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And, you know, this -- this -- in some ways, 1 it's like a child for me where I was involved in the 2 3 original conception and development of it. And the fact that I became convinced that we actually had an 4 5 opportunity here to make a business and help people with 6 this technology, and that was exciting to me. 7 What is your position at VirnetX? Ο. 8 Α. I'm the Chief Science Officer. 9 0. What are your responsibilities? 10 Α. I'm -- I'm responsible for the design, directing the development, and I do a lot of the 11 12 development on the -- on the Gabriel product. 13 And tell us again, what stage of development Q. 14 is your Gabriel product in? 15 It's at the beta stage. Α. 16 0. Are you continuing to develop it? 17 Yes, sir. Α. But, Dr. Short, do you believe that your 18 0. 19 Gabriel product can be successful in internet 20 applications if Microsoft continues to infringe your 21 patent? 22 MR. BOBROW: I need to object. Ιt assumes that Microsoft, again, is infringing. 23 24 THE COURT: Overruled. 25 Α. Can you repeat the question, sir?

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Q. (By Mr. Cawley) Yes, sir. 1 Do you believe that your Gabriel product can 2 3 be successful in internet applications if Microsoft continues to infringe your patent? 4 5 No, sir. Α. 6 Q.. Why not? 7 I don't believe that -- that -- number one, I Α. 8 don't believe we can compete with them, if they decide 9 to compete head-to-head with us. 10 The other is, I think it's going to be 11 difficult, if not impossible, to team with other 12 companies who have to invest in this effort when they 13 see the potential of having to compete against Microsoft. 14 15 And finally, Dr. Short, in -- in developing Q. 16 products such as Gabriel, did you try to avoid infringing others' patents? 17 Yes, sir. We were really careful. 18 Α. If it 19 comes to our attention that we need to license software 20 and we need to license the capability, we do that. 21 Q. Thank you, Dr. Short. 22 MR. CAWLEY: I'll pass the witness. 23 THE COURT: All right. Cross-exam. 24 MR. BOBROW: Thank you, Your Honor. 25 Your Honor, may I approach the witness

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1 with a notebook? 2 THE COURT: Yes, you may. 3 THE WITNESS: Excuse me. CROSS-EXAMINATION 4 5 BY MR. BOBROW: Dr. Short, good morning. 6 Q. 7 Α. Good morning. 8 My name is Jerry Bobrow. I represent Q. 9 Microsoft. I have some questions for you this morning. 10 And I wanted to start, if I might, with some questions about what you believe that you invented, and 11 12 I want to then take you back to around the year 2000 13 when you filed your patent applications, okay? 14 Α. Okay. Yes, sir. 15 So I believe that your first patent was filed Q. 16 in February of 2000, correct? 17 Α. Yes, sir. Now, certainly by that time, there were a 18 0. 19 number of technologies that were already in existence 20 for securing communications over the internet; is that 21 fair? 22 A. Yes, sir. One of those technologies -- and you alluded 23 Q. 24 to it a little bit -- is the technology that was called 25 https, correct?

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Yes, sir. 1 Α. And you've already told us, if we can keep all 2 Q. 3 of these letters straight, what https stood for. And I think you said it was something like hypertext transfer 4 5 protocol secure; is that right? I believe that's right. I may not be exactly 6 Α. 7 right. 8 All right. And if I understand what you're Q. 9 saying, before your patents were filed, users of the internet, like the people in this courtroom, if they are 10 at home or what-have-you, that they could use https to 11 12 set up a secure connection on the internet; is that 13 right? 14 Α. Yes, sir. 15 And one of the things that you could do to set Q. up a secure connection on the internet before the year 16 17 2000, before you filed your patents, was you could be at your, say, home computer and you could type in something 18 19 called a domain name; is that right? 20 Α. Yes, sir. 21 0. So I could have a web browser opening like 22 Internet Explorer; I could type in www.amazon.com; and that would take me to a website, right? 23 24 Α. Yes, sir. 25 Q. And with https, what I could do is type in

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https://www.amazon.com, and that would take me to a 1 2 secure page at Amazon, correct? 3 Α. Yes, sir. And then I could conduct e-commerce. I could 4 Ο. 5 buy a book; I could buy whatever product that was being sold at Amazon, right? 6 7 Yes, sir. Α. 8 Q. And I could do that securely, correct? 9 Α. That's correct. 10 Ο. The credit card information, any other information I needed to enter that was private to me 11 12 would be secure over the internet from my computer to 13 Amazon, because it was encrypted, right? 14 Α. That's correct, yes, sir. 15 And part of that connection, and one of the Q. 16 issues I wanted to ask you about, is that when I'm at 17 home, to create that secure connection, all I have to do is type in https www.amazon.com and hit enter, and that 18 19 connection was automatically created, right? 20 Α. Yes, sir. 21 0. And not just the connection but the secure 22 connection was automatically created, right? 23 Α. Yes, it was. 24 Users didn't have to do anything else, Ο. 25 correct?

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Α. That's correct. 1 2 Q. So from the user's standpoint before 2000, 3 what I could do was type in what's called the domain name, hit enter, and have a secure, encrypted 4 5 connection, right? That's correct. 6 Α. 7 And the technology doing that connection was Ο. 8 something called SSL, right? 9 Α. I believe that's correct, yes, sir. 10 Q.. Secure socket layer, SSL; is that right? Yes, sir. 11 Α. 12 Q. And all of that, from the user's perspective, was easy, wasn't it? 13 14 Α. Yes, sir. 15 It was fast? Q. 16 Α. Yes, sir. 17 And it was, from the user's standpoint, fast, Q. easy, and efficient and, frankly, user-friendly, wasn't 18 19 it? 20 Yes, it was. Α. 21 Q. And that whole system, https, that's not 22 something that you invented or Mr. Munger invented or 23 any of your co-inventors invented, is it? 24 Α. That's correct. 25 Now, if we might, I'd like to pull up from Q.

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that explanation you gave. Remember, you used some 1 2 animations and some PowerPoints and the like? 3 MR. BOBROW: If we could pull up one of them. 4 5 I think we need to dim the Right. 6 lights. I don't think we can see that. 7 Thank you very much. 8 Q. (By Mr. Bobrow) Now, Dr. Short, this is a 9 still image from the presentation you gave in response 10 to Plaintiff's counsel earlier today; is that right? Yes, sir. 11 Α. And I want to make sure I understand the 12 Q. 13 various elements of this, okay? 14 Α. Yes. 15 So if I've got this right, up in the upper Q. 16 left corner, I have what you're calling a remote user, 17 right? Yes, sir. 18 Α. 19 Q. The remote user, I think you even said it 20 might be somebody at home, may be somebody at an 21 airport, may be somebody at a hotel; this is somebody 22 who is remote, correct? 23 Α. Yes, sir. 24 Seeking access to the internet, right? 0. 25 Α. Yes.

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And that remote user may -- in this example 1 Q. 2 that you've illustrated, the idea here is that that 3 remote user could use https to get to Acme, right? Yes, sir. 4 Α. 5 And I think what you're showing us and what Ο. you told us earlier is that on the internet what you do 6 7 to communicate is you don't use physical envelopes, of 8 course, but you use something that you call packets, 9 right? 10 Yes, sir. Α. 11 0. And I think what you were saying was that an 12 envelope and a packet were kind of similar in that they 13 will have information on the outside of them, and they will have information on the inside of them, right? 14 15 Α. Yes. 16 0. When you were describing here how the https 17 system works, what you were saying, I think, is that there's a source address and a destination address on 18 19 the outside of the packet, right? 20 Α. Yes, sir. 21 0. And on the inside of the packet is the 22 content, right? The payload it's sometimes called, I think, right? 23 24 Α. Yes, sir. 25 Q. And what you're showing there is that the

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https system would encrypt or scramble up the inner 1 2 content of the packet, right? 3 Yes, sir. Α. But the outer parts of the packet, the source 4 Ο. 5 address and the computer that was sending the message and the destination address of the computer that would 6 7 receive the message, would be visible, correct? 8 Α. Yes, sir. 9 So if there was a hacker of the type you 0. 10 described earlier, somebody who, unfortunately in this day and age, may be pulling information off the 11 internet -- that hacker would be able to see the source 12 13 address and the destination address, right? That's correct. 14 Α. 15 And as a result of that, it would know which Q. 16 two computers were communicating with each other, 17 correct? 18 Α. Yes, sir. 19 All right. Now, I understand from what you Q. 20 said that this automated system -- this easy automated 21 system called https is something you didn't invent, 22 right? That's correct. 23 Α. 24 There were a number of other elements involved 0. 25 in internet communication, secured internet

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communication you didn't invent either, right? 1 2 Α. I'm sure that's correct. 3 0. The whole domain name system is something that you didn't invent, is it? 4 5 No, sir, we did not. Α. The use of domain names was something you 6 Q. 7 didn't invent, correct? 8 Α. That's correct. 9 Ο. Encryption is something that you didn't invent 10 in these patents, correct? 11 Α. That is correct. And another thing that you didn't invent 12 Q. 13 related to secure communication were the actual VPNs themselves, correct? 14 15 That's correct. Α. VPNs were already known prior to 2000 when you 16 0. 17 filed the patents, right? 18 Α. Yes, sir. 19 And they were known before September 1999 when Q. 20 you had the train ride that you described earlier, 21 correct? 22 Α. That's correct. 23 By September of 1999, there were a number of Q. different kinds of VPNs, weren't there? 24 25 A. I believe that's correct, yes, sir.

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One of them that you described and spent some 1 Q. time over there, when you were marking up on those 2 3 large, white boards, that was a VPN that was called an IP SEC tunnel-mode VPN, right? 4 5 Yes, sir. Α. All right. That was one VPN that was out 6 Q. 7 there at the time prior to the filing of your patents 8 and prior to the time that you had the idea that led to 9 your patents, correct? 10 Α. That's correct. But that wasn't the only one, was it? 11 Ο. 12 Α. That's correct. Yes, sir. 13 There was also something that was available 0. before those times that was called a PPTP VPN, PPTP VPN, 14 15 right? 16 Α. I understand that's true, yes, sir. 17 And a PPTP VPN, and I think -- you were here Q. for the opening statements, right? 18 19 Α. I was, yes, sir. 20 And so you heard something about PPTP VPNs in Q. 21 that context, right? 22 Α. Yes, sir. 23 Q. All right. But that is your understanding 24 that was a VPN that was available before the year 2000? 25 Α. That's what I understand, yes, sir.

