from FSECURE 00000006) (F-Secure SSH 2.0 Guide 6)				
	C1155	F-Secure, <i>F-Secure Evaluation Kit</i> (Sept. 1998) (FSECURE 00000009) (Evaluation Kit 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1156	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (Sept. 1998) (from FSECURE 00000009) (SSH Guide 9)				
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	C1161	SafeNet, Inc., <i>VPN Policy Manager</i> (January 2000) (VPN Policy Manager)				
	C1162	F-Secure, <i>F-Secure VPN+ for Windows NT 4.0</i> (1998) (from FSECURE 00000009) (FSecure VPN+)				
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	C1165	IRE, Inc., <i>SafeNet / Security Center Technical Reference Addendum</i> (June 22, 1999) (Safenet Addendum)				
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	C1167	IRE, Inc., <i>About SafeNet / VPN Policy Manager</i> (1999) (About Safenet VPN Policy Manager)					
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	C1172	Todd W. Mathers and Shawn P. Genoway, <i>Windows NT Thing Client Solutions: Implementing Terminal Server and Citrix MetaFrame</i> (Macmillan Technial Publishing 1999) (Windows NT Mathers)					
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	C1174	156. <i>Finding Your Way Through the VPN Maze</i> (1999) ("PGP")					
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	C1177	WatchGuard Technologies, Inc., <i>WatchGuard Firebox System Powerpoint</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1178	WatchGuard Technologies, Inc., <i>MSS Firewall Specifications</i> (1999) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
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	C1190	<i>Virtual Private Network Demonstration</i> (March 21, 1998)				
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	C1193	NAI Labs, <i>IFE 3.1 Integration Demo</i> (2000)				
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	C1197	<i>IFE 3.1 Topology</i> (February 9, 2000)				
	C1198	Information Assurance, <i>Information Assurance Integration: IFE 3.1, Hypothesis &amp; Thread Development</i> (January 10-11, 2000)				
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	C1201	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.3</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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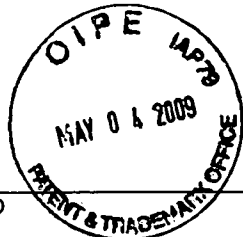
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	C1210	David G. Schaer, <i>MCSE Test Success: Proxy Server 2</i> (1998) (Schaer, Microsoft Prior Art VPN Technology)				
	C1211	John Savill, <i>The Windows NT and Windows 2000 Answer Book</i> (1999) (Savill, Microsoft Prior Art VPN Technology)				
	C1212	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)				
	C1213	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)				
	C1214	File History for U.S. Application Serial No. 09/653,201, Applicant(s): Whittle Bryan, et al., Filing Date 08/31/2000.				
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	C1216	Ran Atkinson, <i>Use of DNS to Distribute Keys</i> , 7 Sept. 1993, <a href="http://ops.ietf.org/lists/namedroppers/namedroppers.199x/msg00945.html">http://ops.ietf.org/lists/namedroppers/namedroppers.199x/msg00945.html</a>				
	C1217	FirstVPN Enterprise Networks, Overview				
	C1218	Chapter 1: Introduction to Firewall Technology, Administration Guide; 12/19/07, <a href="http://www.books24x7.com/book/id_762/viewer_r.asp?bookid=762&amp;chunked=41065062">http://www.books24x7.com/book/id_762/viewer_r.asp?bookid=762&amp;chunked=41065062</a>				
	C1219	The TLS Protocol Version 1.0; January 1999; page 65 of 71.				
	C1220	Elizabeth D. Zwicky, et al., <i>Building Internet Firewalls</i> , 2nd Ed.				
	C1221	Virtual Private Networks – Assured Digital Incorporated – ADI 4500; <a href="http://web.archive.org/web/19990224050035/www.assured-digital.com/products/prodvpn/adia4500.htm">http://web.archive.org/web/19990224050035/www.assured-digital.com/products/prodvpn/adia4500.htm</a>				
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	C1223	Extended System Press Release, Sept. 2, 1997; <i>Extended VPN Uses The Internet to Create Virtual Private Networks</i> , <a href="http://www.extendedsystems.com">www.extendedsystems.com</a>				
	C1224	Socks Version 5; Executive Summary; <a href="http://web.archive.org/web/199970620031945/www.aventail.com/educate/whitepaper/socks_wp.html">http://web.archive.org/web/199970620031945/www.aventail.com/educate/whitepaper/socks_wp.html</a>				
	C1225	Internet Dynamics First to Ship Integrated Security Solutions for Enterprise Intranets and Extranets; Sept. 15, 1997; <a href="http://web.archive.org/web/19980210014150/interdyn.com">http://web.archive.org/web/19980210014150/interdyn.com</a>				
	C1226	Emails from various individuals to Linux IPsec re: DNS-LDAP Splicing				
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(17)  
ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.L./  
Petitioner Apple Inc. - Exhibit 1026, p. 3411



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				Art Unit	2157
				Examiner Name	Not yet assigned
Sheet	1	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1000	5,311,593	05/10/1994	Carmi	
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EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes-Number & Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	B1000	WO 001/17775	03-30-2000	Science Applications International Corporation		Yes	No
	B1001	WO 00/70458	11-23-2000	Comsec Corporation			
	B1002	WO 01/016766	03-08-2001	Science Applications International Corporation			

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 Petitioner Apple Inc. - Exhibit 1026, p. 3412

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	C998	Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009, VirnetX Inc. and Science Applications International Corp. v. Microsoft Corporation,				
	C999	Appendix A of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.				
	C1000	Concordance Table For the References Cited in Tables on pages 6-15, 71-80 and 116-124 of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.				
	C1001	1. P. Mockapetris, "DNS Encoding of Network Names and Other Types," Network Working Group, RFC 1101 (April 1989) (RFC1101, DNS SRV)				
	C1002	DNS-related correspondence dated September 7, 1993 to September 20, 1993. (Pre KX, KX Records) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1003	R. Atkinson, "An Internetwork Authentication Architecture," Naval Research Laboratory, Center for High Assurance Computing Systems (8/5/93). (Atkinson NRL, KX Records)				
	C1004	Henning Schulzrinne, <i>Personal Mobility For Multimedia Services In The Internet</i> , Proceedings of the Interactive Distributed Multimedia Systems and Services European Workshop at 143 (1996). (Schulzrinne 96)				
	C1005	Microsoft Corp., <i>Microsoft Virtual Private Networking: Using Point-to-Point Tunneling Protocol for Low-Cost, Secure, Remote Access Across the Internet</i> (1996) (printed from 1998 PDC DVD-ROM). (Point to Point, Microsoft Prior Art VPN Technology)				
	C1006	"Safe Surfing: How to Build a Secure World Wide Web Connection," IBM Technical Support Organization, (March 1996). (Safe Surfing, WEBSITE ART)				
	C1007	Goldschlag, et al., "Hiding Routing Information," Workshop on Information Hiding, Cambridge, UK (May 1996). (Goldschlag II, Onion Routing)				
	C1008	"IPSec Minutes From Montreal", IPSEC Working Group Meeting Notes, <a href="http://www.sandleman.ca/ipsec/1996/08/msg00018.html">http://www.sandleman.ca/ipsec/1996/08/msg00018.html</a> (June 1996). (IPSec Minutes, FreeS/WAN)				
	C1009	J. M. Galvin, "Public Key Distribution with Secure DNS," Proceedings of the Sixth USENIX UNIX Security Symposium, San Jose, California, July 1996. (Galvin, DNSSEC)				
	C1010	J. Gilmore, et al. "Re: Key Management, anyone? (DNS Keying)," IPsec Working Group Mailing List Archives (8/96). (Gilmore DNS, FreeS/WAN)				
	C1011	H. Orman, et al. "Re: 'Re: DNS? was Re: Key Management, anyone?'" IETF IPsec Working Group Mailing List Archive (8/96-9/96). (Orman DNS, FreeS/WAN)				
	C1012	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2052 (October 1996). (RFC 2052, DNS SRV)				
EXAMINER			DATE CONSIDERED			
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				Application Number	11/679,416			
				Filing Date	February 27, 2007			
				First Named Inventor	Victor Larson			
				Art Unit	2157			
Examiner Name	Not yet assigned		Sheet	3	Of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>								
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
	C1013	Freier, et al. "The SSL Protocol Version 3.0," Transport Layer Security Working Group (November 18, 1996). (SSL, UNDERLYING SECURITY TECHNOLOGY)						
	C1014	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/02/1996). (RFC 2543 Internet Draft 1) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>						
	C1015	M.G. Reed, et al. "Proxies for Anonymous Routing," 12th Annual Computer Security Applications Conference, San Diego, CA, Dec. 9-13, 1996. (Reed, Onion Routing)						
	C1016	Kenneth F. Alden & Edward P. Wobber, <i>The AltaVista Tunnel: Using the Internet to Extend Corporate Networks</i> , Digital Technical Journal (1997) (Alden, AltaVista)						
	C1017	Automotive Industry Action Group, "ANX Release 1 Document Publication," AIAG (1997). (AIAG, ANX)						
	C1018	Automotive Industry Action Group, "ANX Release 1 Draft Document Publication," AIAG Publications (1997). (AIAG Release, ANX)						
	C1019	Aventail Corp., "AutoSOCKS v. 2.1 Datasheet," available at <a href="http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html">http://www.archive.org/web/19970212013409/www.aventail.com/prod/autosk2ds.html</a> (1997). (AutoSOCKS, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>						
	C1020	Aventail Corp. "Aventail VPN Data Sheet," available at <a href="http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html">http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html</a> (1997). (Data Sheet, Aventail)						
	C1021	Aventail Corp., "Directed VPN Vs. Tunnel," available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/directvpn.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/directvpn.html</a> (1997). (Directed VPN, Aventail)						
	C1022	Aventail Corp., "Managing Corporate Access to the Internet," Aventail AutoSOCKS White Paper available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/ipmwp.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/ipmwp.html</a> (1997). (Corporate Access, Aventail)						
	C1023	Aventail Corp., "Socks Version 5," Aventail Whitepaper, available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/soc kswp.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/soc kswp.html</a> (1997). (Socks, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>						
	C1024	Aventail Corp., "VPN Server V2.0 Administration Guide," (1997). (VPN, Aventail)						
	C1025	Goldschlag, et al. "Privacy on the Internet," Naval Research Laboratory, Center for High Assurance Computer Systems (1997). (Goldschlag I, Onion Routing)						
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				Examiner Name	Not yet assigned
Sheet	4	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)
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	C1026	Microsoft Corp., <i>Installing Configuring and Using PPTP with Microsoft Clients and Servers</i> (1997). (Using PPTP, Microsoft Prior Art VPN Technology)			
	C1027	Microsoft Corp., <i>IP Security for Microsoft Windows NT Server 5.0</i> (1997) (printed from 1998 PDC DVD-ROM). (IP Security, Microsoft Prior Art VPN Technology)			
	C1028	Microsoft Corp., <i>Microsoft Windows NT Active Directory: An Introduction to the Next Generation Directory Services</i> (1997) (printed from 1998 PDC DVD-ROM). (Directory, Microsoft Prior Art VPN Technology)			
	C1029	Microsoft Corp., <i>Routing and Remote Access Service for Windows NT Server New Opportunities Today and Looking Ahead</i> (1997) (printed from 1998 PDC DVD-ROM). (Routing, Microsoft Prior Art VPN Technology)			
	C1030	Microsoft Corp., <i>Understanding Point-to-Point Tunneling Protocol PPTP</i> (1997) (printed from 1998 PDC DVD-ROM). (Understanding PPTP, Microsoft Prior Art VPN Technology)			
	C1031	J. Mark Smith et al., <i>Protecting a Private Network: The AltaVista Firewall</i> , Digital Technical Journal (1997). (Smith, AltaVista)			
	C1032	Naganand Doraswamy <i>Implementation of Virtual Private Networks (VPNs) with IP Security</i> , <draft-ietf-ipsec-vpn-00.txt> (March 12, 1997). (Doraswamy)			
	C1033	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (03/27/1997). (RFC 2543 Internet Draft 2) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1034	Aventail Corp., "Aventail and Cybersafe to Provide Secure Authentication For Internet and Intranet Communication," Press Release, April 3, 1997. (Secure Authentication, Aventail)			
	C1035	D. Wagner, et al. "Analysis of the SSL 3.0 Protocol," (April 15, 1997). (Analysis, UNDERLYING SECURITY TECHNOLOGIES)			
	C1036	Automotive Industry Action Group, "ANXO Certification Authority Service and Directory Service Definition for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (May 9, 1997). (AIAG Definition, ANX)			
	C1037	Automotive Industry Action Group, "ANXO Certification Process and ANX Registration Process Definition for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (May 9, 1997). (AIAG Certification, ANX)			
	C1038	Aventail Corp., "Aventail Announces the First VPN Solution to Assure Interoperability Across Emerging Security Protocols," June 2, 1997. (First VPN, Aventail)			
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	C1039	Syverson, et al. "Private Web Browsing," Naval Research Laboratory, Center for High 8 Assurance Computer Systems (June 2, 1997). (Syverson, Onion Routing)					
	C1040	Bellcore, "Metrics, Criteria, and Measurement Technique Requirements for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (June 16, 1997). (AIAG Requirements, ANX)					
	C1041	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/31/1997). (RFC 2543 Internet Draft 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1042	R. Atkinson, "Key Exchange Delegation Record for the DNS," Network Working Group, RFC 2230 (November 1997). (RFC 2230, KX Records)					
	C1043	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/11/1997). (RFC 2543 Internet Draft 4) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1044	1998 Microsoft Professional Developers Conference DVD ("1998 PDC DVD-ROM") (including screenshots captured therefrom and produced as MSFTVX 00018827- 00018832). (Conference, Microsoft Prior Art VPN Technology)					
	C1045	Microsoft Corp., <i>Virtual Private Networking An Overview</i> (1998) (printed from 1998 PDC DVD-ROM) (Overview, Microsoft Prior Art VPN Technology)					
	C1046	Microsoft Corp., <i>Windows NT 5.0 Beta Has Public Premiere at Seattle Mini-Camp          Seminar attendees get first look at the performance and capabilities of Windows NT 5.0</i> (1998) (available at <a href="http://hap/www.microsoft.com/presspass/features/1998/10-19nt5.mspxpfalse">hap //www.microsoft.com/presspass/features/1998/10-          19nt5.mspxpfalse</a> ). (NT Beta, Microsoft Prior Art VPN Technology)					
	C1047	"What ports does SSL use" <i>available at</i> <a href="http://stason.org/TULARC/security/ssl-talk/3-4-What-ports-does-ssl-use.html">stason.org/TULARC/security/ssl-talk/3-4-What-          ports-does-ssl-use.html</a> (1998). (Ports, DNS SRV)					
	C1048	Aventail Corp., "Aventail VPN V2.6 Includes Support for More Than Ten Authentication Methods Making Extranet VPN Development Secure and Simple," Press Release, January 19, 1998. (VPN V2.6, Aventail)					
	C1049	R. G. Moskowitz, "Network Address Translation Issues with IPsec," Internet Draft, Internet Engineering Task Force, February 6, 1998. (Moskowitz)					
	C1050	H. Schulzrinne, et al, "Internet Telephony Gateway Location," Proceedings of IEEE INfocom '98, The Conference on Computer Communications, Vol. 2 ( March 29 – April 2, 1998). (Gateway, Schulzrinne)					
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	C1051	C. Huitema, 45 al. "Simple Gateway Control Protocol," Version 1.0 (May 5, 1998). (SGCP)					
	C1052	DISA "Secret Internet Protocol Router Network," SIPRNET Program Management Office (D3113) DISN Networks, DISN Transmission Services (May 8, 1998). (DISA, SIPRNET)					
	C1053	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (05/14/1998). (RFC 2543 Internet Draft 5) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1054	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (06/17/1998). (RFC 2543 Internet Draft 6) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1055	D. McDonald, et al. "PF_KEY Key Management API, Version 2," Network Working Group, RFC 2367 (July 1998). (RFC 2367)					
	C1056	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/16/1998). (RFC 2543 Internet Draft 7) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1057	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (08/07/1998). (RFC 2543 Internet Draft 8) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1058	Microsoft Corp., <i>Company Focuses on Quality and Customer Feedback</i> (August 18, 1998). (Focus, Microsoft Prior Art VPN Technology)					
	C1059	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (09/18/1998). (RFC 2543 Internet Draft 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1060	Atkinson, et al. "Security Architecture for the Internet Protocol," Network Working Group, RFC 2401 (November 1998). (RFC 2401, UNDERLYING SECURITY TECHNOLOGIES)					
	C1061	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/12/1998). (RFC 2543 Internet Draft 10) 9 <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
	C1062	Donald Eastlake, <i>Domain Name System Security Extensions</i> , IETF DNS Security Working Group (December 1998). (DNSSEC-7)					
	C1063	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/15/1998). (RFC 2543 Internet Draft 11) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>					
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	C1064	Aventail Corp., "Aventail Connect 3.1/2.6 Administrator's Guide," (1999). (Aventail Administrator 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1065	Aventail Corp., "Aventail Connect 3.1/2.6 User's Guide," (1999). (Aventail User 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1066	Aventail Corp., "Aventail ExtraWeb Server v3.2 Administrator's Guide," (1999). (Aventail ExtraWeb 3.2, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1067	Kaufman et al, "Implementing IPsec," (Copyright 1999). (Implementing IPSEC, VPN REFERENCES)				
	C1068	Network Solutions, Inc. "Enabling SSL," NSI Registry (1999). (Enabling SSL, UNDERLYING SECURITY TECHNOLOGIES)				
	C1069	Check Point Software Technologies Ltd. (1999) (Check Point, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1070	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , <draft-ietf-dnsind-frc2052bis-02.txt> (January 1999). (Gulbrandsen 99, DNS SRV)				
	C1071	C. Scott, et al. <i>Virtual Private Networks</i> , O'Reilly and Associates, Inc., 2nd ed. (Jan. 1999). (Scott VPNs)				
	C1072	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (01/15/1999). (RFC 2543 Internet Draft 12) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1073	Goldschlag, et al., "Onion Routing for Anonymous and Private Internet Connections," Naval Research Laboratory, Center for High Assurance Computer Systems (January 28, 1999). (Goldschlag III, Onion Routing)				
	C1074	H. Schulzrinne, "Internet Telephony: architecture and protocols – an IETF perspective," <i>Computer Networks</i> , Vol. 31, No. 3 (February 1999). (Telephony, Schulzrinne)				
	C1075	M. Handley, et al. "SIP: Session Initiation Protocol," Network Working Group, RFC 2543 and Internet Drafts (12/96-3/99). (Handley, RFC 2543)				
	C1076	FreeSWAN Project, <i>Linux FreeSWAN Compatibility Guide</i> (March 4, 1999). (FreeSWAN Compatibility Guide, FreeSWAN)				
	C1077	Telcordia Technologies, "ANX Release 1 Document Corrections," AIAG (May 11, 1999). (Telcordia, ANX)				
	C1078	Ken Hornstein & Jeffrey Altman, <i>Distributing Kerberos KDC and Realm Information with DNS</i> <draft-eitf-cat-krb-dns-locate-oo.txt> (June 21, 1999). (Hornstein, DNS SRV)				
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 Petitioner Apple Inc. - Exhibit 1026, p. 3418