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And there was also a VPN that was called an 1 Q. 2 L2TP, if I can just keep with the alphabet soup, an L2TP 3 VPN that was also available before the time you filed your patents, right? 4 I'm not sure I'm familiar with L2TP. 5 Α. Ιt sounds familiar, but I can't answer yes or no on that. 6 7 Ο. Well, you mentioned that you did some research 8 before the time that your patent was filed, right? Yes, we did. 9 Α. 10 You're not claiming your research in this Ο. 11 field was comprehensive, was it? 12 Probably not, no, sir. Α. 13 So you're not saying there that L2TP didn't 0. 14 exist; you're just saying you don't know either way; is that right? 15 That's correct. 16 Α. 17 Now, when you were talking about the IP tunnel Q. VPN earlier and you had all the boards up over there, 18 19 that was not saying how to configure a PPTP VPN, was it? 20 Α. No, sir. 21 0. None of those steps, none of those pages of 22 bullet points and numbered paragraphs, none of that had to do with how you configure a PPTP VPN, right? 23 24 Yes, sir; that is true. Α. 25 And none of those steps that you described in Q..

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that long list of boards that we went through, describe 1 2 the steps for how to implement an L2TP VPN, correct? 3 Well, I don't know how to configure it, so I Α. don't know if any of those are relevant or not. 4 5 But what the document described and what you 0. said was that those were the steps for an IP SEC 6 7 tunnel-mode VPN, not for any other VPN, right? 8 Α. Yes, sir, that's true. 9 Now, I'd like to pull up, if we might, another 0. 10 graphic that you used as part of your explanation of this process. 11 12 And I think, if I was listening and paying attention to what you were saying -- I was certainly 13 doing my best, and I hope I didn't get it wrong -- so 14 15 tell me, I believe this is a graphic of what you were describing as a basic VPN. 16 17 Did I get that right? 18 Α. Yes. This was an example, sir. 19 Q. I understand. 20 And I -- I'm just trying to make sure that I'm 21 not confusing this image with an https image. 22 So this is a VPN, right? 23 Α. Yes. 24 Okay. Thank you very much. 0. 25 And what you've depicted here is a very

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typical situation where, even before 2000, a user would 1 2 want to use a VPN, correct? 3 Α. That's correct. And what you're depicting here is, once again, 4 Ο. 5 the remote user up in the upper left-hand corner, okay? 6 Is that right? 7 Α. Yes, sir. 8 And, again, this could be someone who's Q. 9 seeking what's called remote access, right? 10 Α. Yes, sir. 11 0. All right. So this person has a computer at 12 the airport, at a hotel, maybe at home, one of those 13 types of places where you're seeking remote access. 14 And what you're trying to get to by the remote access is 15 you're trying to get -- for information, you're trying 16 to access information back at your company, right? 17 Α. Yes, sir. 18 So you want to get those resources that are at 0. 19 your company, but you're remote from your company, 20 right? Yes. Or send information. 21 Α. 22 And so I think what you're depicting here is Q. 23 that here's this remote user. He or she is away from 24 the Acme Company and wants to set up a VPN back into the 25 Acme Company, correct?

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Yes, sir. 1 Α. 2 Now, with the scenario that's painted here Q. 3 with the remote user seeking remote access, that scenario, the common scenario for using a VPN, has 4 5 absolutely nothing to do with the VPN configuration that you talked about with all those big poster boards when 6 7 you were describing an IP SEC tunnel VPN, correct? 8 Can you repeat the question, please? Α. 9 0. I will. Sure. 10 Α. Thank you. This scenario of creating a VPN by a remote 11 Ο. 12 access user has nothing to do with the VPN that you were 13 describing when you were using those -- the white poster boards and the red ink and you were going through the 14 15 steps to create that IP SEC tunnel VPN, correct? 16 Α. I don't know if that's true or not, sir. 17 All right. Well, you certainly read -- and if Q. we can put it up -- Exhibit PX983. 18 19 Now, sir, I don't have those boards. Maybe 20 they're over there, but what I'm showing you on that 21 screen is an image of the document that you walked 22 everybody in the courtroom through, to show all the 23 different steps that are involved in creating an IP SEC 24 tunnel VPN, right? 25 Α. Yes, sir.

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With Windows 2000, right? 1 Q. Yes, sir. 2 Α. 3 All right. Now, this document is a Microsoft 0. document, as you said, right? 4 5 Α. Yes, sir. When was the first time you read this 6 Q. 7 document? I've never seen this document. An earlier 8 Α. 9 version of this document, back in the 2000 timeframe. 10 0. So not this version of it but an earlier version from 2000? 11 12 Α. Yes, sir. I believe this is a revised 13 version. And that version back then and this version 14 Ο. now we're describing, again, this IP SEC tunnel-mode, 15 16 right? 17 Α. Yes, sir. Now, what I'd like you to do -- I'd like to 18 Ο. 19 direct your attention to the text that is underneath -it's about the middle of the page, and there's a 20 21 paragraph that begins: Windows 2000 IP SEC tunneling. 22 MR. BOBROW: Let's see how big we can 23 make that. 24 Can you make that any bigger, Chris? 25 Thank you.

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1	Q. (By Mr. Bobrow) So the first page of this
2	document is not a page that you marked up for the
3	ladies of the jury, correct?
4	A. Yes, sir.
5	Q. All right. But you did read this page to
6	yourself, either back in 2000 or recently, right?
7	A. I'm sure I did, yes, sir.
8	Q. What this paragraph says at the start is that
9	Windows 2000, the IP SEC tunneling is not supported for
10	client remote access VPN use.
11	You see what I'm referring to there, right?
12	A. Yes. Yes, sir, because the NRFCs don't
13	provide the access solution.
14	Q. Right.
15	So what this is saying to people who are
16	reading the Microsoft information is that the IP SEC
17	tunneling mode with Windows 2000 is not for use in the
18	remote access VPN scenario, correct?
19	A. Yes, sir. Those two aren't.
20	Q. What it's saying instead is, don't use that
21	remote don't use that IP SEC tunnel-mode VPN.
22	What this document says, does it not, is use a
23	different VPN, correct?
24	A. Yes, sir.
25	Q. What it says to do is, instead of using the IP

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SEC tunnel-mode VPN that you showed on these boards, is 1 2 that instead to use an L2TP VPN, right? 3 Yes, sir. Α. And what it adds is that there were several 4 0. 5 companies, including Microsoft and Cisco, who specifically developed the L2PT VPN for the purpose of 6 7 providing client remote-access VPN connections, right? 8 Α. Yes, sir. 9 So what this document is saying is, forget the 0. 10 IP SEC VPN. Use the L2PT VPN when you want to have 11 remote access of the type that you were describing in 12 your graphics. 13 When you want to do that, use the L2PT VPN, correct? 14 15 Yes, sir. Α. And one of the things that it further adds is 16 Q. 17 that in Windows 2000, it says that client remote-access VPN connections are protected using an automatically 18 19 generated IP SEC policy, correct? 20 Α. Yes, sir. 21 0. So the user isn't creating that policy. That 22 policy is automatically created, right? 23 Α. Yes, sir. 24 Now, I noticed that as you were going through 0. 25 all of the steps describing the IP SEC tunnel VPN, I

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wanted to through with you some of the other VPNs that 1 2 were around at that time just so that we're all clear 3 about what you were trying to demonstrate to us. And -- and there was one technology that's 4 5 been discussed -- you were here for at least part of it, because it was in the opening -- was a technology that 6 7 was called Aventail. 8 Does that name ring a bell? 9 Α. Yes, sir. Yes, sir. 10 Now, that lengthy protocol of steps that you Ο. 11 went through with all these pages for IP SEC tunnel 12 mode, that was not describing how Aventail works, was 13 it? 14 No -- not to my knowledge, sir. Α. No. 15 To your knowledge, Aventail did not use an IP Q. 16 SEC VPN, right? 17 I don't know one way or the other, sir. Α. 18 And so as far as you know, Aventail didn't use 0. 19 that technology, correct? 20 Α. That's correct, sir. 21 0. Now, I'd like you in your book, or you can 22 simply look on the screen -- I want to direct your attention to Defendant's Exhibit 3121. 23 24 Now, I know you said you did some research 25 back in the day when you were looking to secure

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information, and you were looking at different VPN 1 technologies, correct? 2 3 Α. Yes, sir. And you certainly had done enough research to 4 0. 5 have seen a prior version of this Windows 2000 exhibit that we just looked at a moment ago, right? 6 7 Α. Yes, sir. 8 All right. So one of the things I wanted to Q. 9 find out, Dr. Short, was, I put in front of you this 10 exhibit, which is called Microsoft Windows NT Server 11 Operating System, a white paper, and then underneath it 12 says Microsoft Virtual Private Networking Using 13 Point-to-Point Tunneling Protocol for Low-Cost, Secure, Remote Access Across the Internet. 14 15 Do you see that? 16 Α. Yes, sir. 17 All right. And if you would turn the page --Q. 18 MR. BOBROW: This is going to be hard 19 for, I think, everybody to read, so could you blow that 20 up, Chris? How do you like that for a copyright page? 21 Why don't we take a look, though, and 22 blow that up if we can. (By Mr. Bobrow) And you'll see in the very 23 Q. 24 upper left, that this document bears a copyright date of 25 1996.

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Do you see that? 1 2 Α. Yes, sir. 3 And if you go to the next page, there was some 0. information available to folks to look at about PPTP 4 5 VPNs. Do you see what I'm referring to? 6 7 Α. Yes, sir. 8 And in the upper left corner, it talks about Q. 9 virtual private networking, right? 10 Α. Yes, sir. And it mentions the point-to-point tunneling 11 0. protocol or PPTP, right? 12 13 Α. Yes, sir. And you understand that back in this time in 14 Ο. 1996, that was a technology that Microsoft was working 15 on, PPTP VPN. 16 17 Α. Yes, sir. And what this manual is telling people is that 18 0. 19 those PPTP VPNs were for remote users, if you look in the third line, right? 20 21 Α. Yes, sir. 22 This technology was about allowing remote Q. users to connect securely using a VPN, right? 23 24 Α. Yes, sir. 25 And it describes those VPN connections using Q.

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PPTP as being easy-to-implement solutions for creating 1 2 secure and encrypted communications across the internet. 3 Do you see that? Yes, sir. 4 Α. 5 All right. Now, if I direct your attention to Q. Page -- and there are lots and lots of page numbers on 6 7 these documents, so forgive me. 8 I need to direct your attention to a page that's called 3121.007. It's in the -- the page numbers 9 10 are in the lower right corner. And it will be up on the 11 screen, but feel free to look at it in your book, if you wish. 12 13 This is easier, actually. Α. All right. And I wanted to first have you 14 Ο. 15 look at the top of the page where there's a figure, and that figure is describing some VPN connection scenarios 16 17 using PPTP, correct? 18 Α. Yes, sir. 19 All right. And the scenario that is being Q. 20 painted here is one where you have remote users on the 21 one hand trying to connect to corporate resources on the 22 other hand, correct? 23 Α. Yes, sir. 24 And what this is saying is that back in 1996, 0. 25 you could use PPTP to connect remotely to corporate

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resources using a VPN, correct?
          Yes, sir.
     Α.
     0.
          It describes doing that lower down on the
page.
               MR. BOBROW: If we could show that.
          (By Mr. Bobrow) This publication,
     Q..
Exhibit 3121, from 1996 describes doing that as being
easy, easy implementation, correct?
     Α.
          Yes, sir.
          Now, if we go to Page 11, there's a -- the
     Q.
second paragraph from the top is called Making PPTP Easy
to Use.
          Do you see that?
     Α.
          Yes, sir.
          And that, once again, is describing that it is
     Q.
easy for clients and servers and for clients -- I'm
sorry.
          It says that ease of use has been built into
VPN from its inception for both the server and client
personal computer.
          Do you see that?
     Α.
          Yes, sir.
          And right underneath that --
     Q.
               MR. BOBROW: If we can go down the page.
          (By Mr. Bobrow) -- it says that setting up the
     Q.
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1 VPN on Windows NT Server 4.0 is easy, correct? 2 Α. Yes, sir. 3 So certainly, Exhibit 3121 is describing and 0. telling people that using PPTP VPN, it was easy to make 4 5 a remote access connection securely to corporate 6 resources. 7 That's what this is saying, isn't it? 8 Α. Yes, sir. 9 And finally, if you go to Page 3121.013, Q. 10 Page 13 --11 MR. BOBROW: If we can highlight the 12 bottom paragraph. 13 (By Mr. Bobrow) -- this is, once again, Q. talking about PPTP, correct? 14 15 Α. Yes, sir. 16 0. And creating VPN connections, correct? 17 Yes, sir. Α. And at the bottom of this paragraph, it says 18 0. 19 that to further simplify use, both the ISP connection 20 and the VPN connection can be set up and activated from 21 one easy AutoDial phone book entry. 22 Do you see what I'm referring to there? 23 Α. Yes, sir. 24 And you were here when there was some mention 0. 25 of AutoDial in the courtroom, correct?

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Yes, I was. 1 Α. 2 All right. And what this is describing is how Q. 3 you can use AutoDial to easily create a VPN connection in that remote access VPN scenario, correct? 4 5 Α. Yes, sir. And I take it that you understand that this 6 Q. 7 kind of a VPN, when you're talking about remote access 8 and the like, that this kind of a system is using the 9 DNS infrastructure that was already in existence, 10 correct? That PPTP was using the -- I don't know one 11 Α. 12 way or the other, sir. 13 Well, let's take a look at Page 20, and you'll Ο. 14 see, at the bottom of that page, there's a paragraph 15 labeled summary. 16 Do you see that? 17 Α. Yes, sir. And towards the bottom of that paragraph, in 18 0. 19 talking about PPTP VPNs, it says that the security, 20 reliability, ease of use, and speed of PPTP-enabled 21 Windows NT servers, combined with the DNS infrastructure 22 provides significantly enhanced business-to-business 23 communications across the internet. 24 Do you see that? 25 Α. Yes, sir, I see that. I see that, yes, sir.

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So what this -- so what this is saying is that 1 Q . 2 when you're using PPTP and you have remote access, that 3 that's taking advantage of the DNS infrastructure to create secure communications across the internet, right? 4 5 Α. Yes, sir. Okay. And that was in 1996, correct? 6 Q.. 7 Α. Yes, sir. 8 That was three or maybe four years before you Q. 9 filed your patent application, right? 10 Α. That's correct. 11 0. Certainly, three years before you had the idea 12 that led to your patent applications, correct? 13 Α. That's correct. 14 All right. Now, I wanted to shift subjects a Ο. 15 bit, and I now wanted to ask you some questions about 16 the demonstration that you were kind enough to show to 17 us using the two computers that are over there, one that's in front of Mr. Munger and one that is on -- that 18 19 was on that little easel or what-have-you over by the 20 jurors. 21 You know what I'm talking about, right? 22 Yes, sir. Α. And I think what you told us was that both of 23 Q. 24 these computers in the courtroom were running what 25 you're calling the Gabriel connection software; is that

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1
   right?
2
        Α.
             Yes, sir.
3
             And this is the software that you've been
        0.
   working on for several years, right?
 4
5
        Α.
             That's correct.
             This technology, this software includes the
6
        Q.
7
   patented technology that is the subject of your patents,
8
   right?
9
        Α.
             Yes, sir.
10
             Now, when you ran this demonstration in the
        Ο.
   courtroom, I trust that this was not the first time that
11
12
   you used the computer that is over by Mr. Cawley right
13
   now, was it?
14
        Α.
             No, sir.
15
             And this wasn't the first time that Mr. Munger
        Q.
16
   used the computer that's in front of him, was it?
17
        Α.
             No, sir.
             I assume the two of you have communicated
18
        Ο.
19
   using these computers at various times over the last
20
   several years, right?
21
        Α.
             No, sir. Those were just set up specifically
   for this demonstration.
22
23
             Ah, okay. So -- so how old are those
        Q.
24
   computers? How long have you had them?
25
             The one over on the easel, maybe for a month,
        Α.
```

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and then this one, a couple of days now. 1 2 Now, I trust that when you first got those Q. 3 computers and you plugged them into the wall and you pushed the power button, I assume those computers were 4 not ready at that time to do VPN communication, correct? 5 That's correct. 6 Α. 7 You had to configure the computers in various Ο. 8 ways to do a VPN communication even using your 9 invention, right? 10 Yes, sir. We had to download our software and Α. install it. 11 12 Q. There are things that you need to install on the computer, aren't there? 13 14 Α. That's correct. 15 And there are things that you need to activate Q. on the computer, aren't there? 16 17 Α. Yes, sir. And that takes time, doesn't it? 18 0. 19 Α. Yes, sir. 20 So the first time that you use something like Q . 21 this, and you create on your computer the various 22 resources, as it were, that you needed to do a VPN, that takes time, right? 23 24 Α. Yes, sir. 25 You can't just click your fingers, click the Q.

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mouse once when you first power up the computers, and 1 2 have your invention work; you need to do some work 3 behind the scenes, right? Yes, sir. 4 Α. 5 All right. I'd like you, if you would, 0. please, to take a look at Exhibit 3578. It's in your 6 7 binder. 8 So I will apologize in advance for the font 9 size. This is as big as we got it from VirnetX. And I 10 hope you'll recognize this if we maybe blow up the top title, that what this document is called is the Gabriel 11 12 Connection Technology Beta Version 3 User's Guide by Vic 13 Larson from May of 2009. Do I have that right? 14 15 Yes, sir. That's what it says. Α. 16 Now, just to get our bearings here, if we may, Q. 17 Vic Larson is actually Dr. Vic Larson, right? Α. Yes, sir. 18 19 Ο. He's one of the coinventors on the patents 20 that are involved in this suit, right? Yes, sir. 21 Α. 22 And you're familiar with this document from Q. 23 May of 2009, a little less than a year ago, I guess, 24 right? 25 Α. Yes, sir.

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1	Q. This is a document that's, what, about 12
2	pages long?
3	A. Yes, sir.
4	Q. What this document is describing is how you
5	install and set up the Gabriel connection software of
6	the type that you demonstrated here today, correct?
7	A. Yes, sir.
8	Q. But this is just a version that existed about
9	a year ago. That's what this document, 3578, is
10	describing, right?
11	A. Yes, sir.
12	Q. What this document does in part and let's
13	turn to the second page.
14	And if I got this right, what this is saying
15	is that, essentially, if you are a user of this beta
16	and I think we heard earlier what a beta is, right?
17	It's kind of like a test where you let people
18	outside of the company use the software to see how well
19	it's working and help I think it's called debug it,
20	get the bugs out of the software?
21	A. Yes, sir.
22	Q. That's what's going on here, right?
23	Okay. So if I want to use this Gabriel
24	software in the VirnetX beta test, use the software,
25	I've got to go through all of these steps in order to be

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able to set up a VPN on my computer, right? 1 2 Α. Yes, sir. 3 So if I took this computer over on our desk Ο. over here, I would have to walk through the steps in 4 this manual before I could do a VPN of the type that you 5 and Mr. Munger showed us about an hour ago, right? 6 7 Α. I'm not sure you have to go through all these 8 steps. 9 Ο. Well, one of the things I'd have to do if I 10 want to participate in a beta is, you told the folks who were participating that they had to register, correct? 11 12 Α. Yes, sir. 13 So that's on Page 2, right? 0. 14 Α. Yes, sir. 15 And if you go down to the bottom, it looks Q. 16 like there's a screen where you have to type in -- the 17 user has to type in all kinds of information before they can get your beta software so that they can create a 18 19 VPN, right? 20 Α. That's correct. 21 Q. User name, a first name, a last name, their 22 e-mail, all kinds of information has to be put into the 23 computer before they can use your software and connect 24 using a VPN, right? 25 Yes, sir. This is being put into our Α.

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1 registry. 2 Q. Sure. And then --3 Α. Yes, sir. Sorry to interrupt you, sir. Then the next page --4 5 MR. BOBROW: If we can go there. 6 (By Mr. Bobrow) -- it tells you how you Q. 7 download and install the software, right? 8 Α. Yes, sir. 9 So before that happens, before I download the 0. 10 software and install the software, there's no way that I could use Gabriel to do a VPN connection of the type 11 that you and Mr. Munger showed us earlier, correct? 12 13 Α. That's correct. So I've got to go through a downloading and 14 0. 15 installing process, correct? 16 Α. Yes. 17 That takes time, doesn't it? Q. Yes, sir. 18 Α. 19 Q. Then if I go to the next page, this is now a 20 page that headed, Running the Gabriel Connector Software 21 for the First Time. 22 Do you see what I'm referring to there? 23 Α. Yes, sir. 24 What this is referring to, it's talking about 0. 25 all kinds of issues that may come up after I download

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and install the software but attempt for the first time 1 to create a VPN connection using your software that 2 3 includes your invention, right? Yes, sir. 4 Α. 5 All right. So what this manual is telling us 0. about your Gabriel software is that it is not a 6 7 situation where I can simply power up my computer and 8 click and create a VPN; what I need to do is, in fact, 9 install your software, download the software and take 10 some steps to configure my computer so that I can communicate, right? 11 That's correct. 12 Α. 13 All right. And those steps, at least in part, Q. are laid out in a 12-page document that VirnetX created 14 15 to describe how that process works, 12 pages long, 16 right? 17 Α. Yes, sir. Now, I'd like to shift gears and go to a 18 0. 19 subject that I mentioned just briefly earlier and that had to do with some software mentioned briefly here in 20 21 Court already called Aventail. 22 You remember hearing about that from the 23 opening statements, correct? 24 Α. Yes, sir. 25 Q. Now, Aventail and the Aventail software, the

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first time you heard about this software was not in 1 2 opening statements, was it? 3 Α. That's correct. Okay. You heard about Aventail back around 4 0. 5 the year 2000-2001, that timeframe, didn't you? Probably 2001, but I'm not sure, sir. 6 Α. 7 Back at that time, Aventail was one of the Q. 8 companies that was in the market trying to compete to 9 sell software to perform and create secure connections 10 on the internet, right? Yes, sir. 11 Α. 12 They were one of many companies out there that Q. were trying to compete in this market, correct? 13 14 Α. Yes, sir. 15 Along with SAIC, correct? Q. 16 Α. Yes, sir. 17 Now, in the -- I think you said it was in the Q. 2001 timeframe, you not only learned about Aventail, but 18 19 you also were aware of a company called ANX, weren't 20 you? 21 Α. Yes, sir. 22 ANX was an SAIC company, right? Q. 23 I believe that's correct, yes, sir. Α. 24 So ANX was essentially owned by the company 0. 25 that you and Mr. Munger worked for back in 2001,

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1 correct? 2 Α. Yes, I -- I believe that's correct. 3 And what you learned back in 2001 was that Ο. ANX, this SAIC company, wanted to try some security 4 5 software; they wanted to do a beta trial of some software, didn't they? 6 7 I'm not sure if they wanted a beta or if they Α. 8 were looking for a product that they could actually use, 9 sir. 10 And certainly, one of the things that you were Q. 11 trying to do, and I believe at the request of 12 Dr. Beyster from SAIC, was to try to set up a beta trial 13 of your software, what you were working on, would use 14 your invention, you wanted to set that up at ANX, 15 correct? 16 Α. You're talking about our group now, sir? 17 Your group, yes. Q. 18 Α. Yes, sir. 19 So your group, Mr. Munger, yourself, Q. 20 Dr. Larson, your group at SAIC wanted to have ANX run 21 your software, right, to do these automatic VPN 22 connections, correct? 23 I believe there were discussions about that, Α. 24 sir. I wasn't involved. 25 Q. Well, I wanted to ask you about that, because

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my understanding is, is that you actually were one of 1 2 the people who briefed ANX about the technology; isn't 3 that right? I don't recall. It's possible. 4 Α. 5 All right. Let me ask you to turn -- it's not Q. in that book of exhibits, but if you'll close that book. 6 7 Underneath it, there's a spiral-bound volume that has 8 your deposition transcript. 9 Do you have that, sir? 10 Yes, sir. Α. 11 Ο. Let me ask you, please, to turn to the third 12 tab. 13 (Complies.) Α. 14 0. Do you have that, sir? 15 Yes, sir. Α. 16 All right. Please turn to Page 111, if you 0. would. 17 18 And just to remind everyone, sir, you were 19 deposed in this case, meaning you had your deposition 20 taken, right? 21 Α. Yes, sir, that's correct. 22 And of course, that deposition didn't happen Q. 23 in a courtroom; it happened in an attorney's office; but 24 you were sworn to tell the truth when -- when you 25 testified, right?

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1 Α. Oh, yes, sir. So it's testimony under oath just like here 2 Q. 3 today, right? Yes, sir. 4 Α. 5 Now, if you'll look down at the bottom of Page 0. 111, you'll see that there's a reference there at Line 6 7 21 down to Line 23, and it says there -- you were asked 8 a question about a document that says: The straw that 9 broke the camel's back was the loss of the ANX beta site as they decided to go with an Aventail solution. 10 11 Do you see that? 12 Yes, sir. Α. 13 And you recall, don't you, that during the Q. middle of 2001, essentially, SAIC decided to no longer 14 15 continue to seek commercial funding for your inventions, 16 right, in the middle of 2001? 17 Α. Yes, sir. All right. And so what this document is 18 0. 19 saying is that the straw that broke the camel's back, 20 the reason for no more commercial funding, was that --21 Α. Yes, sir. 22 -- Aventail got this beta site, right? Q. 23 Α. Yes, sir. 24 And if you go down further, from Page 111 over 0. to 112, you were asked a question: Do you recall an 25

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```
effort by SAIC to set up a beta at ANX?
1
2
             Do you see that?
3
             Yes, sir.
        Α.
             And at Page 112, your answer at Lines 2 and 3
 4
        Ο.
5
        I recall a briefing to the ANX program people
   was:
   about VirnetX, yeah. I recall that.
6
 7
            Yes, sir.
        Α.
8
        Q.
             Do you see that?
9
             All right. So at the very least, at the very
10
  least, what you remember was that your team provided a
  briefing to --
11
        A. That's --
12
13
            -- to ANX about your inventions; is that
        Q.
14
  right?
15
            Yes, sir. I do recall there was some
        Α.
16
  briefing. I don't recall being at it.
17
        Q.
             I see.
             And the briefing took place -- there was a
18
19
  discussion about your software and technology and ANX
20
   decided against your technology in favor of Aventail; is
   that right?
21
22
        A. Yes, sir. They -- which I thought was the
23
   right decision, sir.
24
           In 2001, and after you learned that ANX had
        0.
   decided to go with Aventail, you learned that SAIC
25
```