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	C1079	Bhattacharya et. al. "An LDAP Schema for Configuration and Administration of IPsec Based Virtual Private Networks (VPNs)", IETF Internet Draft (October 1999). (Bhattacharya LDAP VPN)			
	C1080	B. Patel, et al. "DHCP Configuration of IPSEC Tunnel Mode," IPSEC Working Group, Internet Draft 02 (10/15/1999). (Patel)			
	C1081	Goncalves, et al. <i>Check Point FireWall -1 Administration Guide</i> , McGraw-Hill Companies (2000). (Goncalves, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1082	"Building a Microsoft VPN: A Comprehensive Collection of Microsoft Resources," FirstVPN, (Jan 2000). (FirstVPN Microsoft)			
	C1083	Gulbrandsen, Vixie, & Esibov, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2782 (February 2000). (RFC 2782, DNS SRV)			
	C1084	MITRE Organization, "Technical Description," Collaborative Operations in Joint Expeditionary Force Experiment (JEFX) 99 (February 2000). (MITRE, SIPRNET)			
	C1085	H. Schulzrinne, et al. "Application-Layer Mobility Using SIP," <i>Mobile Computing and Communications Review</i> , Vol. 4, No. 3. pp. 47-57 (July 2000). (Application, SIP)			
	C1086	Kindred et al, "Dynamic VPN Communities: Implementation and Experience," DARPA Information Survivability Conference and Exposition II (June 2001). (DARPA, VPN SYSTEMS)			
	C1087	ANX 101: Basic ANX Service Outline. (Outline, ANX)			
	C1088	ANX 201: Advanced ANX Service. (Advanced, ANX)			
	C1089	Appendix A: Certificate Profile for ANX IPsec Certificates. (Appendix, ANX)			
	C1090	Assured Digital Products. (Assured Digital) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1091	Aventail Corp., "Aventail AutoSOCKS the Client Key to Network Security," Aventail Corporation White Paper. (Network Security, Aventail)			
	C1092	Cindy Moran, "DISN Data Networks: Secret Internet Protocol Router Network (SIPRNet)." (Moran, SIPRNET)			
	C1093	Data Fellows F-Secure VPN+ (F-Secure VPN+)			
	C1094	"Interim Operational Systems Doctrine for the Remote Access Security Program (RASP) Secret Dial-In Solution. (RASP, SIPRNET)			
	C1095	<i>Onion Routing</i> , "Investigation of Route Selection Algorithms," available at <a href="http://www.onion-router.net/Archives/Route/index.html">http://www.onion-router.net/Archives/Route/index.html</a> . (Route Selection, Onion Routing)			
	C1096	Secure Computing, "Bullet-Proofing an Army Net," Washington Technology. (Secure, SIPRNET)			
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<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C1097	SPARTA "Dynamic Virtual Private Network." (Sparta, VPN SYSTEMS)				
	C1098	Standard Operation Procedure for Using the 1910 Secure Modems. (Standard, SIPRNET)				
	C1099	Publicly available emails relating to FreeSWAN (MSFTVX00018833-MSFTVX00019206). (FreeSWAN emails, FreeSWAN)				
	C1100	Kaufman et al., "Implementing IPsec," (Copyright 1999) (Implementing IPsec)				
	C1101	Network Associates <i>Gauntlet Firewall For Unix User's Guide Version 5.0</i> (1999). (Gauntlet User's Guide – Unix, Firewall Products)				
	C1102	Network Associates <i>Gauntlet Firewall For Windows NT Getting Started Guide Version 5.0</i> (1999) (Gauntlet Getting Started Guide – NT, Firewall Products)				
	C1103	Network Associates <i>Gauntlet Firewall For Unix Getting Started Guide Version 5.0</i> (1999) (Gauntlet Unix Getting Started Guide, Firewall Products)				
	C1104	Network Associates <i>Release Notes Gauntlet Firewall for Unix 5.0</i> (March 19, 1999) (Gauntlet Unix Release Notes, Firewall Products)				
	C1105	Network Associates <i>Gauntlet Firewall For Windows NT Administrator's Guide Version 5.0</i> (1999) (Gauntlet NT Administrator's Guide, Firewall Products)				
	C1106	Trusted Information Systems, Inc. <i>Gauntlet Internet Firewall Firewall-to-Firewall Encryption Guide Version 3.1</i> (1996) (Gauntlet Firewall-to-Firewall, Firewall Products)				
	C1107	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)				
	C1108	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)				
	C1109	Dan Sterne <i>Dynamic Virtual Private Networks</i> (May 23, 2000) (Sterne DVPN, DVPN)				
	C1110	Darrell Kindred <i>Dynamic Virtual Private Networks (DVPN)</i> (December 21, 1999) (Kindred DVPN, DVPN)				
	C1111	Dan Sterne <i>et al. TIS Dynamic Security Perimeter Research Project Demonstration</i> (March 9, 1998) (Dynamic Security Perimeter, DVPN)				
	C1112	Darrell Kindred <i>Dynamic Virtual Private Networks Capability Description</i> (January 5, 2000) (Kindred DVPN Capability, DVPN) 11				
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/Krisna Lim/			06/04/2009			

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				First Named Inventor	Victor Larson	
				Art Unit	2157	
				Examiner Name	Not yet assigned	
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	C1113	October 7, and 28 1997 email from Domenic J. Turchi Jr. (SPARTA00001712-1714, 1808-1811) (Turchi DVPN email, DVPN)				
	C1114	James Just & Dan Sterne <i>Security Quickstart Task Update</i> (February 5, 1997) (Security Quickstart, DVPN)				
	C1115	Virtual Private Network Demonstration dated March 21, 1998 (SPARTA00001844-54) (DVPN Demonstration, DVPN)				
	C1116	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.1 Plan</i> (March 10, 1998) (IFD 1.1, DVPN)				
	C1117	Microsoft Corp. Windows NT Server Product Documentation: Administration Guide – Connection Point Services, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx</a> (Connection Point Services) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows. Accordingly, upon information and belief, this reference is prior art to the patents-insuit.)				
	C1118	Microsoft Corp. Windows NT Server Product Documentation: Administration Kit Guide – Connection Manager, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.msp</a> (Connection Manager) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1119	Microsoft Corp. Autodial Heuristics, <i>available at</i> <a href="http://support.microsoft.com/kb/164249">http://support.microsoft.com/kb/164249</a> (Autodial Heuristics) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1120	Microsoft Corp., Cariplo: Distributed Component Object Model, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx</a> (Cariplo I)				
	C1121	Marc Levy, COM Internet Services (Apr. 23, 1999), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx</a> (Levy)				
	C1122	Markus Horstmann and Mary Kirtland, DCOM Architecture (July 23, 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx</a> (Horstmann)				
	C1123	Microsoft Corp., DCOM: A Business Overview (Apr. 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx</a> (DCOM Business Overview I)				
	C1124	Microsoft Corp., DCOM Technical Overview (Nov. 1996), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx</a> (DCOM Technical Overview I)				
	C1125	Microsoft Corp., DCOM Architecture White Paper (1998) <i>available in</i> PDC DVD-ROM (DCOM Architecture)				
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(10)  
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 Petitioner Apple Inc. - Exhibit 1026, p. 3421

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				Art Unit	2157	
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	C1126	Microsoft Corp, DCOM – The Distributed Component Object Model, A Business Overview White Paper (Microsoft 1997) available in PDC DVD-ROM (DCOM Business Overview II)				
	C1127	Microsoft Corp., DCOM—Cariplo Home Banking Over The Internet White Paper (Microsoft 1996) available in PDC DVD-ROM (Cariplo II)				
	C1128	Microsoft Corp., DCOM Solutions in Action White Paper (Microsoft 1996) available in PDC DVD-ROM (DCOM Solutions in Action)				
	C1129	Microsoft Corp., DCOM Technical Overview White Paper (Microsoft 1996) available 12 in PDC DVD-ROM (DCOM Technical Overview II)				
	C1130	125. Scott Suhy & Glenn Wood, DNS and Microsoft Windows NT 4.0, (1996) available at <a href="http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx</a> (Suhy)				
	C1131	126. Aaron Skonnard, <i>Essential Winlnet</i> 313-423 (Addison Wesley Longman 1998) (Essential Winlnet)				
	C1132	Microsoft Corp. Installing, Configuring, and Using PPTP with Microsoft Clients and Servers, (1998) available at <a href="http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx">http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx</a> (Using PPTP)				
	C1133	Microsoft Corp., Internet Connection Services for MS RAS, Standard Edition, <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp</a> (Internet Connection Services I)				
	C1134	Microsoft Corp., Internet Connection Services for RAS, Commercial Edition, available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp</a> (Internet Connection Services II)				
	C1135	Microsoft Corp., Internet Explorer 5 Corporate Deployment Guide – Appendix B: Enabling Connections with the Connection Manager Administration Kit, available at <a href="http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp">http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp</a> (IE5 Corporate Development)				
	C1136	Mark Minasi, <i>Mastering Windows NT Server 4</i> 1359-1442 (6th ed., January 15, 1999)(Mastering Windows NT Server)				
	C1137	<i>Hands On, Self-Paced Training for Supporting Version 4.0</i> 371-473 (Microsoft Press 1998) (Hands On)				
	C1138	Microsoft Corp., MS Point-to-Point Tunneling Protocol (Windows NT 4.0), available at <a href="http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp">http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp</a> (MS PPTP)				
	C1139	Kenneth Gregg, et al., <i>Microsoft Windows NT Server Administrator's Bible</i> 173-206, 883-911, 974-1076 (IDG Books Worldwide 1999) (Gregg)				
	C1140	Microsoft Corp., Remote Access (Windows), available at <a href="http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx">http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx</a> (Remote Access)				
EXAMINER /Krisna Lim/				DATE CONSIDERED 06/04/2009		