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invested in Aventail in 2001, didn't you? 1 2 Α. I don't recall when I learned about the 3 investment, sir. Let me refresh your recollection, if I might. 4 0. 5 If you would turn -- and I'm sorry to have you turn to all these books, but turn back to that binder of 6 7 exhibits and take a look at Exhibit 3256. 8 Α. (Complies.) 9 MR. BOBROW: And if we highlight the top, 10 please. 11 0. (By Mr. Bobrow) You can see that, essentially, this is --12 13 MR. BOBROW: Actually, Chris, the wrong one. If you can highlight the very top. Thank you. 14 15 I'm sorry I wasn't clear on that. 16 0. (By Mr. Bobrow) You'll see here that this is a 17 message from Foley to Mr. Munger and others, including yourself, Bob Short, correct? 18 19 Α. Yes, sir. 20 And this was an e-mail that you received on Q . 21 September 28th, 2001, correct? 22 Α. Yes, sir. 23 This is about the SAIC/Aventail partnership, 0. 24 correct? 25 Α. Yes, sir.

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And what was happening here was that somebody 1 Q. was forwarding to you and others an e-mail about the 2 3 relationship and investment by SAIC in Aventail, correct? 4 5 Yes, sir, it looks like that. Α. All right. And what you learned and what this 6 Q. 7 document is saying is that SAIC and ANX were, 8 essentially, partnering together to provide full 9 extranet VPN services, correct? 10 That's one of the things you learned from this 11 e-mail, right? 12 Yes, sir. Α. 13 And you also learned something about Aventail Q. from this e-mail, correct? 14 15 Yes, sir. Α. 16 In that bottom paragraph, you learned that Q. 17 Aventail provides secure and authenticated access to a customer's critical software applications and thus makes 18 19 these applications available to business partners and 20 employees who are working remotely, right, working 21 remotely off the customer's corporate network, correct? 22 Α. Yes, sir. You also learned from this that Aventail 23 0. 24 provides that security by providing identity 25 authentication, user authorization, and encryption

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1	services, correct?
2	A. Yes, sir.
3	Q. You also learned that Aventail was being used
4	by Fortune 100 companies, correct?
5	A. Yes, sir.
6	Q. Certainly, at this time in September of 2001,
7	there were no Fortune 100 companies that were using your
8	software or your inventions, correct?
9	A. That's correct.
10	Q. And to this day, you have not licensed that
11	software or those patents to any Fortune 100 companies
12	or anyone else for that matter, correct?
13	A. Not exactly, sir.
14	Q. Well, if we put aside the SafeNet license for
15	which SAIC received no money, correct?
16	A. Yes, sir.
17	Q. Putting that aside, your patents have not been
18	licensed by any Fortune 100 companies, correct?
19	A. That's correct, yes, sir.
20	Q. Now, in the courtroom here, we observed your
21	demonstration of software here in 2010, the software
22	you've been working on since you joined VirnetX in 2007,
23	correct?
24	A. Yes, sir.
25	Q. Now, back in 2000 to 2001, in that timeframe,

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you also demonstrated software that embodies your 1 2 patents, that uses your patent to others, correct? 3 Α. Yes, sir. There were any number of times that you and 4 0. 5 your colleagues would visit someone or someone would visit you, and what you would do is demonstrate the 6 7 software, show how it works, show the creation of the 8 VPN, much like we saw here, and in doing that, you were 9 trying to interest others in either providing funding 10 for you or helping you develop your inventions further or license your -- your patents, correct? 11 12 Α. Yes, sir. 13 And certainly, back in 2001, one of the things 0. 14 that you were trying to do was provide information to a 15 number of government organizations to try to see whether 16 they were interested in providing funding for you or 17 using your inventions, correct? Α. Yes, sir. 18 19 And so even after SAIC pulled the plug on its 0. 20 commercial, that is, its effort to get private 21 businesses to fund your development -- and that -- that 22 was not successful, was it? 23 Α. No, sir. 24 So after SAIC decided on that, one of the 0. 25 things that you did was you tried to get the government

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interested in using your inventions, right? 1 2 Α. Yes, sir. If you're talking about us as a 3 group, that's correct, sir. One of the -- one of the government 4 0. 5 organizations that you tried to get interest from to use your patented ideas was a company called -- or an 6 7 entity, I should say, called OSIS, O-S-I-S; is that 8 right? 9 Α. That doesn't ring a bell to me, sir, but it's 10 possible. All right. Well, why don't we take a look at 11 0. 12 Exhibit 3347, and we'll see if that refreshes your 13 recollection, okay? THE COURT: Counsel, I don't know whether 14 15 this is a good time, but let me just inquire how much 16 longer you anticipate on cross-examination. 17 MR. BOBROW: I imagine perhaps another 15 to 20 minutes. 18 19 THE COURT: All right. I think we'll go 20 ahead and stop at this point then and take our noon break. It's about ten after the hour. 21 22 So, Ladies of the Jury, we're going to recess for lunch, and I will remind you of your 23 24 instructions not to discuss the case among yourselves or 25 with anyone else.