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(11)  
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Petitioner Apple Inc. - Exhibit 1026, p. 3422

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	C1141	Microsoft Corp., Understanding PPTP (Windows NT 4.0), available at <a href="http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.mspx">http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.mspx</a> (Understanding PPTP NT 4) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1142	Microsoft Corp., Windows NT 4.0: Virtual Private Networking, available at <a href="http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.mspx">http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.mspx</a> (NT4 VPN) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1143	Anthony Northrup, <i>NT Network Plumbing: Routers, Proxies, and Web Services</i> 299-399 (IDG Books Worldwide 1998) (Network Plumbing)				
	C1144	Microsoft Corp., Chapter 1 – Introduction to Windows NT Routing with Routing and Remote Access Service, Available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch01.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch01.mspx</a> (Intro to RRAS) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.) 13				
	C1145	Microsoft Corp., Windows NT Server Product Documentation: Chapter 5 – Planning for Large-Scale Configurations, available at <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.mspx</a> (Large-Scale Configurations) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1146	F-Secure, <i>F-Secure Evaluation Kit</i> (May 1999) (FSECURE 00000003) (Evaluation Kit 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1147	F-Secure, <i>F-Secure NameSurfer</i> (May 1999) (from FSECURE 00000003) (NameSurfer 3)				
	C1148	F-Secure, <i>F-Secure VPN Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (F-Secure VPN 3)				
	C1149	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (SSH Guide 3)				
	C1150	F-Secure, <i>F-Secure SSH2.0 for Windows NT and 95</i> (May 1999) (from FSECURE 00000003) (SSH 2.0 Guide 3)				
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	C1151	F-Secure, <i>F-Secure VPN+ Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (VPN+ Guide 3)				
	C1152	F-Secure, <i>F-Secure VPN+ 4.1</i> (1999) (from FSECURE 00000006) (VPN+ 4.1 Guide 6)				
	C1153	F-Secure, <i>F-Secure SSH</i> (1996) (from FSECURE 00000006) (F-Secure SSH 6)				
	C1154	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (1998) (from FSECURE 00000006) (F-Secure SSH 2.0 Guide 6)				
	C1155	F-Secure, <i>F-Secure Evaluation Kit</i> (Sept. 1998) (FSECURE 00000009) (Evaluation Kit 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1156	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (Sept. 1998) (from FSECURE 00000009) (SSH Guide 9)				
	C1157	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (Sept. 1998) (from FSECURE 00000009) (F-Secure SSH 2.0 Guide 9)				
	C1158	F-Secure, <i>F-Secure VPN+</i> (Sept. 1998) (from FSECURE 00000009) (VPN+ Guide 9)				
	C1159	F-Secure, <i>F-Secure Management Tools, Administrator's Guide</i> (1999) (from FSECURE 00000003) (F-Secure Management Tools)				
	C1160	F-Secure, <i>F-Secure Desktop, User's Guide</i> (1997) (from FSECURE 00000009) (FSecure Desktop User's Guide)				
	C1161	SafeNet, Inc., <i>VPN Policy Manager</i> (January 2000) (VPN Policy Manager)				
	C1162	F-Secure, <i>F-Secure VPN+ for Windows NT 4.0</i> (1998) (from FSECURE 00000009) (FSecure VPN+)				
	C1163	IRE, Inc., <i>SafeNet/Soft-PK Version 4</i> (March 28, 2000) (Soft-PK Version 4) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1164	IRE/SafeNet Inc., <i>VPN Technologies Overview</i> (March 28, 2000) (Safenet VPN Overview) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1165	IRE, Inc., <i>SafeNet / Security Center Technical Reference Addendum</i> (June 22, 1999) (Safenet Addendum)				
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	C1166	IRE, Inc., <i>System Description for VPN Policy Manager and SafeNet/SoftPK</i> (March 30, 2000) (VPN Policy Manager System Description)				
	C1167	IRE, Inc., <i>About SafeNet / VPN Policy Manager</i> (1999) (About Safenet VPN Policy Manager)				
	C1168	IRE, Inc., <i>SafeNet/VPN Policy Manager Quick Start Guide Version 1</i> (1999) (SafeNet VPN Policy Manager) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1169	Trusted Information Systems, Inc., <i>Gauntlet Internet Firewall, Firewall Product Functional Summary</i> (July 22, 1996) (Gauntlet Functional Summary)				
	C1170	Trusted Information Systems, Inc., <i>Running the Gauntlet Internet Firewall, An Administrator's Guide to Gauntlet Version 3.0</i> (May 31, 1995) (Running the Gauntlet Internet Firewall)				
	C1171	Ted Harwood, <i>Windows NT Terminal Server and Citrix Metaframe</i> (New Riders 1999) (Windows NT Harwood) 79				
	C1172	Todd W. Mathers and Shawn P. Genoway, <i>Windows NT Thing Client Solutions: Implementing Terminal Server and Citrix MetaFrame</i> (Macmillan Technical Publishing 1999) (Windows NT Mathers)				
	C1173	Bernard Aboba et al., <i>Securing L2TP using IPSEC</i> (February 2, 1999)				
	C1174	156. <i>Finding Your Way Through the VPN Maze</i> (1999) ("PGP")				
	C1175	Linux FreeSWAN Overview (1999) (Linux FreeSWAN) Overview)				
	C1176	TimeStep, <i>The Business Case for Secure VPNs</i> (1998) ("TimeStep")				
	C1177	WatchGuard Technologies, Inc., <i>WatchGuard Firebox System Powerpoint</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1178	WatchGuard Technologies, Inc., <i>MSS Firewall Specifications</i> (1999) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1179	WatchGuard Technologies, Inc., <i>Request for Information, Security Services</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1180	WatchGuard Technologies, Inc., <i>Protecting the Internet Distributed Enterprise, White Paper</i> (February 2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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	C1181	WatchGuard Technologies, Inc., <i>WatchGuard LiveSecurity for MSS Powerpoint</i> (Feb. 14 2000)			
	C1182	WatchGuard Technologies, Inc., <i>MSS Version 2.5, Add-On for WatchGuard SOHO Release Notes</i> (July 21, 2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1183	Air Force Research Laboratory, <i>Statement of Work for Information Assurance System Architecture and Integration, PR No. N-8-6106 (Contract No. F30602-98-C-0012)</i> (January 29, 1998)			
	C1184	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.2 Report, Rev. 1.0</i> (September 21, 1998)			
	C1185	BBN Information Assurance Contract, <i>TIS Labs Monthly Status Report</i> (March 16-April 30, 1998)			
	C1186	DARPA, <i>Dynamic Virtual Private Network (VPN) Powerpoint</i>			
	C1187	GTE Internetworking, <i>Contractor's Program Progress Report</i> (March 16-April 30, 1998)			
	C1188	Darrell Kindred, <i>Dynamic Virtual Private Networks (DVPN) Countermeasure Characterization</i> (January 30, 2001)			
	C1189	<i>Virtual Private Networking Countermeasure Characterization</i> (March 30, 2000)			
	C1190	<i>Virtual Private Network Demonstration</i> (March 21, 1998)			
	C1191	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks (VPNs) and Integrated Security Management</i> (2000)			
	C1192	Information Assurance/NAI Labs, <i>Create/Add DVPN Enclave</i> (2000)			
	C1193	NAI Labs, <i>IFE 3.1 Integration Demo</i> (2000)			
	C1194	Information Assurance, <i>Science Fair Agenda</i> (2000)			
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Subst. for form 1449/PTO <b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				<b>Complete if Known</b>		
				Application Number	11/679,416	
				Filing Date	February 27, 2007	
				First Named Inventor	Victor Larson	
				Art Unit	2157	
Examiner Name	Not yet assigned					
Sheet	16	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C1195	Darrell Kindred et al., <i>Proposed Threads for IFE 3.1</i> (January 13, 2000)				
	C1196	<i>IFE 3.1 Technology Dependencies</i> (2000)				
	C1197	<i>IFE 3.1 Topology</i> (February 9, 2000)				
	C1198	Information Assurance, <i>Information Assurance Integration: IFE 3.1, Hypothesis &amp; Thread Development</i> (January 10-11, 2000)				
	C1199	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation</i> (2000)				
	C1200	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.2</i> (2000)				
	C1201	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.3</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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	C1203	Network Associates Products – <i>PGP Total Network Security Suite, Dynamic Virtual Private Networks</i> (1999)				
	C1204	Microsoft Corporation, <i>Microsoft Proxy Server 2.0</i> (1997) (Proxy Server 2.0, Microsoft Prior Art VPN Technology)				
	C1205	David Johnson et. al., <i>A Guide To Microsoft Proxy Server 2.0</i> (1999) (Johnson, Microsoft Prior Art VPN Technology)				
	C1206	Microsoft Corporation, <i>Setting Server Parameters</i> (1997 (copied from Proxy Server 2.0 CD labeled MSFTVX00157288) (Setting Server Parameters, Microsoft Prior Art VPN Technology)				
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	C1208	Erik Rozell et. al., <i>MCSE Proxy Server 2 Study Guide</i> (1998) (Rozell, Microsoft Prior 15 Art VPN Technology)				
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	C1209	M. Shane Stigler & Mark A Linsenbardt, <i>IIS 4 and Proxy Server 2</i> (1999) (Stigler, Microsoft Prior Art VPN Technology)			
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	C1212	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)			
	C1213	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)			
	C1214	File History for U.S. Application Serial No. 09/653,201, Applicant(s): Whittle Bryan, et al., Filing Date 08/31/2000.			
	C1215	<i>AutoSOCKS v2.1</i> , Datasheet, <a href="http://web.archive.org/web/19970212013409/www.aventail.com/prod/autoskds.html">http://web.archive.org/web/19970212013409/www.aventail.com/prod/autoskds.html</a>			
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	C1218	Chapter 1: Introduction to Firewall Technology, Administration Guide; 12/19/07, <a href="http://www.books24x7.com/book/id_762/viewer_r.asp?bookid=762&amp;chunked=41065062">http://www.books24x7.com/book/id_762/viewer_r.asp?bookid=762&amp;chunked=41065062</a>			
	C1219	The TLS Protocol Version 1.0; January 1999; page 65 of 71.			
	C1220	Elizabeth D. Zwicky, et al., <i>Building Internet Firewalls</i> , 2nd Ed.			
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	C1222	Accessware – The Third Wave in Network Security, Conclave from Internet Dynamics; <a href="http://web.archive.org/web/11980210013830/interdyn.com/Accessware.html">http://web.archive.org/web/11980210013830/interdyn.com/Accessware.html</a>			
	C1223	Extended System Press Release, Sept. 2, 1997; <i>Extended VPN Uses The Internet to Create Virtual Private Networks</i> , <a href="http://www.extendedsystems.com">www.extendedsystems.com</a>			
	C1224	Socks Version 5; Executive Summary; <a href="http://web.archive.org/web/199970620031945/www.aventail.com/educate/whitepaper/socks_wp.html">http://web.archive.org/web/199970620031945/www.aventail.com/educate/whitepaper/socks_wp.html</a>			
	C1225	Internet Dynamics First to Ship Integrated Security Solutions for Enterprise Intranets and Extranets; Sept. 15, 1997; <a href="http://web.archive.org/web/19980210014150/interdyn.com">http://web.archive.org/web/19980210014150/interdyn.com</a>			
	C1226	Emails from various individuals to Linux IPsec re: DNS-LDAP Splicing			
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BST99 1618785-1.077580.0015

(17)  
 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.L./  
 Petitioner Apple Inc. - Exhibit 1026, p. 3428



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11679416 - GAU: 2458 [Signature]

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	First Named Inventor	Victor Larson
	Art Unit	2157
	Examiner Name	Not yet assigned
Sheet 1 of 17	Docket Number	77580-015 (VRNK-1CP2DVCN)

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1000	5,311,593	05/10/1994	Carmi	
	A1001	5,511,122	04/23/1996	Atkinson	
	A1003	5,805,803	09/08/1998	Birrell et al.	
	A1004	5,822,434	10/13/1998	Caronni et al.	
	A1005	5,898,830	04/27/1999	Wesinger, Jr. et al.	
	A1006	60/134,547	05/17/1999	Victor Sheymov	
	A1007	60/151,563	08/31/1999	Bryan Whittles	
	A1008	5,950,195	09/07/1999	Stockwell et al.	
	A1009	6,119,171	09/12/2000	Alkhatib	
	A1010	6,937,597	08/30/2005	Rosenberg et al.	
	A1011	7,072,964	07/04/2006	Whittle et al.	
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	A1014	6,173,399	01/09/2001	Gilbrech	
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	A1017	6,701,437	03/02/2004	Hoke et al.	
	A1018	6,055,574	04/25/2000	Smorodinsky et al.	

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	B1000	WO 001/17775	03-30-2000	Science Applications International Corporation			
	B1001	WO 00/70458	11-23-2000	Comsec Corporation			
	B1002	WO 01/016766	03-08-2001	Science Applications International Corporation			

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	C998	Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009, VirnetX Inc. and Science Applications International Corp. v. Microsoft Corporation,			
	C999	Appendix A of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.			
	C1000	Concordance Table For the References Cited in Tables on pages 6-15, 71-80 and 116-124 of the Microsoft Corporation's Fourth Amended Invalidity Contentions dated Jan. 5, 2009.			
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	C1002	DNS-related correspondence dated September 7, 1993 to September 20, 1993. (Pre KX, KX Records) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
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	C1004	Henning Schulzrinne, <i>Personal Mobility For Multimedia Services In The Internet</i> , Proceedings of the Interactive Distributed Multimedia Systems and Services European Workshop at 143 (1996). (Schulzrinne 96)			
	C1005	Microsoft Corp., <i>Microsoft Virtual Private Networking: Using Point-to-Point Tunneling Protocol for Low-Cost, Secure, Remote Access Across the Internet</i> (1996) (printed from 1998 PDC DVD-ROM). (Point to Point, Microsoft Prior Art VPN Technology)			
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	C1007	Goldschlag, et al., "Hiding Routing Information," Workshop on Information Hiding, Cambridge, UK (May 1996). (Goldschlag II, Onion Routing)			
	C1008	"IPSec Minutes From Montreal", IPSEC Working Group Meeting Notes, <a href="http://www.sandleman.ca/ipsec/1996/08/msg00018.html">http://www.sandleman.ca/ipsec/1996/08/msg00018.html</a> (June 1996). (IPSec Minutes, FreeSWAN)			
	C1009	J. M. Galvin, "Public Key Distribution with Secure DNS," Proceedings of the Sixth USENIX UNIX Security Symposium, San Jose, California, July 1996. (Galvin, DNSSEC)			
	C1010	J. Gilmore, et al. "Re: Key Management, anyone? (DNS Keying)," IPsec Working Group Mailing List Archives (8/96). (Gilmore DNS, FreeSWAN)			
	C1011	H. Orman, et al. "Re: 'Re: DNS? was Re: Key Management, anyone?'" IETF IPsec Working Group Mailing List Archive (8/96-9/96). (Orman DNS, FreeSWAN)			
	C1012	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2052 (October 1996). (RFC 2052, DNS SRV)			
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Petitioner Apple Inc. - Exhibit 1026, p. 3430

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	C1013	Freier, et al. "The SSL Protocol Version 3.0," Transport Layer Security Working Group (November 18, 1996). (SSL, UNDERLYING SECURITY TECHNOLOGY)			
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	C1015	M.G. Reed, et al. "Proxies for Anonymous Routing," 12th Annual Computer Security Applications Conference, San Diego, CA, Dec. 9-13, 1996. (Reed, Onion Routing)			
	C1016	Kenneth F. Alden & Edward P. Wobber, <i>The AltaVista Tunnel: Using the Internet to Extend Corporate Networks</i> , Digital Technical Journal (1997) (Alden, AltaVista)			
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	C1020	Aventail Corp. "Aventail VPN Data Sheet," available at <a href="http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html">http://www.archive.org/web/19970212013043/www.aventail.com/prod/vpndata.html</a> (1997). (Data Sheet, Aventail)			
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	C1023	Aventail Corp., "Socks Version 5," Aventail Whitepaper, available at <a href="http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/soc kswp.html">http://web.archive.org/web/19970620030312/www.aventail.com/educate/whitepaper/soc kswp.html</a> (1997). (Socks, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1024	Aventail Corp., "VPN Server V2.0 Administration Guide," (1997). (VPN, Aventail)			
	C1025	Goldschlag, et al. "Privacy on the Internet," Naval Research Laboratory, Center for High Assurance Computer Systems (1997). (Goldschlag I, Onion Routing)			
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	C1026	Microsoft Corp., <i>Installing Configuring and Using PPTP with Microsoft Clients and Servers</i> (1997). (Using PPTP, Microsoft Prior Art VPN Technology)			
	C1027	Microsoft Corp., <i>IP Security for Microsoft Windows NT Server 5.0</i> (1997) (printed from 1998 PDC DVD-ROM). (IP Security, Microsoft Prior Art VPN Technology)			
	C1028	Microsoft Corp., <i>Microsoft Windows NT Active Directory: An Introduction to the Next Generation Directory Services</i> (1997) (printed from 1998 PDC DVD-ROM). (Directory, Microsoft Prior Art VPN Technology)			
	C1029	Microsoft Corp., <i>Routing and Remote Access Service for Windows NT Server New Opportunities Today and Looking Ahead</i> (1997) (printed from 1998 PDC DVD-ROM). (Routing, Microsoft Prior Art VPN Technology)			
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	C1033	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (03/27/1997). (RFC 2543 Internet Draft 2) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1034	Aventail Corp., "Aventail and Cybersafe to Provide Secure Authentication For Internet and Intranet Communication," Press Release, April 3, 1997. (Secure Authentication, Aventail)			
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	C1038	Aventail Corp., "Aventail Announces the First VPN Solution to Assure Interoperability Across Emerging Security Protocols," June 2, 1997. (First VPN, Aventail)			
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	C1039	Syverson, et al. "Private Web Browsing," Naval Research Laboratory, Center for High 8 Assurance Computer Systems (June 2, 1997). (Syverson, Onion Routing)				
	C1040	Bellcore, "Metrics, Criteria, and Measurement Technique Requirements for ANX Release 1," AIAG Telecommunications Project Team and Bellcore (June 16, 1997). (AIAG Requirements, ANX)				
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	C1042	R. Atkinson, "Key Exchange Delegation Record for the DNS," Network Working Group, RFC 2230 (November 1997). (RFC 2230, KX Records)				
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	C1049	R. G. Moskowitz, "Network Address Translation Issues with IPsec," Internet Draft, Internet Engineering Task Force, February 6, 1998. (Moskowitz)				
	C1050	H. Schulzrinne, et al, "Internet Telephony Gateway Location," Proceedings of IEEE INfocom '98, The Conference on Computer Communications, Vol. 2 ( March 29 – April 2, 1998). (Gateway, Schulzrinne)				
EXAMINER  /Krisna Lim/				DATE CONSIDERED  06/04/2009		

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Subst. for form 1449/PTO <b>SUPPLEMENTAL          INFORMATION DISCLOSURE STATEMENT BY          APPLICANT</b> <i>(Use as many sheets as necessary)</i>			<b>Complete if Known</b>			
			Application Number		11/679,416	
			Filing Date		February 27, 2007	
			First Named Inventor		Victor Larson	
			Art Unit		2157	
			Examiner Name		Not yet assigned	
Sheet	6	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	C1051	C. Huitema, 45 al. "Simple Gateway Control Protocol," Version 1.0 (May 5, 1998). (SGCP)				
	C1052	DISA "Secret Internet Protocol Router Network," SIPRNET Program Management Office (D3113) DISN Networks, DISN Transmission Services (May 8, 1998). (DISA, SIPRNET)				
	C1053	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (05/14/1998). (RFC 2543 Internet Draft 5) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1054	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (06/17/1998). (RFC 2543 Internet Draft 6) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1055	D. McDonald, et al. "PF_KEY Key Management API, Version 2," Network Working Group, RFC 2367 (July 1998). (RFC 2367)				
	C1056	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (07/16/1998). (RFC 2543 Internet Draft 7) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1057	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (08/07/1998). (RFC 2543 Internet Draft 8) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1058	Microsoft Corp., <i>Company Focuses on Quality and Customer Feedback</i> (August 18, 1998). (Focus, Microsoft Prior Art VPN Technology)				
	C1059	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (09/18/1998). (RFC 2543 Internet Draft 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1060	Atkinson, et al. "Security Architecture for the Internet Protocol," Network Working Group, RFC 2401 (November 1998). (RFC 2401, UNDERLYING SECURITY TECHNOLOGIES)				
	C1061	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (11/12/1998). (RFC 2543 Internet Draft 10) 9 <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1062	Donald Eastlake, <i>Domain Name System Security Extensions</i> , IETF DNS Security Working Group (December 1998). (DNSSEC-7)				
	C1063	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (12/15/1998). (RFC 2543 Internet Draft 11) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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				Art Unit	2157	
				Examiner Name	Not yet assigned	
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	C1064	Aventail Corp., "Aventail Connect 3.1/2.6 Administrator's Guide," (1999). (Aventail Administrator 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1065	Aventail Corp., "Aventail Connect 3.1/2.6 User's Guide," (1999). (Aventail User 3.1, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1066	Aventail Corp., "Aventail ExtraWeb Server v3.2 Administrator's Guide," (1999). (Aventail ExtraWeb 3.2, Aventail) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1067	Kaufman et al, "Implementing IPsec," (Copyright 1999). (Implementing IPSEC, VPN REFERENCES)				
	C1068	Network Solutions, Inc. "Enabling SSL," NSI Registry (1999). (Enabling SSL, UNDERLYING SECURITY TECHNOLOGIES)				
	C1069	Check Point Software Technologies Ltd. (1999) (Check Point, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1070	Arnt Gulbrandsen & Paul Vixie, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , <draft-ietf-dnsind-frc2052bis-02.txt> (January 1999). (Gulbrandsen 99, DNS SRV)				
	C1071	C. Scott, et al. <i>Virtual Private Networks</i> , O'Reilly and Associates, Inc., 2nd ed. (Jan. 1999). (Scott VPNs)				
	C1072	M. Handley, H. Schulzrinne, E. Schooler, Internet Engineering Task Force, Internet Draft, (01/15/1999). (RFC 2543 Internet Draft 12) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1073	Goldschlag, et al., "Onion Routing for Anonymous and Private Internet Connections," Naval Research Laboratory, Center for High Assurance Computer Systems (January 28, 1999). (Goldschlag III, Onion Routing)				
	C1074	H. Schulzrinne, "Internet Telephony: architecture and protocols – an IETF perspective," <i>Computer Networks</i> , Vol. 31, No. 3 (February 1999). (Telephony, Schulzrinne)				
	C1075	M. Handley, et al. "SIP: Session Initiation Protocol," Network Working Group, RFC 2543 and Internet Drafts (12/96-3/99). (Handley, RFC 2543)				
	C1076	FreeSWAN Project, <i>Linux FreeSWAN Compatibility Guide</i> (March 4, 1999). (FreeSWAN Compatibility Guide, FreeSWAN)				
	C1077	Telcordia Technologies, "ANX Release 1 Document Corrections," AIAG (May 11, 1999). (Telcordia, ANX)				
	C1078	Ken Hornstein & Jeffrey Altman, <i>Distributing Kerberos KDC and Realm Information with DNS</i> <draft-ietf-cat-krb-dns-locate-oo.txt> (June 21, 1999). (Hornstein, DNS SRV)				
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Petitioner Apple Inc. - Exhibit 1026, p. 3435

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	C1079	Bhattacharya et. al. "An LDAP Schema for Configuration and Administration of IPsec Based Virtual Private Networks (VPNs)", IETF Internet Draft (October 1999). (Bhattacharya LDAP VPN)			
	C1080	B. Patel, et al. "DHCP Configuration of IPSEC Tunnel Mode," IPSEC Working Group, Internet Draft 02 (10/15/1999). (Patel)			
	C1081	Goncalves, et al. <i>Check Point FireWall -1 Administration Guide</i> , McGraw-Hill Companies (2000). (Goncalves, Checkpoint FW) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1082	"Building a Microsoft VPN: A Comprehensive Collection of Microsoft Resources," FirstVPN, (Jan 2000). (FirstVPN Microsoft)			
	C1083	Gulbrandsen, Vixie, & Esibov, <i>A DNS RR for specifying the location of services (DNS SRV)</i> , IETF RFC 2782 (February 2000). (RFC 2782, DNS SRV)			
	C1084	MITRE Organization, "Technical Description," Collaborative Operations in Joint Expeditionary Force Experiment (JEFX) 99 (February 2000). (MITRE, SIPRNET)			
	C1085	H. Schulzrinne, et al. "Application-Layer Mobility Using SIP," <i>Mobile Computing and Communications Review</i> , Vol. 4, No. 3. pp. 47-57 (July 2000). (Application, SIP)			
	C1086	Kindred et al, "Dynamic VPN Communities: Implementation and Experience," DARPA Information Survivability Conference and Exposition II (June 2001). (DARPA, VPN SYSTEMS)			
	C1087	ANX 101: Basic ANX Service Outline. (Outline, ANX)			
	C1088	ANX 201: Advanced ANX Service. (Advanced, ANX)			
	C1089	Appendix A: Certificate Profile for ANX IPsec Certificates. (Appendix, ANX)			
	C1090	Assured Digital Products. (Assured Digital) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1091	Aventail Corp., "Aventail AutoSOCKS the Client Key to Network Security," Aventail Corporation White Paper. (Network Security, Aventail)			
	C1092	Cindy Moran, "DISN Data Networks: Secret Internet Protocol Router Network (SIPRNet)." (Moran, SIPRNET)			
	C1093	Data Fellows F-Secure VPN+ (F-Secure VPN+)			
	C1094	"Interim Operational Systems Doctrine for the Remote Access Security Program (RASP) Secret Dial-In Solution. (RASP, SIPRNET)			
	C1095	<i>Onion Routing</i> , "Investigation of Route Selection Algorithms," available at <a href="http://www.onion-router.net/Archives/Route/index.html">http://www.onion-router.net/Archives/Route/index.html</a> . (Route Selection, Onion Routing)			
	C1096	Secure Computing, "Bullet-Proofing an Army Net," Washington Technology. (Secure, SIPRNET)			
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	C1097	SPARTA "Dynamic Virtual Private Network." (Sparta, VPN SYSTEMS)				
	C1098	Standard Operation Procedure for Using the 1910 Secure Modems. (Standard, SIPRNET)				
	C1099	Publicly available emails relating to FreeSWAN (MSFTVX00018833-MSFTVX00019206). (FreeSWAN emails, FreeSWAN)				
	C1100	Kaufman et al., "Implementing IPsec," (Copyright 1999) (Implementing IPsec)				
	C1101	Network Associates <i>Gauntlet Firewall For Unix User's Guide Version 5.0</i> (1999). (Gauntlet User's Guide - Unix, Firewall Products)				
	C1102	Network Associates <i>Gauntlet Firewall For Windows NT Getting Started Guide Version 5.0</i> (1999) (Gauntlet Getting Started Guide - NT, Firewall Products)				
	C1103	Network Associates <i>Gauntlet Firewall For Unix Getting Started Guide Version 5.0</i> (1999) (Gauntlet Unix Getting Started Guide, Firewall Products)				
	C1104	Network Associates <i>Release Notes Gauntlet Firewall for Unix 5.0</i> (March 19, 1999) (Gauntlet Unix Release Notes, Firewall Products)				
	C1105	Network Associates <i>Gauntlet Firewall For Windows NT Administrator's Guide Version 5.0</i> (1999) (Gauntlet NT Administrator's Guide, Firewall Products)				
	C1106	Trusted Information Systems, Inc. <i>Gauntlet Internet Firewall Firewall-to-Firewall Encryption Guide Version 3.1</i> (1996) (Gauntlet Firewall-to-Firewall, Firewall Products)				
	C1107	Network Associates <i>Gauntlet Firewall Global Virtual Private Network User's Guide for Windows NT Version 5.0</i> (1999) (Gauntlet NT GVPN, GVPN)				
	C1108	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)				
	C1109	Dan Sterne <i>Dynamic Virtual Private Networks</i> (May 23, 2000) (Sterne DVPN, DVPN)				
	C1110	Darrell Kindred <i>Dynamic Virtual Private Networks (DVPN)</i> (December 21, 1999) (Kindred DVPN, DVPN)				
	C1111	Dan Sterne <i>et.al. TIS Dynamic Security Perimeter Research Project Demonstration</i> (March 9, 1998) (Dynamic Security Perimeter, DVPN)				
	C1112	Darrell Kindred <i>Dynamic Virtual Private Networks Capability Description</i> (January 5, 2000) (Kindred DVPN Capability, DVPN) 11				
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	C1113	October 7, and 28 1997 email from Domenic J. Turchi Jr. (SPARTA00001712-1714, 1808-1811) (Turchi DVPN email, DVPN)			
	C1114	James Just & Dan Sterne <i>Security Quickstart Task Update</i> (February 5, 1997) (Security Quickstart, DVPN)			
	C1115	Virtual Private Network Demonstration dated March 21, 1998 (SPARTA00001844-54) (DVPN Demonstration, DVPN)			
	C1116	GTE Internetworking & BBN Technologies <i>DARPA Information Assurance Program Integrated Feasibility Demonstration (IFD) 1.1 Plan</i> (March 10, 1998) (IFD 1.1, DVPN)			
	C1117	Microsoft Corp. Windows NT Server Product Documentation: Administration Guide – Connection Point Services, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cpsops.mspx</a> (Connection Point Services) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows. Accordingly, upon information and belief, this reference is prior art to the patents-insuit.)			
	C1118	Microsoft Corp. Windows NT Server Product Documentation: Administration Kit Guide – Connection Manager, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/cmak.msp</a> (Connection Manager) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1119	Microsoft Corp. Autodial Heuristics, <i>available at</i> <a href="http://support.microsoft.com/kb/164249">http://support.microsoft.com/kb/164249</a> (Autodial Heuristics) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)			
	C1120	Microsoft Corp., Cariplo: Distributed Component Object Model, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809332(printer).aspx</a> (Cariplo I)			
	C1121	Marc Levy, COM Internet Services (Apr. 23, 1999), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809302(printer).aspx</a> (Levy)			
	C1122	Markus Horstmann and Mary Kirtland, DCOM Architecture (July 23, 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809311(printer).aspx</a> (Horstmann)			
	C1123	Microsoft Corp., DCOM: A Business Overview (Apr. 1997), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809320(printer).aspx</a> (DCOM Business Overview I)			
	C1124	Microsoft Corp., DCOM Technical Overview (Nov. 1996), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms809340(printer).aspx</a> (DCOM Technical Overview I)			
	C1125	Microsoft Corp., DCOM Architecture White Paper (1998) <i>available in</i> PDC DVD-ROM (DCOM Architecture)			
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Petitioner Apple Inc. - Exhibit 1026, p. 3438