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1	We're going to recess until 1:30. That
2	will give you an hour and 20 minutes today. So enjoy
3	your lunch, have a nice break, and we'll see you back
4	here at 1:30. We'll be in recess until then.
5	COURT SECURITY OFFICER: All rise.
6	(Lunch recess.)
7	* * * * *
8	
9	
10	
11	
12	
13	
14	
15	
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	L

1 2 3 CERTIFICATION 4 5 I HEREBY CERTIFY that the foregoing is a 6 true and correct transcript from the stenographic notes 7 of the proceedings in the above-entitled matter to the 8 best of my ability. 9 10 11 12 /s/\_\_\_ SUSAN SIMMONS, CSR Date 13 Official Court Reporter State of Texas No.: 267 14 Expiration Date: 12/31/10 15 16 17 /s/\_\_\_\_ JUDITH WERLINGER, CSR Date 18 Deputy Official Court Reporter State of Texas No.: 731 19 Expiration Date: 12/31/10 20 21 22 23 24 25

EXHIBIT F4

IN THE UNITED STATES DISTRICT COURT 1 FOR THE EASTERN DISTRICT OF TEXAS 2 TYLER DIVISION 3 VIRNETX Civil Docket No. 6:07 - CV - 80\* 4 VS. \* Tyler, Texas 5 March 9, 2010 \* 6 MICROSOFT CORPORATION 1:30 P.M. 7 TRANSCRIPT OF JURY TRIAL 8 BEFORE THE HONORABLE JUDGE LEONARD DAVIS UNITED STATES DISTRICT JUDGE 9 10 11 APPEARANCES: 12 FOR THE PLAINTIFFS: MR. DOUGLAS CAWLEY MR. BRADLEY CALDWELL 13 MR. JASON D. CASSADY MR. LUKE MCLEROY McKool-Smith 14 300 Crescent Court 15 Suite 1500 Dallas, TX 75201 16 MR. ROBERT M. PARKER 17 Parker, Bunt & Ainsworth 100 East Ferguson 18 Suite 1114 Tyler, TX 75702 19 20 APPEARANCES CONTINUED ON NEXT PAGE: 21 22 COURT REPORTERS: MS. SUSAN SIMMONS, CSR Ms. Judith Werlinger, CSR 23 Official Court Reporters 100 East Houston, Suite 125 24 Marshall, TX 75670 903/935-3868 25 (Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

1 APPEARANCES CONTINUED: 2 FOR THE DEFENDANT: MR. MATTHEW POWERS 3 MR. JARED BOBROW MR. PAUL EHRLICH 4 MR. THOMAS KING MR. ROBERT GERRITY 5 Weil Gotshal & Manges 201 Redwood Shores Parkway 6 5th Floor Redwood City, CA 94065 7 MS. ELIZABETH WEISWASSER 8 MR. TIM DeMASI Weil Gotshal & Manges 9 767 Fifth Avenue New York, NY 10153 10 MR. DANIEL BOOTH 11 Weil Gotshal & Manges 700 Louisiana 12 Suite 1600 Houston, TX 77002 13 MR. RICHARD SAYLES MR. MARK STRACHAN 14 Sayles Werbner 15 1201 Elm Street 4400 Renaissance Tower 16 Dallas, TX 75270 17 MR. ERIC FINDLAY Findlay Craft 18 6760 Old Jacksonville Highway Suite 101 19 Tyler, TX 75703 20 \* \* \* 21 P R O C E E D I N G S 22 COURT SECURITY OFFICER: All rise. 23 All rise for the jury. 24 (Jury in.) 25 THE COURT: Please be seated.

All right. Counsel, you may proceed. 1 MR. BOBROW: Thank you, Your Honor. 2 3 ROBERT D. SHORT, III, Ph.D., PLAINTIFF'S WITNESS, 4 PREVIOUSLY SWORN 5 CROSS-EXAMINATION (CONTINUED) 6 BY MR. BOBROW: 7 Good afternoon, Mr. Short. Ο. 8 Α. Good afternoon. Thank you. 9 0. Welcome back. 10 I have just a few more questions for you on a couple of topics, okay? 11 12 Α. Yes, sir. 13 Thank you. Q. I think where we broke for lunch was I was 14 15 asking you about some of the efforts that SAIC made after SAIC had decided to stop trying to seek funds from 16 the commercial market in the summer of 2001. 17 18 Do you recall that? 19 Α. Yes, sir. 20 What I had asked you about was whether SAIC Q. 21 had made an approach to a government agency called OSIS in the summer of 2001. 22 23 Do you recall that? 24 Α. Yes, sir. 25 Let me please -- and I believe, sir, your Q.

testimony may have been -- and forgive me if I've gotten 1 this wrong -- that you weren't sure whether there was 2 3 such an approach to OSIS; is that right? 4 Α. Yes, sir. It was not a name that rang a bell 5 in my head. 6 Q. Thank you. 7 So what I'd like you to do, then, All right. 8 is take a look at the exhibit that I mentioned right before the break, and that's Exhibit 3347. 9 10 And, sir, Exhibit 3347 should also be on the screen in front of you. And it appears to be a 11 presentation from SAIC to OSIS dated June 6th of 2001. 12 13 Do you see that? 14 Α. Yes, sir. 15 Do you see, for example, that Mr. Munger's Q. 16 name is listed on this presentation, right? 17 Α. Yes, sir. And you see also that your name is listed on 18 0. 19 this presentation as well? 20 Α. Yes, sir. And Mr. Zimmet as well? 21 Ο. 22 Yes, sir. I don't recall that name. Α. 23 Q. All right. So in all events, you and 24 Mr. Munger were involved in this presentation to OSIS, 25 correct?

Yes, sir, it appears so. 1 Α. 2 Q. And does this refresh your memory that you, 3 indeed, were so involved? Not really, but I believe that I probably was. 4 Α. 5 My name is on there. Right. And OSIS, as you recall, was a 6 Q. 7 government agency that was involved in intelligence, 8 don't you? 9 Α. I seem to recall that, yes, sir. 10 And one of the things that you did when you Q. went to OSIS in the summer of 2001 was you were trying 11 to interest OSIS in your invention, right? 12 13 Α. Yes, sir. You were hoping to get OSIS to help fund the 14 Ο. 15 continuing development of your invention, right? 16 Α. Yes, sir. So one of the things that you had to do to get 17 Q. them interested in your invention was to describe it to 18 19 them, right? 20 Α. Yes, sir. 21 And one of the things that you did on 0. 22 Page 3 -- if you'd take a look there, please, Page 003 23 at the top -- was you wanted to let OSIS know what the problem was that your invention was trying to deal with, 24 25 right?

Yes, sir. 1 Α. 2 Q. You told them one of the things you were 3 trying to address was the secure connectivity of road warriors, right? 4 5 Α. Yes, sir. People on the road trying to access corporate 6 Q. 7 resources from remote locations, correct? 8 Α. Yes, sir. 9 Q. Now, what you did was you told them about the 10 technology you were trying to get patents on; am I right? 11 12 Yes, sir. Α. 13 And if you take a look at Page 7 towards the Q. bottom, you describe a situation where you have a client 14 15 on the Wal-Mart LAN who wants to access services at 16 Mattel using a secure link, and you go through a series 17 of steps there. 18 Do you see what I'm referring to? 19 Α. Yes, sir. 20 And at the end of those steps which involve a Q. 21 gatekeeper and which involve entering a domain, a secure 22 domain name with .scom in there into a browser, at the 23 end of that, you get a VPN tunnel, right? 24 Α. Yes, sir. 25 And essentially in those steps, you're Q.

describing your invention, right? The invention that 1 2 brings us here into this courtroom? 3 Α. I'm not sure if we were describing our invention or describing the prototype that we had 4 5 developed. The prototype you developed to embody your 6 Q. 7 inventions, right? 8 Α. Yes, sir. 9 All right. One of the things that you also Q. 10 did on Page 6 was you described for OSIS -- and it's probably a little hard to read because of the copy, but 11 if you look at the box all the way over to the 12 13 right-hand side, it says 280-plus patent claims pending. 14 Do you see that? 15 Yes, sir. Α. 16 So you're also telling OSIS that you were Q. 17 getting patents on the technology you're presenting to OSIS, correct? 18 19 Α. Yes, sir. 20 And after telling them all of this information Q. 21 about your inventions, what you did, on Page 9, was you 22 asked OSIS to consider doing a beta trial of your 23 technology, right? 24 Α. Yes, sir. 25 You describe on Page 9 some of the Q.

possibilities for a beta trial, 45 days, 10 clients, 1 2 available mid-July. 3 Do you see that? Yes. 4 Α. 5 That beta never happened with OSIS, did it? 0. No, sir. 6 Α. 7 They rejected your approach to them, didn't Ο. 8 they? 9 Α. Yes, sir. Now, after June of 2001, as you had mentioned, 10 Q. we all do remember those tragic events of September 11 12 11th. And those events transpired. And I think you 13 mentioned on direct examination that you were looking for ways that you could help to contribute in light of 14 15 the effort that all of us needed to take to respond to 16 that challenge, right? 17 Α. Yes, sir. One of the things that you and Mr. Munger 18 0. 19 decided to try to do, in response to that challenge and 20 those horrible events, was to approach government 21 agencies to try to interest them in these inventions 22 that are the subject of these patents, correct? 23 That's correct, sir. Α. 24 You had the idea, as did Mr. Munger, that the 0. 25 government at that time of 9/11 should be particularly

interested in internet security and in protecting the 1 internet infrastructure that our country had come to 2 3 depend on so much, right? Yes, sir. 4 Α. 5 So one of the things that you did was you 0. approached a number of government agencies that were 6 7 involved with security and infrastructure, correct? 8 Α. Yes, sir, we did. 9 0. One of those agencies was the -- was the FAA, 10 right? 11 Α. Yes. Federal Aviation Administration? 12 Q. 13 Yes, sir, I do recall it. Α. And you approached the FAA, which, of 14 0. Yes. 15 course, is responsible for aviation, in September of 16 2001, just shortly after the events of September 11th, correct? 17 I think that's correct, yes, sir. 18 Α. 19 And one of the things that you recognized and Q. 20 I think that OSIS recognized is that these horrible 21 events could be used as an opportunity to get funding 22 from the federal government to further develop and enhance the technology that you were working on as a way 23 24 to get funding so that the FAA or others could use that 25 technology, correct?

I'm not sure I would say it that way. 1 Α. We -- we believed that maybe our technology could help 2 3 in improving security for the country. And you learned at that time that the 4 0. Indeed. 5 federal government was anxious to spend money on security in securing the internet, correct? 6 7 I believe there was an interest, yes, sir. Α. 8 Q. And so why don't you take a look at Page 3525. 9 Α. I'm sorry --10 Q.. I'm sorry. I said page. I meant 11 Exhibit 3525. 12 Α. 3525. Yes, sir. 13 Thank you. Q. And do you see at the bottom of that first 14 15 page that there is an e-mail from Dan Woolley to you and 16 Mr. Munger? 17 Do you see that? 18 Α. Yes, sir. 19 Q. And it says must read; see highlight 20 paragraph. 21 Mr. Woolley, who was he at that time? Let's see. What's the date here? 22 Α. 23 September 18, 2001. Q. 24 I don't recall what his role was. Earlier, he Α. 25 was leading the effort to help commercialize.

By September of 2001, I don't think he was 1 2 doing that, serving that role anymore. I'm not sure 3 what his role was at that point. Now, if you turn to the second page of this 4 Q. 5 exhibit, please. Α. Uh-huh. 6 7 You'll see that there is an article that was Ο. 8 being forwarded to you by someone named Thomas Temin, 9 from Government Computer News Staff Writer, dated 10 September 17, 2001. 11 Do you see that? 12 Yes, sir. Α. 13 And what that tells you in the first paragraph Q. is that federal technology managers have jammed the 14 pedal to the metal on information security. 15 The 16 terrorist events of September 11 have seen to that. 17 Do you see what I'm referring to there? Let me look here. 18 Α. 19 Yes, sir. 20 All right. So what this article was telling Ο. 21 you was that those responsible for spending money may very well be interested in spending money on internet 22 security, information security, and the like, in light 23 24 of those tragic events, correct? 25 Α. Yes, sir.

1 So then if we turn back to the prior page, the Q. 2 first page, it appears about the middle of the page that 3 Mr. Munger, copying you and others, sent an e-mail to Michael Brown at FAA. 4 5 Do you see what I'm referring to there? 6 Α. Yes, sir. 7 And, Chris, if you would MR. BOBROW: 8 please go up above that to the text above that. 9 0. (By Mr. Bobrow) It appears that Mr. Munger 10 sent an e-mail that discusses your IP hopping research and also our latest work in Dynamic IP SEC VPNs. 11 You see what I'm referring to there? 12 13 Α. Yes. And what you're referring to there is, again, 14 0. 15 part of the work that you were doing related to the 16 inventions that bring us here into this courtroom, 17 right? The Dynamic VPNs? The second part of that, the 18 Α. Yes, sir. 19 Dynamic IP SEC VPNs would be that, yes, sir. 20 And if you look even further up the document, Q. there's a mention in an e-mail from Mr. Munger to FAA 21 22 and others, including yourself, from September 18th, 23 wherein the first line of the e-mail, it talks about VirnetX's ISC. 24 25 Do you see that?

Yes, sir. 1 Α. 2 And that stands for instant secure connect? Q. 3 I believe that's correct, yes, sir. Α. And that's also describing your inventions, 4 0. 5 correct? Yes, sir. And that was another name we used. 6 Α. 7 And despite the fact that you had this Ο. 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 effort or your invention, after you talked to the 11 Federal Aviation Administration; is that right? 12 13 Α. That's correct. What happened after this mid-September 14 Ο. 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 Α. That's correct, yes, sir. 19 And not much happened after October 2001 with Q. 20 respect to this project until about the middle or so of 21 2002; is that right? 22 Yes, sir, that's true. Α. 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 Α. Yes, sir. 3 You were one of the people, not the only 0. person, but one of the people that was involved in that 4 5 effort with SafeNet; is that right? Yes, I was. 6 Α. 7 If you would take a look at 3199, Defendant's 0. 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 It's talking about some SafeNet deal points. 11 one. 12 Do you see that? 13 Yes, sir. Α. And this is dated in April of 2003, correct? 14 0. 15 2002. Α. 16 Q. Did I say '3? I apologize. 17 Yes, sir. Α. April of 2002. 18 Q. Thank you. 19 If you go to the last page, there are a set of points for discussion, and it appears from these points 20 21 that someone at SAIC is describing reasons to do a deal 22 with SafeNet at that time, correct? 23 Α. Yes, sir. 24 One of them is that SafeNet had a track record 0. 25 of success in internet security.

Do you see that? That's --1 2 Α. Yes, sir. 3 All right. And another reason -- it's a 0. little farther down, but it's the second to last 4 5 paragraph -- another reason is -- is -- was the simple reason that no other company had come forward with an 6 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 Α. Yes, sir. So a deal was done in the middle of 2002 11 Ο. between SafeNet and SAIC, correct? 12 13 That sounds right, yes, sir. Α. And as I understand it, SafeNet, under that 14 0. 15 agreement, had an option under which it could 16 unilaterally terminate the license. 17 That's your understanding, right? I believe that's correct, yes, sir. 18 Α. 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 That's my understanding, yes, sir. Α. 23 Now in the process of the steps following the Q. entry of the license agreement, SAIC gave some 24 25 information to SafeNet, right?

Yes, sir, we did. 1 Α. 2 One of the things that you gave to SafeNet was Q. 3 the source code for the software that used your patented technology, right? 4 5 Yes, we did. Α. They had access to the -- essentially the 6 Q. 7 secret information that was the set of instructions for 8 the computer to follow in executing and implementing 9 your inventions, right? 10 Α. That's correct. So they had every -- a full and fair 11 Ο. 12 opportunity to look at that code and see what they 13 thought of it, right? Yes, sir, they did. 14 Α. 15 And thereafter, after getting that code and Q. having an opportunity to review it, SafeNet decided to 16 terminate the license, right? 17 18 Yes, sir. Α. 19 Q. They decided not to pursue your inventions, 20 correct? 21 That's correct. Α. 22 And decided to terminate the license without Q. 23 paying any royalties or money whatsoever to SAIC, 24 correct? 25 Α. That is correct, yes, sir.

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Q. Thank you very much, Dr. Short. 1 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 Illustrative Exhibit 1 and Defendant's Illustrative 12 13 Exhibit 2. Those were the https example from Dr. Short's illustration and also the VPN illustration from 14 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:

Just a few questions, Dr. Short, because I 1 Q. 2 think -- I think maybe there was a little bit of 3 information that wasn't covered in some of the questions that you were just asked that it's important that we 4 5 hear to understand the rest of the story. First of all, on Plaintiff's Exhibit 983, 6 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 Α. Yes, sir. 10 In your view, is that document a fair example 0. of how people had to set up VPNs back in that timeframe, 11 the year 2000? 12 13 Yes, sir. Α. Well, we saw in that document that it 14 Ο. 15 wasn't -- Microsoft didn't recommend that it be used for 16 remote access. 17 What do you understand remote access is? My understanding for a remote access is that 18 Α. 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 It was just -- it would be too hard. Α. Okay. So that's -- basically, you testified 23 Q. 24 earlier it was too hard for average people to use, like 25 remote users, right?

Yes, sir. 1 Α. 2 Q. What was it used for? 3 It was used primarily for connecting --Α. interconnecting networks. Like if you had two offices 4 5 that were remotely located from each other and you wanted to connect them, like you had a virtual network 6 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 Okay. Then you were asked some questions Q. about a different way of setting up a VPN back then, 11 something called PPTP. 12 13 Do you remember that? 14 Α. Yes, sir. 15 And you were shown some documents that seemed Q. 16 to create the impression that that was easy using PPTP? 17 Α. Yes, sir. 18 Let's take a look at that document again, 0. 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 Α. Yes, sir. 23 Let's look at Page 7 where that appears first, Q. 24 that bold -- that's a little bit more than halfway down 25 the page. Right there.

And let me read it to you: Microsoft virtual 1 private networks have been designed to make their 2 3 implementation easy for network administrators. Who are network administrators? 4 5 Typically, these are network engineers, the Α. kind I was talking about. 6 7 Okay. And let's go to the next place in this Q. 8 document that Microsoft's lawyer pointed you to. Page 9 11. 10 I want to find the language that says that setting up a VPN is easy. Right there: Setting up a 11 VPN on Windows NT Server 4.0 is easy. 12 13 Right? 14 Α. Yes, sir. 15 You were shown that sentence by Microsoft's Q. lawyer? 16 17 Α. Yes, sir. Well, let's skip over the next sentence that 18 0. 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 The way I read that, an IS administrator is Α. 2 like a network engineer. 3 0. Have you seen a Microsoft document that describes those steps? 4 5 Yes, sir. Α. Well, let me show you a document that 6 Q. 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. What's this? 10 This is an instruction manual, I believe, 11 Α. 12 for --13 MR. CAWLEY: If we can highlight that little language that says installing, configuring, et 14 15 cetera. 16 0. (By Mr. Cawley) So this tells us it's an instruction manual about how we're going to install, 17 configure, and use PPTP, right? 18 19 Α. Yes, sir. 20 So let's go to Page 4 of this Microsoft Q . 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 PPTP? 24 25 Α. Yes, sir.