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	C1126	Microsoft Corp, DCOM – The Distributed Component Object Model, A Business Overview White Paper (Microsoft 1997) <i>available in</i> PDC DVD-ROM (DCOM Business Overview II)					
	C1127	Microsoft Corp., DCOM—Cariplo Home Banking Over The Internet White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (Cariplo II)					
	C1128	Microsoft Corp., DCOM Solutions in Action White Paper (Microsoft 1996) <i>available in</i> PDC DVD-ROM (DCOM Solutions in Action)					
	C1129	Microsoft Corp., DCOM Technical Overview White Paper (Microsoft 1996) <i>available in</i> 12 PDC DVD-ROM (DCOM Technical Overview II)					
	C1130	125. Scott Suhy & Glenn Wood, DNS and Microsoft Windows NT 4.0, (1996) <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx">http://msdn2.microsoft.com/en-us/library/ms810277(printer).aspx</a> (Suhy)					
	C1131	126. Aaron Skonnard, <i>Essential Winlnet</i> 313-423 (Addison Wesley Longman 1998) (Essential Winlnet)					
	C1132	Microsoft Corp. Installing, Configuring, and Using PPTP with Microsoft Clients and Servers, (1998) <i>available at</i> <a href="http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx">http://msdn2.microsoft.com/enus/library/ms811078(printer).aspx</a> (Using PPTP)					
	C1133	Microsoft Corp., Internet Connection Services for MS RAS, Standard Edition, <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstart.msp</a> (Internet Connection Services I)					
	C1134	Microsoft Corp., Internet Connection Services for RAS, Commercial Edition, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/inetconctservice/bcgstrtc.msp</a> (Internet Connection Services II)					
	C1135	Microsoft Corp., Internet Explorer 5 Corporate Deployment Guide – Appendix B: Enabling Connections with the Connection Manager Administration Kit, <i>available at</i> <a href="http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp">http://www.microsoft.com/technet/prodtechnol/ie/deploy/deploy5/appendb.msp</a> (IE5 Corporate Development)					
	C1136	Mark Minasi, <i>Mastering Windows NT Server 4</i> 1359-1442 (6th ed., January 15, 1999)(Mastering Windows NT Server)					
	C1137	<i>Hands On, Self-Paced Training for Supporting Version 4.0</i> 371-473 (Microsoft Press 1998) (Hands On)					
	C1138	Microsoft Corp., MS Point-to-Point Tunneling Protocol (Windows NT 4.0), <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp">http://www.microsoft.com/technet/archive/winntas/maintain/featusability/pptpwp3.msp</a> (MS PPTP)					
	C1139	Kenneth Gregg, <i>et al.</i> , <i>Microsoft Windows NT Server Administrator's Bible</i> 173-206, 883-911, 974-1076 (IDG Books Worldwide 1999) (Gregg)					
	C1140	Microsoft Corp., Remote Access (Windows), <i>available at</i> <a href="http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx">http://msdn2.microsoft.com/en-us/library/bb545687(VS.85,printer).aspx</a> (Remote Access)					
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 Petitioner Apple Inc. - Exhibit 1026, p. 3439

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	C1141	Microsoft Corp., Understanding PPTP (Windows NT 4.0), <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.msp">http://www.microsoft.com/technet/archive/winntas/plan/pptpudst.msp</a> (Understanding PPTP NT 4) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1142	Microsoft Corp., Windows NT 4.0: Virtual Private Networking, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.msp">http://www.microsoft.com/technet/archive/winntas/deploy/confeat/vpntwk.msp</a> (NT4 VPN) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1143	Anthony Northrup, <i>NT Network Plumbing: Routers, Proxies, and Web Services</i> 299-399 (IDG Books Worldwide 1998) (Network Plumbing)				
	C1144	Microsoft Corp., Chapter 1 – Introduction to Windows NT Routing with Routing and Remote Access Service, <i>Available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch01.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch01.msp</a> (Intro to RRAS) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.) 13				
	C1145	Microsoft Corp., Windows NT Server Product Documentation: Chapter 5 – Planning for Large-Scale Configurations, <i>available at</i> <a href="http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.msp">http://www.microsoft.com/technet/archive/winntas/proddocs/rras40/rrasch05.msp</a> (Large-Scale Configurations) (Although undated, this reference refers to the operation of prior art versions of Microsoft Windows such as Windows NT 4.0. Accordingly, upon information and belief, this reference is prior art to the patents-in-suit.)				
	C1146	F-Secure, <i>F-Secure Evaluation Kit</i> (May 1999) (FSECURE 00000003) (Evaluation Kit 3) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1147	F-Secure, <i>F-Secure NameSurfer</i> (May 1999) (from FSECURE 00000003) (NameSurfer 3)				
	C1148	F-Secure, <i>F-Secure VPN Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (F-Secure VPN 3)				
	C1149	F-Secure, <i>F-Secure SSH User's &amp; Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (SSH Guide 3)				
	C1150	F-Secure, <i>F-Secure SSH2.0 for Windows NT and 95</i> (May 1999) (from FSECURE 00000003) (SSH 2.0 Guide 3)				
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				Application Number	11/679,416
				Filing Date	February 27, 2007
				First Named Inventor	Victor Larson
				Art Unit	2157
				Examiner Name	Not yet assigned
Sheet	13	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>					
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
	C1151	F-Secure, <i>F-Secure VPN+ Administrator's Guide</i> (May 1999) (from FSECURE 00000003) (VPN+ Guide 3)			
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	C1153	F-Secure, <i>F-Secure SSH</i> (1996) (from FSECURE 00000006) (F-Secure SSH 6)			
	C1154	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (1998) (from FSECURE 00000006) (F-Secure SSH 2.0 Guide 6)			
	C1155	F-Secure, <i>F-Secure Evaluation Kit</i> (Sept. 1998) (FSECURE 00000009) (Evaluation Kit 9) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
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	C1157	F-Secure, <i>F-Secure SSH 2.0 for Windows NT and 95</i> (Sept. 1998) (from FSECURE 00000009) (F-Secure SSH 2.0 Guide 9)			
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	C1160	F-Secure, <i>F-Secure Desktop, User's Guide</i> (1997) (from FSECURE 00000009) (FSecure Desktop User's Guide)			
	C1161	SafeNet, Inc., <i>VPN Policy Manager</i> (January 2000) (VPN Policy Manager)			
	C1162	F-Secure, <i>F-Secure VPN+ for Windows NT 4.0</i> (1998) (from FSECURE 00000009) (FSecure VPN+)			
	C1163	IRE, Inc., <i>SafeNet/Soft-PK Version 4</i> (March 28, 2000) (Soft-PK Version 4) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1164	IRE/SafeNet Inc., <i>VPN Technologies Overview</i> (March 28, 2000) (Safenet VPN Overview) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1165	IRE, Inc., <i>SafeNet / Security Center Technical Reference Addendum</i> (June 22, 1999) (Safenet Addendum)			
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			Art Unit		2157	
			Examiner Name		Not yet assigned	
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	C1166	IRE, Inc., <i>System Description for VPN Policy Manager and SafeNet/SoftPK</i> (March 30, 2000) (VPN Policy Manager System Description)				
	C1167	IRE, Inc., <i>About SafeNet / VPN Policy Manager</i> (1999) (About Safenet VPN Policy Manager)				
	C1168	IRE, Inc., <i>SafeNet/VPN Policy Manager Quick Start Guide Version 1</i> (1999) (SafeNet VPN Policy Manager) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1169	Trusted Information Systems, Inc., <i>Gauntlet Internet Firewall, Firewall Product Functional Summary</i> (July 22, 1996) (Gauntlet Functional Summary)				
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	C1171	Ted Harwood, <i>Windows NT Terminal Server and Citrix Metaframe</i> (New Riders 1999) (Windows NT Harwood) 79				
	C1172	Todd W. Mathers and Shawn P. Genoway, <i>Windows NT Thing Client Solutions: Implementing Terminal Server and Citrix MetaFrame</i> (Macmillan Technical Publishing 1999) (Windows NT Mathers)				
	C1173	Bernard Aboba et al., <i>Securing L2TP using IPSEC</i> (February 2, 1999)				
	C1174	156. <i>Finding Your Way Through the VPN Maze</i> (1999) ("PGP")				
	C1175	Linux FreeSWAN Overview (1999) (Linux FreeSWAN) Overview)				
	C1176	TimeStep, <i>The Business Case for Secure VPNs</i> (1998) ("TimeStep")				
	C1177	WatchGuard Technologies, Inc., <i>WatchGuard Firebox System Powerpoint</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1178	WatchGuard Technologies, Inc., <i>MSS Firewall Specifications</i> (1999) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1179	WatchGuard Technologies, Inc., <i>Request for Information, Security Services</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
	C1180	WatchGuard Technologies, Inc., <i>Protecting the Internet Distributed Enterprise, White Paper</i> (February 2000). <b>[Due to difficulty locating this reference, a copy has not been provided]</b>				
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	C1181	WatchGuard Technologies, Inc., <i>WatchGuard LiveSecurity for MSS Powerpoint</i> (Feb. 14 2000)								
	C1182	WatchGuard Technologies, Inc., <i>MSS Version 2.5, Add-On for WatchGuard SOHO Releaset Notes</i> (July 21, 2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>								
	C1183	Air Force Research Laboratory, <i>Statement of Work for Information Assurance System Architecture and Integration, PR No. N-8-6106 (Contract No. F30602-98-C-0012)</i> (January 29, 1998)								
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	C1187	GTE Internetworking, <i>Contractor's Program Progress Report</i> (March 16-April 30, 1998)								
	C1188	Darrell Kindred, <i>Dynamic Virtual Private Networks (DVPN) Countermeasure Characterization</i> (January 30, 2001)								
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	C1190	<i>Virtual Private Network Demonstration</i> (March 21, 1998)								
	C1191	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks (VPNs) and Integrated Security Management</i> (2000)								
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	C1193	NAI Labs, <i>IFE 3.1 Integration Demo</i> (2000)								
	C1194	Information Assurance, <i>Science Fair Agenda</i> (2000)								
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Examiner Name	Not yet assigned				
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	C1195	Darrell Kindred et al., <i>Proposed Threads for IFE 3.1</i> (January 13, 2000)			
	C1196	<i>IFE 3.1 Technology Dependencies</i> (2000)			
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	C1198	Information Assurance, <i>Information Assurance Integration: IFE 3.1, Hypothesis &amp; Thread Development</i> (January 10-11, 2000)			
	C1199	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation</i> (2000)			
	C1200	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.2</i> (2000)			
	C1201	Information Assurance/NAI Labs, <i>Dynamic Virtual Private Networks Presentation v.3</i> (2000) <b>[Due to difficulty locating this reference, a copy has not been provided]</b>			
	C1202	T. Braun et al., <i>Virtual Private Network Architecture, Charging and Accounting Technology for the Internet</i> (August 1, 1999) (VPNA)			
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	C1205	David Johnson et. al., <i>A Guide To Microsoft Proxy Server 2.0</i> (1999) (Johnson, Microsoft Prior Art VPN Technology)			
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	C1210	David G. Schaer, <i>MCSE Test Success: Proxy Server 2</i> (1998) (Schaer, Microsoft Prior Art VPN Technology)					
	C1211	John Savill, <i>The Windows NT and Windows 2000 Answer Book</i> (1999) (Savill, Microsoft Prior Art VPN Technology)					
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	C1213	Network Associates <i>Gauntlet Firewall For UNIX Global Virtual Private Network User's Guide Version 5.0</i> (1999) (Gauntlet Unix GVPN, GVPN)					
	C1214	File History for U.S. Application Serial No. 09/653,201, Applicant(s): Whittle Bryan, et al., Filing Date 08/31/2000.					
	C1215	<i>AutoSOCKS v2.1</i> , Datasheet, <a href="http://web.archive.org/web/19970212013409/www.aventail.com/prod/autoskds.html">http://web.archive.org/web/19970212013409/www.aventail.com/prod/autoskds.html</a>					
	C1216	Ran Atkinson, <i>Use of DNS to Distribute Keys</i> , 7 Sept. 1993, <a href="http://ops.ietf.org/lists/namedroppers/namedroppers.199x/msg00945.html">http://ops.ietf.org/lists/namedroppers/namedroppers.199x/msg00945.html</a>					
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	C1219	The TLS Protocol Version 1.0; January 1999; page 65 of 71.					
	C1220	Elizabeth D. Zwicky, et al., <i>Building Internet Firewalls</i> , 2nd Ed.					
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	C1223	Extended System Press Release, Sept. 2, 1997; <i>Extended VPN Uses The Internet to Create Virtual Private Networks</i> , <a href="http://www.extendedsystems.com">www.extendedsystems.com</a>					
	C1224	Socks Version 5; Executive Summary; <a href="http://web.archive.org/web/199970620031945/www.aventail.com/educate/whitepaper/socks_wp.html">http://web.archive.org/web/199970620031945/www.aventail.com/educate/whitepaper/socks_wp.html</a>					
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	C1226	Emails from various individuals to Linux IPsec re: DNS-LDAP Splicing					
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BST99 1618785-1.077580.0015

(17)  
 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.L./  
 Petitioner Apple Inc. - Exhibit 1026, p. 3445



<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  <b>(PTO-1449)</b>	ATTY. DOCKET NO. <b>077580-0015</b>	SERIAL NO. <b>11/679,416</b>
APPLICANT <b>Larson et al.</b>		
FILING DATE <b>Feb. 27, 2007</b>		GROUP <b>2131</b>

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Codez (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	US 4,933,846 A	6/12/1990	Humphrey et al.	
	A2	US 4,988,990 A	1/29/1991	Warrior	
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SHEET 2 OF 6

INFORMATION DISCLOSURE CITATION IN AN APPLICATION  (PTO-1449)				ATTY. DOCKET NO. <b>077580-0015</b>	SERIAL NO. <b>11/679,416</b>
APPLICANT <b>Larson et al.</b>					
FILING DATE <b>Feb. 27, 2007</b>				GROUP <b>2131</b>	
U.S. PATENT DOCUMENTS					
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EXAMINER /Krisna Lim/				DATE CONSIDERED 06/04/2009	

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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  (PTO-1449)	ATTY. DOCKET NO. <b>077580-0015</b>	SERIAL NO. <b>11/679,416</b>
APPLICANT <b>Larson et al.</b>		
FILING DATE <b>Feb. 27, 2007</b>		GROUP <b>2131</b>

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A64	US 6,332,158 B1	12/18/2001	Risley et al.	
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	A68	US 6,487,598 B1	11/26/2002	Valencia	
	A69	US 6,502,135 B1	12/31/2002	Munger et al	
	A70	US 6,505,232 B1	1/7/2003	Mighdoll et al	
	A71	US 6,510,154 B1	1/21/2003	Mayes et al	
	A72	US 6,549,516 B1	4/15/2003	Albert et al	
	A73	US 6,557,037 B1	4/29/2007	Provino	
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	A83	US 6,826,616 B2	11/30/2004	Larson et al.	
	A84	US 6,839,759 B2	1/4/2005	Larson et al.	
	A85	US 7,010,604 B1	3/7/2006	Munger et al.	
	A86	US 7,133,930 B2	11/7/2006	Munger et al.	
	A87	US 7,188,180 B2	3/6/2007	Larson et al.	
	A88	US 7,197,563 B2	3/27/2007	Sheymov et al.	
	A89	US 2002/0004898 A1	1/10/2002	Droge	
	A90	US 2005/0055306 A1	3/10/2005	Miller et al.	

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No

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SHEET 4 OF 6

EXAMINER'S INITIALS		CITE NO.	Foreign Patent Document Country Codes - Number 4 - Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation Yes No	
		B1	EP 0 814 589	12/29/1997	Harwood et al.			
		B2	EP 0 838 930	4/29/1998	Alden et al.			
		B3	EP 0 858 189	8/12/1998	Maciel et al.			
		B4	DE 199 24 575	12/2/1999	Provino et al.			
		B5	GB 2 317 792	4/1/1998	Miner et al.			
		B6	GB 2 334 181 A	8/11/1999	Noblet			
		B7	EP 836306A1	4/15/1998	Sasyan et al.			
		B8	WO 9827783 A	6/25/1998	Tello et al.			
		B9	WO 00/17775	3/30/2000	Miller et al.			
		B10	WO 00/70458	11/23/2000	Sheymov			
		B11	WO 01 50688	7/12/2001	Kriens			
		B12	WO 98 55930	12/10/1998	Tang			
		B13	WO 98 59470	12/30/1998	Kanter et al.			
		B14	WO 98/27783	6/25/1998	Tello et al.			
		B16	WO 99 38081	7/29/1999	Paulsen et al.			
		B17	WO 99 48303	9/23/1999	Cox et al.			
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
	C1	Alan O. Frier et al., "The SSL Protocol Version 3.0", Nov. 18, 1996, printed from <a href="http://www.netscape.com/eng/ss13/draft302.txt">http://www.netscape.com/eng/ss13/draft302.txt</a> on Feb. 4, 2002, 56 pages.						
	C2	August Bequai, "Balancing Legal Concerns Over Crime and Security in Cyberspace", Computer & Security, vol. 17, No. 4, 1998, pp. 293-298.						
	C3	D. B. Chapman et al., "Building Internet Firewalls", Nov. 1995, pp. 278-375.						
	C4	D. Clark, "US Calls for Private Domain-Name System", Computer, IEEE Computer Society, Aug. 1, 1998, pp. 22-25.						
	C5	Davila J et al, "Implementation of Virtual Private Networks at the Transport Layer", Information Security, Second International Work-shop, ISW'99. Proceedings (Lecture Springer-Verlag Berlin, Germany, [Online] 1999, pp. 85-102, XP002399276, ISBN 3-540-66695-B, retrieved from the Internet: URL: <a href="http://www.springerlink.com/content/4uac0tb0hecoma89/fulltext.pdf">http://www.springerlink.com/content/4uac0tb0hecoma89/fulltext.pdf</a> (Abstract).						
EXAMINER /Krisna Lim/					DATE CONSIDERED 06/04/2009			

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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  <b>(PTO-1449)</b>		ATTY. DOCKET NO. <b>077580-0015</b>	SERIAL NO. <b>11/679,416</b>
		APPLICANT <b>Larson et al.</b>	
		FILING DATE <b>Feb. 27, 2007</b>	GROUP <b>2131</b>
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
	C6	Dolev, Shlomi and Ostrovsky, Rafil, "Efficient Anonymous Multicast and Reception" (Extended Abstract), 16 pages.	
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	C10	Glossary for the Linux FreeS/WAN project, printed from <a href="http://liberty.freeswan.org/freeswan_trees/freeswan-1.3/doc/glossary.html">http://liberty.freeswan.org/freeswan_trees/freeswan-1.3/doc/glossary.html</a> on Feb. 21, 2002, 25 pages.	
	C11	J. Gilmore, "Swan: Securing the Internet against Wiretapping", printed from <a href="http://liberty.freeswan.org/freeswan_trees/freeswan-1.3/doc/rationale.html">http://liberty.freeswan.org/freeswan_trees/freeswan-1.3/doc/rationale.html</a> on Feb. 21, 2002, 4 pages.	
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	C19	RFC 2543-SIP (dated March 1999): Session Initiation Protocol (SIP or SIPS)	
	C20	Rich Winkel, "CAQ: Networking With Spooks: The NET & The Control Of Information", Internet Newsgroup, Jun. 21, 1997, 4 pages.	
	C21	Rubin, Aviel D., Geer, Daniel, and Ranum, Marcus J. (Wiley Computer Publishing), "Web Security Sourcebook", pp. 82-94.	
	C22	Search Report (dated Aug. 20, 2002), International Application No. PCT/US01/04340.	
	C23	Search Report (dated Aug. 23, 2002), International Application No. PCT/US01/13260.	
EXAMINER		DATE CONSIDERED	
/Krisna Lim/		06/04/2009	

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APPLICANT <b>Larson et al.</b>							
FILING DATE <b>Feb. 27, 2007</b>		GROUP <b>2131</b>					
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes-Number 4 -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
	C24	Search Report (dated Oct. 7, 2002), International Application No. PCT/US01/13261.					
	C25	Search Report, IPER (dated Nov. 13, 2002), International Application No. PCT/US01/04340.					
	C26	Search Report, IPER (dated Feb. 06, 2002), International Application No. PCT/US01/13261.					
	C27	Search Report, IPER (dated Jan. 14, 2003), International Application No. PCT/US01/13260.					
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	C30	W. Stallings, "Cryptography And Network Security", 2nd, Edition, Chapter 13, IP Security, Jun. 8, 1998, pp. 399-440.					
EXAMINER		/Krisna Lim/		DATE CONSIDERED		06/04/2009	

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Subst. for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	11/679,416
		Filing Date	02-27-2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Krisna Lim
		Docket Number	077580-0015

U.S. PATENTS					
EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear






FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes -Number 4 -Kind Codes (if known)	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
<i>KL</i>	C1	EP0838930	4/29/1988	Digital Equipment Corporation			
<i>KL</i>	C2	EP0814589	12/29/1997	AT&T Corp.			
<i>KL</i>	C3	GB2317792	04/01/1998	Secure Computing Corporation			
<i>KL</i>	C4	WO98/27783	06/25/1998	Northern Telecom Limited			
<i>KL</i>	C5	WO99/11019	03/04/1999	V One Corp			
<i>KL</i>	C6	GB2334181	08/11/1999	NEC Technologies			
<i>KL</i>	C7	GB2340702	02/23/2000	Sun Microsystems Inc.			

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
<i>KL</i>	D1	Baumgartner et al, "Differentiated Services: A New Approach for Quality of Service in the Internet," International Conference on High Performance Networking, 255-273 (1998)	
<i>KL</i>	D2	Chapman et al., "Domain Name System (DNS)," 278-296 (1995)	
<i>KL</i>	D4	Davila et al., "Implementation of Virtual Private Networks at the Transport Layer," M. Mambo, Y. Zheng (Eds), Information Security (Second International) Workshop, ISW' 99. Lecture Notes in Computer Science (LNCS), Vol. 1729; 85-102 (1999)	
<i>KL</i>	D5	De Raadt et al., "Cryptography in OpenBSD," 10 pages (1999)	
<i>KL</i>	D6	Eastlake, "Domain Name System Security Extensions," Internet Citation, Retrieved from the Internet: URL:ftp://ftp.inet.no/pub/ietf/internet-drafts/draft-ietf-dnssec-secext2-05.txt (1998)	

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11/21/2010

Subst. for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	11/679,416
		Filing Date	02-27-2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	Krisna Lim
		Docket Number	077580-0015

	D8	Gunter et al., "An Architecture for Managing QoS-Enabled VRNs Over the Internet," Proceedings 24th Conference on Local Computer Networks. LCN' 99 IEEE Comput. Soc Los Alamitos, CA, pages 122-131 (1999)	
	D9	Shimizu, "Special Feature: Mastering the Internet with Windows 2000", Internet Magazine, 63:296-307 (2000)	
	D10	Stallings, "Cryptography and Network Security," Principals and Practice, 2nd Edition, pages 399-440 (1999)	
	D11	Takata, "U.S. Vendors Take Serious Action to Act Against Crackers – A Tracking Tool and a Highly Safe DNS Software are Released", Nikkei Communications, 257:87 (1997)	
	D12	Wells, Email (Lancasterb1be@mail.msn.com), Subject: "Security Icon," (1998)	

/Krisna Lim/

11/21/2010

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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	
		Application Number	
Title of Invention	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

### Secrecy Order 37 CFR 5.2

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

### Applicant Information:

<b>Applicant 1</b>				
<b>Applicant Authority</b> <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>
	Victor		Larson	
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
<b>City</b>	Fairfax	<b>State/Province</b>	VA	<b>Country of Residence i</b>   US
<b>Citizenship under 37 CFR 1.41(b) i</b>		US		
<b>Mailing Address of Applicant:</b>				
<b>Address 1</b>		12026 Lisa Marie Court		
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<b>Postal Code</b>	22033	<b>Countryi</b>	US	
<b>Applicant 2</b>				
<b>Applicant Authority</b> <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>
	Robert	<del>Durham</del> DUNHAM	Short	III
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
<b>City</b>	Leesburg	<b>State/Province</b>	VA	<b>Country of Residence i</b>   US
<b>Citizenship under 37 CFR 1.41(b) i</b>		US		
<b>Mailing Address of Applicant:</b>				
<b>Address 1</b>		38710 Goose Creek Lane		
<b>Address 2</b>				
<b>City</b>	Leesburg	<b>State/Province</b>	VA	
<b>Postal Code</b>	20175	<b>Countryi</b>	US	
<b>Applicant 3</b>				
<b>Applicant Authority</b> <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>
	Edmund	Colby	Munger	
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
<b>City</b>	Crownsville	<b>State/Province</b>	MD	<b>Country of Residence i</b>   US

VC  
9/6/11

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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	
		Application Number	
Title of Invention	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK		

Citizenship under 37 CFR 1.41(b) i	US		
<b>Mailing Address of Applicant:</b>			
Address 1	1101 Opaca Court		
Address 2			
City	Crownsville	State/Province	MD
Postal Code	21032	Country	US

<b>Applicant 4</b>			
Applicant Authority	<input checked="" type="radio"/> Inventor	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name	Family Name
	Michael		Williamson
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service			
City	South Riding	State/Province	VA
		Country of Residence i	US

Citizenship under 37 CFR 1.41(b) i	US		
<b>Mailing Address of Applicant:</b>			
Address 1	26203 Ocala Circle		
Address 2			
City	South Riding	State/Province	VA
Postal Code	20152	Country	US

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<input type="checkbox"/> An Address is being provided for the correspondence information of this application.			
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Email Address		Add Email	Remove Email

### Application Information:

Title of the Invention	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK		
Attorney Docket Number		Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

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<b>Application Data Sheet 37 CFR 1.76</b>	Attorney Docket Number	
	Application Number	
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**Publication Information:**

Request Early Publication (Fee required at time of Request 37 CFR 1.219)

Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not been and will not be the subject of an application filed in another country, or under a multilateral agreement, that requires publication at eighteen months after filing.