And many of these steps, as we can see from 1 Q. 2 the numbers in the right-hand side, those refer to page 3 numbers of the manual? Yes, sir. 4 Α. 5 So you have to go through all these steps, Q. many of which have multiple pages. 6 7 Is that accurate? 8 Α. Yes, sir. 9 0. You were also asked some questions about the 10 demonstration you gave to the jury in Court, and that when you got your computers, when you bought computers 11 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 Yes, sir. Α. 16 Well, Dr. Short, does any software have to be Q. 17 installed on a computer to be used? 18 Α. Yes, sir. 19 Q. It's not any good in the box, is it? 20 Α. That's correct. Now, it is possible, isn't it, as many people 21 Q. 22 have done, that sometimes when you buy a computer, 23 someone like Dell has already installed software on it? 24 Α. Yes, sir. 25 But it's also the case that if you want to Q.

have some additional software, like maybe a game, like 1 2 maybe a word processor, like maybe something that helps 3 you take care of taxes, or whatever it is, you have to buy that software and install it on your computer? 4 5 Yes, sir. Α. That's not unusual for Gabriel, is it? 6 Q.. 7 Α. No, sir. 8 And it's possible, isn't it, that if you could Q. 9 find a computer-maker who was willing to do it, they 10 could pre-install Gabriel on a computer that they sold to someone and the buyer of the computer wouldn't have 11 12 to install anything? 13 Α. That's correct. Microsoft's lawyer also showed you a section 14 Ο. 15 in the manual about how to get your Gabriel software 16 registered, that you have to register the software? 17 Α. Yes, sir. 18 Ο. Why is that? 19 There are a couple of reasons. One, we were Α. 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 So when the user of Gabriel for the first time 0. 25 is using your beta test is going to have to register the

software, what kind of complicated information are they 1 2 going to have to enter to get it registered? 3 This is after it's installed? Α. Yes, sir. 4 0. 5 All -- all they'd have to do is -- is register Α. their name and ask for a domain name. 6 7 Once it's installed, once it's registered, Ο. 8 what does the user of your software have to do to set up 9 a VPN? 10 Basically what I showed in the demo, sir. Α. Okay. Let me ask you briefly about Aventail. 11 0. 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 invention and they were looking at Aventail, and they 15 chose Aventail. 16 17 I believe the response you gave to Microsoft's lawyer was that's true, and you thought they made the 18 19 right decision. 20 Α. Yes, sir, I did. 21 0. They didn't ask you about that, so let me. 22 Why do you think that SAIC made the right decision in choosing Aventail over your invention at that time? 23 24 Our -- our technology was really in the very Α. 25 early beta stage at that point, and they were trying to

put together a system to immediately service real 1 2 customers. So they needed a solid product that was 3 tested and of commercial quality. So I would have made the same decision. 4 5 Was your product there yet? Q. No, sir. 6 Α. 7 And finally, let me ask you about SafeNet. Ο. 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. Do you remember that? 11 12 Yes, sir. Α. 13 But then they canceled that agreement before Q. they ever paid anything under it? 14 15 That's correct. Α. 16 0. And you understand that they did that -why -- why did they do that? 17 18 My understanding from their letter was that Α. 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 That's correct. Α. 24 It was just the right to use your invention? 0. 25 Α. Yes, sir.

Q. And where would they get a product? 1 2 Α. They would have had to do a fair development 3 themselves. So they would have to spend a bunch of money 4 Q. 5 developing your idea into an invention, correct? Yes, sir. 6 Α. 7 And they eventually decided that they didn't Ο. 8 want to do that? 9 Α. 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 BY MR. BOBROW: 17 18 Dr. Short, in response to the questions just Ο. 19 posed to you, you were asked some questions about PPTP. 20 Do you recall that? 21 Α. Yes, sir. 22 You were asked some questions about Q. 23 Exhibit 3121, which is the Windows NT server white paper that talks about PPTP. 24 25 Do you recall that?

Yes, sir. 1 Α. Do you still have that in front of you? 2 Q. 3 Α. Yes, sir. Now, let me ask you about a page of this 4 Q. 5 exhibit that VirnetX's lawyer didn't ask you about on redirect examination, all right? 6 7 Would you please turn to Page 12? 8 And if you look towards --9 Α. Yes. 10 Q.. Please look towards the bottom where there is 11 a reference --12 Α. I'm sorry. I have the wrong document here. 13 3121, please. Q. 21? 14 Α. 15 3-1-2-1. Q. 16 Α. That's what I've got. 17 And this is Page? 18 Please look at Page 12, if you would. Ο. 19 Α. Okay. I'll just look here. And you'll see towards the bottom there 20 Okay. Q. 21 is a reference where it says on the client. 22 Do you see that? 23 Α. Yes, sir. 24 And unlike on the server side, which is a side 0. 25 that's written for administrators and others, the client

side is talking about the side of the VPN where the 1 client actually enters a domain name into a computer, 2 3 hits enter, and a connection is created, right? That's the side we're talking about here? 4 5 Yes, sir. Α. And what this says, for PPTP from the client's 6 Q. 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 Α. Yes, sir. And it says that when PPTP support is provided 11 Q. 12 by an ISP -- now, let me pause there. An ISP is a service like --13 14 Α. Excuse me. 15 That's fine. Are you alright? Q. 16 Α. Yes, sir. 17 An ISP is a company like AT&T or someone like Q. that that provides internet service, right? 18 19 Α. Yes, sir. It's internet service provider. 20 So what this is saying is that when PPTP Q. 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 Α. Yes, sir. 25 The user doesn't need to do anything, because Q.

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the ISP, like AT&T or what-have-you, has taken care of 1 2 that, right? 3 Α. Yes, sir. And what it goes on to say is that in that 4 Q. 5 situation, when you're hooked up through an ISP, the VPN 6 support with PPTP is transparent. 7 Α. Yes, sir. 8 Q. Transparent to the user, correct? 9 Α. Yes, sir. Now, as we went through Exhibit 3021, which 10 Q.. VirnetX's lawyer showed you, I think he just showed you 11 the table of contents. 12 13 Do you recall that? 14 Α. Yes, sir. 15 Okay. Now, back in 1996, you had not set up a Q. PPTP VPN, correct? 16 17 Α. No, sir. 18 Is that correct? Ο. That is correct, yes, sir. 19 Α. 20 And you hadn't set one up in 1997 either, Q. 21 right? 22 No, sir, we had not. Α. 23 Or in '98, correct? Q. That's correct. 24 Α. 25 You had not set up a PPTP VPN? Q.

Α. That is correct. 1 2 Q. Thank you. 3 MR. BOBROW: No further questions. Pass the witness. 4 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. THE COURT: All right. Mr. Cawley, who 10 11 will be your next witness. 12 MR. CAWLEY: Your Honor, may this witness 13 be excused? THE COURT: Yes, he may. 14 15 Who will be your next witness? MR. CALDWELL: Your Honor, Plaintiff 16 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 are not going to say Windows 7 infringes. But rather 24 25 than have the elephant in the room, while everybody's

seen it on the Olympics, I want to ask why is that not 1 2 in your analysis, and have him say that it just came out 3 too late to be part of the case. I have not discussed this with 4 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 don't go into it. 12 13 MR. CALDWELL: Okay. (Bench conference concluded.) 14 15 MR. CALDWELL: May I approach, Your Honor? 16 17 THE COURT: Yes, you may. MARK JONES, Ph.D., PLAINTIFF'S WITNESS, PREVIOUSLY SWORN 18 19 DIRECT EXAMINATION 20 BY MR. CALDWELL: 21 Good afternoon. Ο. 22 Good afternoon, sir. Α. 23 Would you please introduce yourself to the Q. 24 jury. 25 My name is Mark Jones, and I am a professor at Α.

1 Virginia Tech. Are you a Dr. Jones? 2 Q. 3 Α. Yes, sir. A medical doctor. 4 0. 5 No, not that kind. Not the kind to do you any Α. 6 good. 7 A Ph.D. like Dr. Short? Ο. 8 Α. Yes, sir. 9 Ο. Are you a VirnetX employee? 10 Α. No, sir. Well, Dr. Jones, why are you here today? 11 0. 12 Well, I'm here because I was able to look at a Α. 13 lot of information in the case, including confidential information, study it, and then form conclusions. 14 And then I'm here to explain those conclusions 15 16 to the jury today in a way that they can understand the 17 issues. 18 Ο. Okay. THE COURT: Dr. Jones, you may want to 19 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 (By Mr. Caldwell) Is that because we're going 0. 25 to dig into the technology today?

Α. Yes, sir. 1 2 Q. Now, just at a very, very high level, the 3 30,000-foot level, what kinds of opinions are you going to talk about today? 4 5 I'm here to talk about opinions related to Α. 6 infringement of the VirnetX's patents. 7 Professor Jones, we're going to get to your Ο. 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 out a little bit about you. So how old a man are you? 12 13 Α. I'm 44 years old. 14 Have any kids? 0. 15 Yes, I do. I have four children. Α. 16 Q. How old are they? They are 18, 16, 8, and 8. 17 Α. 18 Are the eight year olds twins? Ο. 19 Α. No, they're two months apart. They're both 20 adopted. 21 Where do you live? Q. Α. 22 I live in Blacksburg, Virginia. 23 And what's in Blacksburg, Virginia? Q. 24 Pretty much Virginia Tech. Α. 25 Is that a big town? Q.

No, sir. 1 Α. Okay. Have you always lived in Virginia? 2 Q. 3 I was born there, but shortly -- shortly after Α. that, we moved to the Dallas area. 4 5 Well, where did you live when you were a Ο. little kid when you lived in Virginia? 6 7 I was in the Norfolk, Virginia area where my Α. 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. And that was in Norfolk, Virginia? 11 Ο. 12 Yes, sir. Α. 13 And how long did you live in Norfolk before Q. you moved to Dallas? 14 15 Oh, I was a real little kid. Just a few Α. 16 years. 17 What took you guys to Dallas? Q. My dad had an opportunity to join the faculty 18 Α. 19 at SMU in engineering, and he took that opportunity. 20 And did you go to high school in Dallas? Q. 21 Α. Yes, I did. I went to Richardson High School. 22 And then at some point, you guys moved back to Q. 23 Virginia? 24 Α. Yes. Dallas was getting pretty big. Μv parents wanted to move to a smaller town, so we moved to 25

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.

What did you study at Clemson? Q. 1 2 Α. I studied computer science. 3 Now, we've heard a lot about computer science, 0. but can you kind of tell us generally what that is? 4 5 That's the study of computer hardware and Α. software and how to use those things to solve real 6 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? Both, actually. I was going to school 11 Α. full-time, and I had a job working for a group of 12 13 professors in an Air Force research laboratory, working on networking together computers for the Air Force. 14 15 I also supervised dorm rooms. So going to school and working two jobs, how 16 0. 17 long did it take you to get your computer science 18 degree? 19 Α. It seemed like a while. It took about three 20 years. After that, did you keep going to school? 21 Q. 22 Yes, I did. I went to Duke University in Α. 23 North Carolina. 24 Ο. What did you study at Duke? 25 Again, computer science. Α.