**Representative Information:**

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:     Customer Number     US Patent Practitioner     US Representative (37 CFR 11.9)

Customer Number: 22907

**Domestic Priority Information:**

This section allows for the applicant to claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c). Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Patented		<a href="#">Remove</a>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	Continuation of	10702486	2003-11-07	7188180	2007-03-06
Prior Application Status	Pending		<a href="#">Remove</a>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
10702486	Division of	09558209	2000-04-26		
Prior Application Status	Patented		<a href="#">Remove</a>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
09558209	Continuation in part of	09504783	2000-02-15	6502135	2002-12-31
Prior Application Status	Pending		<a href="#">Remove</a>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
09504783	Continuation in part of	09429643	1999-10-29		
Prior Application Status	Expired		<a href="#">Remove</a>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
09429643	non provisional of	60106261	1998-10-30		

Additional Domestic Priority Data may be generated within this form by selecting the Add button.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>	Attorney Docket Number	
	Application Number	
Title of Invention	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK	

### Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

<input type="button" value="Remove"/>			
Application Number	Country <sup>i</sup>	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			<input checked="" type="radio"/> Yes <input type="radio"/> No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

### Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

**Assignee 1**

If the Assignee is an Organization check here.

Organization Name	Science Applications International Corporation		
-------------------	--	--	--

**Mailing Address Information:**

Address 1	10260 Campus Point Drive		
Address 2			
City	San Diego	State/Province	CA
Country <sup>i</sup>	US	Postal Code	92121
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button.

### Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

<b>Signature</b>	/Steve Chang/	<b>Date (YYYY-MM-DD)</b>	2007-02-27
<b>First Name</b>	Steve	<b>Last Name</b>	Chang
		<b>Registration Number</b>	42402

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Docket No.: 77580-015 (VRNK-1CP2DVCN)

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): Victor Larson et al.

Confirmation No.: 3528

Appl. No.: 11/679,416

Examiner: Lim, Krisna

Filed: February 27, 2007

Group Art Unit: 2453

Title: **METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK  
BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK**

Mail Stop Amendment  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**TRANSMITTAL OF SUPPLEMENTAL APPLICATION DATA SHEET**

Dear Sir:

Applicants submit herewith a Supplemental Application Data Sheet which corrects the spelling of inventor's name as follows:

Original: Robert Durham Short

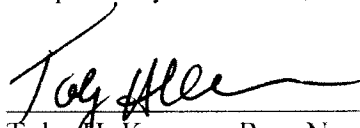
Corrected: Robert Dunham Short

Applicants believe that no fee is due in connection with this communication. However, the Commissioner is hereby authorized to charge any underpayment or credit any overpayment to Deposit Account No. 23630.

Respectfully submitted,

Dated: September 30, 2011

By:



Toby H. Kusmer, Reg. No. 26,418  
McDermott Will & Emery, LLP  
28 State Street  
Boston, MA 02109  
617.535.4065

DM\_US 30290510-1 077580 0015

## Supplemental Application Data Sheet

<b>Application Information</b>	
Application Number::	11/679,416
Filing Date::	February 27, 2007
Application Type::	Regular
Subject Matter::	Utility
Title::	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
Attorney Docket Number::	77580-015 (VRNK-1CP2DVCN)
Request for Early Publication?::	No
Request for Non-Publication?::	No
Suggested Drawing Figure::	1
Total Drawing Sheets::	40
Small Entity?::	No
Licensed US Govt. Agency::	
Contract or Grant Numbers::	

<b>Applicant Information</b>	
Applicant Authority Type::	<b>Inventor 1</b>
Primary Citizenship Country::	U.S.
Status::	Full Capacity
Given Name::	Victor
Middle Name::	
Family Name::	Larson
Name Suffix::	
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State or Province of Residence::	VA
Country of Residence::	U.S.
Street of mailing address::	12026 Lisa Marie Court
City of mailing address::	Fairfax
State or Province of mailing address::	VA
Country of mailing address::	U.S.
Postal or Zip Code of mailing address::	22033
Applicant Authority Type::	<b>Inventor 2</b>
Primary Citizenship Country::	U.S.
Status::	Full Capacity
Given Name::	Robert
Middle Name::	Dunham
Family Name::	Short
Name Suffix::	

City of Residence::	Leesburg
State or Province of Residence::	VA
Country of Residence::	U.S.
Street of mailing address::	38710 Goose Creek Lane
City of mailing address::	Leesburg
State or Province of mailing address::	VA
Country of mailing address::	U.S.
Postal or Zip Code of mailing address::	20175
Applicant Authority Type::	<b>Inventor 3</b>
Primary Citizenship Country::	U.S.
Status::	Full Capacity
Given Name::	Edmund
Middle Name::	Colby
Family Name::	Munger
Name Suffix::	
City of Residence::	Crownsville
State or Province of Residence::	MD
Country of Residence::	U.S.
Street of mailing address::	1101 Opaca Court
City of mailing address::	Crownsville
State or Province of mailing address::	MD
Country of mailing address::	U.S.
Postal or Zip Code of mailing address::	21032
Applicant Authority Type::	<b>Inventor 4</b>
Primary Citizenship Country::	U.S.
Status::	Full Capacity
Given Name::	Michael
Middle Name::	
Family Name::	Williamson
Name Suffix::	
City of Residence::	South Riding
State or Province of Residence::	VA
Country of Residence::	U.S.
Street of mailing address::	26203 Ocala Circle
City of mailing address::	South Riding
State or Province of mailing address::	VA
Country of mailing address::	U.S.
Postal or Zip Code of mailing address::	20152

**Correspondence Information**

Correspondence Customer Number:: 023630

**Representative Information**

Representative Customer Number:: 023630

**Domestic Priority Information**

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application	Is a Continuation of	10/702,486	11/07/2003
10/702,486	is a Division of of	09/558,209	04/26/2000
09/558,209	is a Continuation-in-Part of	09/504,783	02/15/2000
09/504,783	is a Continuation-in-Part of	09/429,643	10/29/1999
09/429,643	Is a non-provisional of	60/106,261	10/30/1998

**Foreign Priority Information**

Country::	Application number::	Filing Date::	Priority Claimed::

**Assignee Information**

Assignee Name::	Virnetx, Inc.
Street of mailing address::	5615 Scotts Valley Drive, suite 110
City of mailing address::	Scotts Valley, California 95066
State or Province of mailing address::	CA
Country of mailing address::	U.S.
Postal or Zip Code of mailing address::	95066

DM\_US 30288818-1.077580.0015

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	11088964
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Toby H. Kusmer./Tricia Tedesco
<b>Filer Authorized By:</b>	Toby H. Kusmer.
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	30-SEP-2011
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	15:25:09
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	TransmittalforSuppADS.pdf	24491 <small>3353fddb0732b64f744af1ce5f1558be560b251e</small>	no	1

### Warnings:

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

**Information:**

2	Application Data Sheet	SuppADS.pdf	74956	no	3
			e2ad71306de65788541f8c069a22d6ef435a bc12		

**Warnings:**

**Information:**

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<b>Total Files Size (in bytes):</b>	99447
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**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**





Subst. for form 1449/PTO <b>SUPPLEMENTAL          INFORMATION DISCLOSURE STATEMENT BY          APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	11/679,416
				Filing Date	February 27, 2007
				First Named Inventor	Victor Larson
				Art Unit	2157
				Examiner Name	Not yet assigned
Sheet	1	of	17	Docket Number	77580-015 (VRNK-1CP2DVCN)

U.S. PATENT DOCUMENTS					
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1000	5,311,593	05/10/1994	Carmi	
	A1001	5,511,122	04/23/1996	Atkinson	
	A1003	5,805,803	09/08/1998	Birrell et al.	
	A1004	5,822,434	10/13/1998	Caronni et al.	
	A1005	5,898,830	04/27/1999	Wesinger, Jr. et al.	
	A1006	60/134,547	05/17/1999	Victor Sheymov	
	A1007	60/151,563	08/31/1999	Bryan Whittles	
	A1008	5,950,195	09/07/1999	Stockwell et al.	
	A1009	6,119,171	09/12/2000	Alkhatib	
	A1010	6,937,597	08/30/2005	Rosenberg et al.	
	A1011	7,072,964	07/04/2006	Whittle et al.	
	A1012	09/399,753	09/22/1998	Graig Miller et al.	
	A1013	6,079,020	06/20/2000	Liu	
	A1014	6,173,399	01/09/2001	Gilbrech	
	A1015	6,226,748	05/01/2001	Bots et al.	
	A1016	6,226,751	05/01/2001	Arrow et al.	
	A1017	6,701,437	03/02/2004	Hoke et al.	
	A1018	6,055,574	04/25/2000	Smorodinsky et al.	

FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes-Number-Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
Change(s) applied to document, /A.E.M./ 10/5/2011	B1000	WO 001/17775 01	03-30-2000	Science Applications International Corporation			
	B1001	WO 00/70458	11-23-2000	Comsec Corporation			
	B1002	WO 01/016766	03-08-2001	Science Applications International Corporation			
EXAMINER				DATE CONSIDERED			
/Krisna Lim/				06/04/2009			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.  
 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

(1)  
 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.L./

1449 8/21/11

.Subst. for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	<b>11/679,416</b>
				Filing Date	<b>02/27/2007</b>
				First Named Inventor	<b>Victor Larson</b>
				Art Unit	<b>2453</b>
				Examiner Name	<b>Lim, Krisna</b>
				Docket Number	<b>077580-0015</b>

**U.S. PATENTS**

EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1044	5,590,285	12/31/1996	Krause et al.	

**U.S. PATENT APPLICATION PUBLICATIONS**

EXAMINER'S INITIALS	CITE NO.	Patent Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes - Number 4 - Kind Codes (if known)	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
	C9	WO9843396	10/01/1998	Northern Telecom Limited			

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	D81	European Search Report dated January 24, 2011 from corresponding European Application Number 10011949.4
	D82	European Search Report dated March 17, 2011 from corresponding European Application Number 10184502.2
	D83	Hollenbeck et al., "Registry Registrar Protocol (RRP) Version 1.1.0; Internet Engineering Task Force, 34 pages (1999)
	D84	Notice of Allowance dated March 14, 2011 from corresponding US Application Number 11/840,508 (Our Ref. No.077580-0057)
	D85	Tannenbaum, "Computer Networks," pages 202-219 (1996)

/Krisna Lim/

07/12/2011

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>			ATTY. DOCKET NO. <b>077580-0015</b>		SERIAL NO. <b>11/679,416</b>	
(PTO-1449)			APPLICANT <b>Larson et al.</b>			
			FILING DATE <b>Feb. 27, 2007</b>		GROUP <b>2131</b>	
<b>U.S. PATENT DOCUMENTS</b>						
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	A64	US 6,332,158 B1	12/18/2001	Risley et al.		
	A65	US 6,353,614 B1	3/5/2002	Borella et al.		
	A66	US 6,430,155 B1	8/6/2002	Davie et al		
	A67	US 6,430,610 B1	8/6/2002	Carter		
	A68	US 6,487,598 B1	11/26/2002	Valencia		
	A69	US 6,502,135 B1	12/31/2002	Munger et al		
	A70	US 6,505,232 B1	1/7/2003	Mighdoll et al		
	A71	US 6,510,154 B1	1/21/2003	Mayes et al		
	A72	US 6,549,516 B1	4/15/2003	Albert et al		
	A73	US 6,557,037 B1	4/29/2007	Provino 2003		
	A74	US 6,571,296 B1	5/27/2002	Dillon 2003		
	A75	US 6,571,338 B1	5/27/2003	Shaio et al.		
	A76	US 6,581,166 B1	06/17/2003	Hirst et al.		
	A77	US 6,618,761 B2	9/9/2003	Munger et al.		
	A78	US 6,671,702 B2	12/30/2003	Kruglikov et al		
	A79	US 6,687,551 B1	2/3/2004	Steindl		
	A80	US 6,714,970 B1	3/30/2004	Fiveash et al.		
	A81	US 6,717,949 B1	4/6/2004	Boden et al.		
	A82	US 6,760,766 B1	7/6/2004	Sahlqvist		
	A83	US 6,826,616 B2	11/30/2004	Larson et al.		
	A84	US 6,839,759 B2	1/4/2005	Larson et al.		
	A85	US 7,010,604 B1	3/7/2006	Munger et al.		
	A86	US 7,133,930 B2	11/7/2006	Munger et al.		
	A87	US 7,188,180 B2	3/6/2007	Larson et al.		
	A88	US 7,197,563 B2	3/27/2007	Sheymov et al.		
	A89	US 2002/0004898 A1	1/10/2002	Droge		
	A90	US 2005/0055306 A1	3/10/2005	Miller et al.		
<b>FOREIGN PATENT DOCUMENTS</b>						
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes -Number -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation Yes No
EXAMINER /Krisna Lim/				DATE CONSIDERED 06/04/2009		

Change(s) applied to document, /A.E.M./ 10/5/2011

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.  
 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.



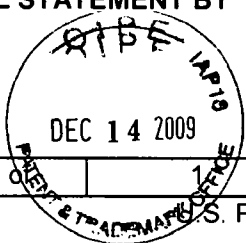
<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  (PTO-1449)		ATTY. DOCKET NO. <b>077580-0015</b>		SERIAL NO. <b>11/679,416</b>	
		APPLICANT <b>Larson et al.</b>			
		FILING DATE <b>Feb. 27, 2007</b>		GROUP <b>2131</b>	
<b>U.S. PATENT DOCUMENTS</b>					
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	US 4,933,846 A	6/12/1990	Humphrey et al.	
	A2	US 4,988,990 A	1/29/1991	Warrior	
	A3	US 5,276,735 A	1/4/1994	Boebert et al	
	A4	US 5,311,593 A	5/10/1994	Carmi	
	A5	US 5,329,521 A	7/12/1994	Walsh et al.	
	A6	US 5,341,426 A	8/23/1994	Barney et al.	
	A7	US 5,367,643 A	11/22/1994	Chang et al	
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	A9	US 5,561,669 A	10/1/1996	Lenney et al	
	A10	US 5,588,060 A	12/24/1996	Aziz	
	A11	US 5,625,626 A	4/29/1997	Umekita	
	A12	US 5,654,695 A	8/5/1997	Olnowich et al	
	A13	US 5,682,480 A	10/28/1997	Nakagawa	
	A14	US 5,689,566 A	11/18/1997	Nguyen	
	A15	US 5,740,375 A	4/14/1998	Dunne et al.	
	A16	US 5,774,660 A	6/30/1998	Brendel et al	
	A17	US 5,787,172 A	7/28/1998	Arnold	
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	A19	US 5,805,801 A	9/8/1998	Holloway et al.	
	A20	US 5,842,040 A	11/24/1998	Hughes et al.	
	A21	US 5,845,091 A	12/1/1998	Dunne et al.	
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	A23	US 5,870,610 A	2/9/1999	Beyda et al.	
	A24	US 5,878,231 A	03/5/2/1999	Bachr et al	
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	A26	US 5,898,830 A	4/27/1999	Wesinger, Jr. et al.	
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	A29	US 5,996,016 A	11/30/1999	Thalheimer et al.	
	A30	US 6,006,259 A	12/21/1999	Adelman et al.	
	A31	US 6,006,272 A	12/21/1999	Aravamudan et al	
EXAMINER <i>/Krisna Lim/</i>				DATE CONSIDERED <b>06/04/2009</b>	

Change(s) applied to document, /A.E.M./ 10/5/2011

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.  
 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

1449 8/12/11

Subst. for form 1449/PTO <b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	11/679,416
		Filing Date	February 27, 2007
		First Named Inventor	Victor Larson
		Art Unit	2453
		Examiner Name	LIM, Krisna
Sheet	1	Docket Number	077580-0015 (VRNK-1CP2DVCN)



**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1019	US 7,461,334	12/02/08	Lu, et al.	
	A1020	US 7,353,841	04/08/08	Kono, et al.	
	A1021	US 7,188,175	03/06/07	McKeeth, James A.	
	A1022	US 7,167,904	01/23/07	Devarajan, et al.	
	A1023	US 7,039,713	05/02/06	Van Gunter, et al.	
	A1024	US 6,757,740	06/29/04	Parekh, et al.	
	A1025	US 6,752,166	06/22/04	Lull, et al.	
	A1026	US 6,687,746	02/03/04	Shuster, et al.	
	A1027	US 6,338,082	01/08/02	Schneider, Eric	
	A1028	US 6,333,272	12/25/01	McMillin, et al.	
	A1029	US 6,314,463	11/06/01	Abbott, et al.	
	A1030	US 6,298,341	10/02/01	Mann, et al.	
	A1031	US 6,262,987	07/17/01	Mogul, Jeffrey C.	
	A1032	US 6,199,112	03/06/01	Wilson, Stephen K.	
	A1033	US 2,895,502	07/21/59	Garland Roper Charles, et al.	
	A1034	US 2001/0049741	12/06/01	Skene, et al.	

Change(s) applied to document, /A.L.M./ 10/5/2011

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes-Number -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	C1240	David Kosiur, "Building and Managing Virtual Private Networks" (1998)
	C1241	P. Mockapetris, "Domain Names - Implementation and Specification," Network Working Group, RFC 1035 (November 1987)
	C1242	Request for Inter Partes Reexamination of Patent No. 6,502,135, dated Nov. 25, 2009.
	C1243	Request for Inter Partes Reexamination of Patent No. 7,188,180, dated Nov. 25, 2009.

EXAMINER  /Krisna Lim/	DATE CONSIDERED  03/27/2010
------------------------------	-----------------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.  
<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.



APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/679,416

11/01/2011

8051181

77580-015

3528

23630

7590

10/12/2011

(VRNK-ICP2DVCN)

McDermott Will & Emery  
600 13th Street, NW  
Washington, DC 20005-3096

### ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

#### **Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)** (application filed on or after May 29, 2000)

The Patent Term Adjustment is 183 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Victor Larson, Fairfax, VA;  
Robert Dunham Short III, Leesburg, VA;  
Edmund Colby Munger, Crownsville, MD;  
Michael Williamson, South Riding, VA;



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY,DOCKET.NO, TOT CLAIMS, IND CLAIMS. Row 1: 11/679,416, 02/27/2007, 2453, 2428, 77580-015 (VRNK-1CP2DVCN), 1, 1

CONFIRMATION NO. 3528

CORRECTED FILING RECEIPT



23630
McDermott Will & Emery
600 13th Street, NW
Washington, DC 20005-3096

Date Mailed: 11/07/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Victor Larson, Fairfax, VA;
Robert Dunham Short III, Leesburg, VA;
Edmund Colby Munger, Crownsville, MD;
Michael Williamson, South Riding, VA;

Assignment For Published Patent Application

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION, San Diego, CA

Power of Attorney: The patent practitioners associated with Customer Number 23630

Domestic Priority data as claimed by applicant

This application is a CON of 10/702,486 11/07/2003 PAT 7,188,180
which is a DIV of 09/558,209 04/26/2000 ABN
which is a CIP of 09/504,783 02/15/2000 PAT 6,502,135
which is a CIP of 09/429,643 10/29/1999 PAT 7,010,604
which claims benefit of 60/106,261 10/30/1998

Foreign Applications (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.)

If Required, Foreign Filing License Granted: 09/20/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 11/679,416

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

**Title**

METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK

**Preliminary Class**

709

**PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

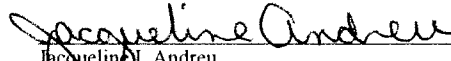
In re Application of: Larson et al.  
Patent No. 8,051,181  
Application Serial No.: 11/679,416  
Filing Date: February 27, 2007  
Title: METHOD FOR ESTABLISHING SECURE COMMUNICATION  
LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE  
NETWORK  
Examiner: Lim, Krisna  
Art Unit: 2453  
Confirmation No.: 3528  
Atty. Docket No.: 077580-0015 (VRNK-1CP2DVCON)

---

**CERTIFICATE OF MAILING OR TRANSMISSION**

I hereby certify that this correspondence is being facsimile transmitted (571) 273-8300 to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Certificate of Correction, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 or filed via EFS-Web on the date shown below:

Date: November 28, 2011

  
Jacqueline J. Andreu

---

Mail Stop Certificate of Correction Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 CFR 1.322**

Sir:

In reviewing the above-identified patent, a printing error was discovered therein requiring correction in order to conform the Official Record in the application.

The error noted is set forth below and on the attached copy of form PTO/SB/44 in the manner required by the Commissioner's Notice.

On the face of the patent, please delete Item (60), first paragraph, and insert the following paragraph:

Continuation of application No. 10/702,486, filed on Nov. 7, 2003, now Pat. No. 7,188,180, which is a division of application No. 09/558,209, filed on Apr. 26, 2000, now abandoned, which is a continuation-in-part of application No. 09/504,783, filed on Feb. 15, 2000, now Pat. No. 6,502,135, which is a continuation-in-part of application No. 09/429,643, filed on Oct. 29, 1999, now Pat. No. 7,010,604.

The change requested herein occurred as a result of printing the Letters Patent and the Certificate should be issued without expense under Rule 37 CFR § 1.322.

The error identified in the appended PTO/SB/44 form occurred through the fault of the Patent Office, as disclosed by the records of the application which matured into this patent. For example, see the Continuity Data as appears on the USPTO's Public PAIR system.

Two (2) copies of PTO Form PTO/SB/44 are appended. The complete Certificate of Correction involves one (1) page. Issuance of the Certificate of Correction containing the correction is earnestly requested.

The Commissioner is authorized to charge any shortage in fees, or credit any overpayment, in connection with this filing to Deposit Account 50-1133.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Dated: November 28, 2011

By: 

Atabak R. Royace, Ph.D., Reg. No. 59,037  
McDERMOTT WILL & EMERY LLP  
28 State Street  
Boston, MA 02109-1775  
Tel. (617) 535-4108  
Fax: (617) 535-3800

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 8,051,181  
 APPLICATION NO.: 11/679,416  
 ISSUE DATE : November 1, 2011  
 INVENTOR(S) : Victor Larson et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the face of the patent: Amend item (60), first paragraph, under the heading "Related U.S. Application Data," as follows:

Delete item (60), first paragraph, and insert the following paragraph:

--Continuation of application No. 10/702,486, filed on Nov. 7, 2003, now Pat. No. 7,188,180, which is a division of application No. 09/558,209, filed on Apr. 26, 2000, now abandoned, which is a continuation-in-part of application No. 09/504,783, filed on Feb. 15, 2000, now Pat. No. 6,502,135, which is a continuation-in-part of application No. 09/429,643, filed on Oct. 29, 1999, now Pat. No. 7,010,604.--

**MAILING ADDRESS OF SENDER (Please do not use customer number below):**

Atabak R. Royae, Reg. No. 59,037  
 McDERMOTT WILL & EMERY LLP  
 28 State Street, Boston, MA, 02109

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 8,051,181  
 APPLICATION NO.: 11/679,416  
 ISSUE DATE : November 1, 2011  
 INVENTOR(S) : Victor Larson et al.

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 28 State Street, Boston, MA, 02109

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*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	11485887
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Atabak R Royae/Jacqueline Andreu
<b>Filer Authorized By:</b>	Atabak R Royae
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	28-NOV-2011
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	12:49:15
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	Request_For_Certificate_of_Correction.pdf	185928 <small>ccd91451dabctae2b0f2f1b82b59b15ad10b3b67</small>	no	4

### Warnings:

### Information:

**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 8,051,181 B2  
APPLICATION NO. : 11/679416  
DATED : November 1, 2011  
INVENTOR(S) : Victor Larson et al.

Page 1 of 1

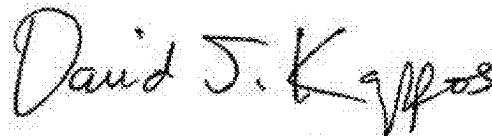
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the cover of the patent: Amend item (60), first paragraph, under the heading "Related U.S. Application Data," as follows:

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--Continuation of application No. 10/702,486, filed on Nov. 7, 2003, now Pat. No. 7,188,180, which is a division of application No. 09/558,209, filed on Apr. 26, 2000, now abandoned, which is a continuation-in-part of application No. 09/504,783, filed on Feb. 15, 2000, now Pat. No. 6,502,135, which is a continuation-in-part of application No. 09/429,643, filed on Oct. 29, 1999, now Pat. No. 7,010,604.--

Signed and Sealed this  
Third Day of January, 2012



David J. Kappos  
*Director of the United States Patent and Trademark Office*



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re *Inter Partes* Reexamination of: )  
)  
Victor LARSON et al. ) Control No.: 95/001,949  
)  
U. S. Patent No. 8,051,181 ) Group Art Unit: 3992  
)  
Issued: November 1, 2011 ) Examiner: Dennis G. Bonshock  
)  
For: METHOD FOR ESTABLISHING ) Confirmation No. 4522  
SECURE COMMUNICATION LINK )  
BETWEEN COMPUTERS OF )  
VIRTUAL PRIVATE NETWORK )

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P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

**REVOCATION OF POWER OF ATTORNEY,  
STATEMENT UNDER 37 C.F.R. § 3.73(b),  
AND GRANT OF NEW POWER OF ATTORNEY**

The undersigned, a representative authorized to sign on behalf of the assignee owning all of the interest in U.S. Patent No. 8,051,181 (“the ’181 patent”), hereby revokes all previous powers of attorney or authorization of agent granted in the ’181 patent before the date of execution hereof.

In compliance with 37 C.F.R. § 3.73(b), the undersigned verifies that VirnetX Inc. is the assignee of the entire right, title, and interest in the ’181 patent by virtue of an assignment recorded in the U.S. Patent and Trademark Office at Reel 019464, Frame 0133 on June 21, 2007.

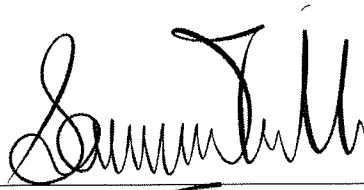
The undersigned representative of the assignee hereby grants its power of attorney to the patent practitioners associated with **Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., Customer Number 22,852**, to transact all business in the Patent and Trademark Office

connected with the '181 patent, including the reexamination proceedings assigned control no. 95/001,949, and in any other proceedings involving the '181 patent.

Please also send all future correspondence concerning the '181 patent to the address associated with **Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., Customer Number 22,852.**

Dated: 11/30/12

By: \_\_\_\_\_



Sameer Mathur  
Vice President, Corporate Development and Product  
Marketing  
VirnetX Inc.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	14369746
<b>Application Number:</b>	11679416
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	3528
<b>Title of Invention:</b>	METHOD FOR ESTABLISHING SECURE COMMUNICATION LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE NETWORK
<b>First Named Inventor/Applicant Name:</b>	Victor Larson
<b>Customer Number:</b>	23630
<b>Filer:</b>	Joseph Edwin Palys./connie sisk
<b>Filer Authorized By:</b>	Joseph Edwin Palys.
<b>Attorney Docket Number:</b>	77580-015 (VRNK-1CP2DVCN)
<b>Receipt Date:</b>	03-DEC-2012
<b>Filing Date:</b>	27-FEB-2007
<b>Time Stamp:</b>	16:42:00
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	Patent_POA_181.pdf	54719 <small>8c9402983096ce93fdb89310270f03f0028e3176</small>	no	2

### Warnings:

### Information:

**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/679,416	02/27/2007	Victor Larson	11798.0013

**CONFIRMATION NO. 3528**

**POA ACCEPTANCE LETTER**

22852  
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP  
901 NEW YORK AVENUE, NW  
WASHINGTON, DC 20001-4413



Date Mailed: 12/12/2012

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 12/03/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/hsarwari/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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11/679,416	02/27/2007	Victor Larson	77580-015 (VRNK-1CP2DVCN)

**CONFIRMATION NO. 3528**

**POWER OF ATTORNEY NOTICE**



\*OC00000058106016\*

23630  
McDermott Will & Emery  
The McDermott Building  
500 North Capitol Street, N.W.  
Washington, DC 20001

Date Mailed: 12/12/2012

**NOTICE REGARDING CHANGE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 12/03/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/hsarwari/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101