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Q. And what degree did you want to get from Duke? 1 2 Α. A Ph.D. 3 Did you have a job while you were at Duke? 0. Yes, I did. During -- during the summers, I 4 Α. 5 worked at NASA Langley Research Center, and actually ended up working in the same department where my father 6 7 had worked when I was a little kid. 8 Q. Did people remember your dad? 9 Α. Yeah, there were still a few people there who 10 had worked with him. I think we can all probably agree that NASA 11 Ο. 12 has a whole bunch of really smart people. 13 So what did NASA want from this Ph.D. student down at Duke? 14 15 This was a couple of years after the Α. 16 Challenger tragedy with the space shuttle, and they were 17 looking at ways to analyze space vehicles and how to make them safer. 18 19 And I was working on computer software and 20 computer methods for using parallel computers to analyze those kinds of structures. 21 22 Q. You mentioned parallel computing. 23 What is that? 24 Well, parallel computing is basically the idea Α. 25 of taking hundreds or thousands of computers, putting

them altogether, networking them together so that you 1 can take all that power and apply it to a problem and 2 3 solve it more quickly. Did you do a dissertation? 4 0. 5 Yes, I did, in 1990. Α. Is that when you got your Ph.D.? 6 Q. 7 Α. Yes, sir. All right. So in 1990, when you have your 8 Q. 9 Ph.D. and you're a newly minted Dr. Jones, did you go 10 straight back into the university as a professor? No, sir, I did not. I wanted to get some 11 Α. 12 real-world experience, so I took a job at Argon National 13 Laboratory. What is Argon National Laboratories? 14 0. 15 That's a government research facility, a Α. 16 Department of Energy facility outside of Chicago. 17 What sort of work did you do for Argon Q. National Labs? 18 19 Well, I was doing more of this parallel Α. 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

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courtroom, about how long had you been working on 1 2 parallel computing and related matters? 3 Α. It goes back about 25 years at this point. Has your work in parallel computing and your 4 0. 5 other research work involved network security? Yes, sir. I've worked on multiple projects 6 Α. 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. Ο. What is DARPA? 11 DARPA is the Defense Advanced Research 12 Α. 13 Projects Agency. So you were working at Argon National Labs. 14 Ο. When did you decide to, hey, it's time to go fulfill 15 16 that dream of being a teacher? 17 There was an older guy that I respected a lot Α. who had been at Argon for a long time and went to the 18 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 there as well. 22 23 What did you teach, then, at the University of Q. 24 Tennessee? 25 I taught computer science. Α.

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And then you eventually moved to Virginia 1 Q. 2 Tech? 3 Yes, sir, I did. I got an offer in 1997 to Α. move there, a chance to be a lot closer to my family. 4 5 And I couldn't pass that up. So did you do both research and teaching 6 Q. 7 during your jobs at these universities? Yes, sir, I did. 8 Α. 9 0. What has made up most of your research? 10 In one way or another, taking networks of Α. computers and computing devices and applying them to 11 solve important problems. 12 13 Are there any really interesting projects Q. you've been working on in recent years? 14 15 Well, a project that I'm real excited about Α. that I've been working on for the last 10 years is 16 something called e-textiles. 17 18 What are e-textiles? 0. 19 Α. Well, e-textiles is short for electronic textiles. 20 21 What are those? Ο. 22 Well, the idea there is to take computing Α. 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

that to see what's going on in the clothing. 1 2 It sounds probably a little strange to some of Q. 3 us, but why -- why would you do something like that. What could it be used for? 4 5 Well, two applications that we've worked on Α. that I think are important. One is to monitoring of 6 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 time as well as the rest of your body so that the doctor 11 can better understand how healthy or unhealthy that 12 13 person is. Q. Is that instead of laying in a hospital bed, 14 15 for instance, and just being monitored over a long 16 period of time? 17 Yes, sir. And you could do -- sort of allow Α. someone to do this in their home or just as they're 18 19 walking around their daily activity in clothing that is going to look and feel normal, so that they're not 20 21 self-conscious, and the Doctor can get better reads in 22 that case as well. Any other health missions you're working on 23 Q. 24 with your research? 25 Α. Yes, sir. With the same e-textiles, we've

been looking at or working with other faculty to monitor 1 how people walk, and especially certain elderly people 2 3 who are at risk for slip and fall and breaking a hip, for example, which can be very painful and debilitating. 4 5 Our work has been trying to detect and prevent those kind of falls. 6 7 Do you weave some of these networks of sensors Ο. 8 into clothing? 9 Α. Yes, sir, we do. 10 Can you show us how you do that? Q. Yes, I'd like to do that. 11 Α. 12 So this is a picture of the electronic 13 computer-automated loom that's in my lab that we use to weave and create these e-textile fabrics. We can put in 14 15 sensors and wires as well as we put lots of regular 16 cotton and polyester fabrics in as well. 17 Now, do you have an example of what the Q. clothing would look like? 18 19 Α. Yes, sir. 20 So this is one of our prototype garments that 21 is used to monitor how people walk. It has networks in It has lots of kind of sensors to determine how 22 it. you're walking and what you're doing. 23 24 Now, I thought you said this clothing looks 0. normal. I can confidently say my wife would not let me 25

1 out wearing that.

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

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.

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

10 A. In a very tasteful way.

-- would be a tragic piece of clothing. 11 Ο. 12 Okay. Thank you. Thank you, Dr. Jones. 13 Now, do others research in that area as well? 14 Yes, sir they do. There are other groups Α. 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 for e-textile online. 17

18 Q. All right. Let's go back to your more general19 research and teaching.

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

A. I teach all kinds of students from freshmen toseniors in design classes to graduate students.

Q. Do you teach computer networking?A. Yes. I've taught classes there specifically

in computer networking. But at this point with the 1 2 importance of computer networks and the internet, in 3 every class I teach, I'm going to teach them about networking. 4 5 Professor Jones, is this the first time that Ο. you've been retained to serve as an expert in a patent 6 7 case? 8 No, sir, it's not. Α. 9 Approximately how many other times have you 0. 10 been retained? I believe it's nine at this point. 11 Α. 12 Now, have you always worked for the party that Q. 13 owns the patent? About half the time I've worked for 14 No, sir. Α. 15 the party that owns it and half the time for the other 16 party. 17 Now, Professor Jones, I want to give basically Q. a road map to the jury of the things that we need to 18 19 cover today. 20 Can you help us out with that? 21 Α. Yes. Let me put up a slide for that. 22 What are we seeing here? Q. 23 This is sort of an overview of what I would Α. 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, and then I'll talk about the '180 patent. 4 5 So, for example, looking at the '135 patent, Q. what -- what bullets do we need to cover here? 6 7 I'll talk somewhat about the invention of the Α. 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 Microsoft infringes those products. 11 12 Q. Are we basically going to go through what 13 infringes those patents? 14 Α. Yes, sir. 15 Then are we basically going to go through Q. those same topics for the '180 patent? 16 17 Α. Yes, sir. Now, candidly, this looks like a lot of 18 Ο. 19 information. Let me ask you, how long do you think this 20 is going to take? 21 I think it will take about two and a half Α. 22 hours, sir. Is it going to be a fair amount of work? 23 Q. 24 Yes, it is, but I think there's a lot of Α. 25 information there that -- evidence that I've examined

that I would like for the jury to see how I reached my 1 2 opinions, what I've based my opinions on. And so I 3 think it's important that everyone see that. Professor Jones, I'd like you to give us a 4 Ο. 5 preview of what the conclusions are going to be so we can get in our minds or fit the pieces into the right 6 7 spot as we come to them. 8 So can you do that for us? 9 Α. Yes, sir. 10 All right. Now, what are we looking at on Q. this slide that's identified as the Microsoft '135 11 products? 12 13 These are the products I'm going to talk about Α. with infringement with respect to the '135 patent. 14 15 Okay. At the top -- I was going to ask you Q. 16 what -- at the top, that says operating system. 17 Yes. Windows XP and -- are operating systems. Α. And on the right, the other four are client 18 19 applications. Those are Windows Message 5.X. Office Communicator 2005, 2007, and 2007 R/2. 20 21 Q. Okay. And then on the lower right-hand side, 22 what are these on the lower right-hand side? 23 Α. 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.

Q. Now, we've seen Dr. Short teach us a lot about 1 how the internet works and how VPNs work, and we have 2 3 sort of this graphical arrangement where we have the user laptop computer, another in the left, and Acme 4 5 Company on the right; fair? Fair. 6 Α. 7 Can you tell us, for example, starting with Ο. 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? The operating systems would be in the proxy 11 Α. server that Dr. Short talked about. 12 13 Ο. Would that be on the user computer? 14 Α. Yes, sir. 15 What computer would be running the client Q. 16 machine, these client applications? 17 That would be the user's laptop computer that Α. was shown in the animation. 18 19 Q. Then last, the servers like Live Communication 20 Server and Office Communication Server, where would those be running? 21 22 Those would be back at Acme.com. Α. 23 Now, about the '135 patent, we heard that it Q. 24 related to a system where you have a DNF proxy server 25 that creates a virtual private network for the user.

Did you find that in these Microsoft products? 1 Yes, sir, I did. 2 Α. 3 0. Can you show us that? Yes, I can. 4 Α. 5 Now, I understand that you worked with graphic Q. 6 slides taken from Dr. Short's presentation. 7 Yes. This is based on Dr. Short's Α. 8 presentation, and I modified it for this presentation. 9 Ο. Explain to us what would be here (indicates). 10 What we see up here is an application up at Α. the top, and that would be, for example, Office 11 Communicator 2007 running on the user's computer. 12 13 Okay. And now here we have the DNS proxy as Ο. Dr. Short described? 14 15 That would be the products I mentioned, and Α. 16 within those operating system products Windows RTC 17 interfaces. I assume we're going to talk more about that 18 0. 19 in a minute. 20 Α. Yes, sir. 21 Q. All right. And then what did you find for the 22 gatekeeper? 23 That would be Office Communications Server, Α. 24 those products on the right-hand side of the previous 25 screen.

Now, there is a faint domain name we can see 1 Q. 2 sort of hanging back there behind the scenes. I notice 3 you didn't point to that for anything. Why is that? 4 5 That's not part of the requirements of the Α. 6 claim. 7 Well, looking at the slide here, when 0. 8 Microsoft's products are used in this manner, did you 9 conclude that that infringes the patent? Yes. I concluded that Microsoft's '135 10 Α. products infringe the '135 patent. 11 12 Q. Now, about the '180 patent, can we talk about 13 that for a second? 14 Α. Yes, sir. 15 Okay. Dr. Jones, what products are we looking Q. at for the '180 patent? 16 17 These are those same two operating systems Α. that I saw before: Windows XP and Windows Vista. 18 19 And just so everybody is clear, XP and Vista Q. 20 are both operating systems; is that fair? 21 Yes, sir. Α. 22 Is Vista a later generation of XP? Q. 23 Α. Yes, it is. 24 All right. Now, can we go to the scene that 0. 25 Dr. Short showed us for the '180 patent? And explain to

1 us what we're going to see.

2 Α. Okay. What we see, again, is an application 3 running on that user computer, and we see a secure domain name, john.acme.scom. And on that computer, we 4 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 Α. Yes, sir. It's PeerNet resolution protocol, 10 and that's the DNS -- I'm sorry -- the secure domain name service. 11 12 Q. Thank you. 13 What did you conclude when the Peer name (sic) resolution protocol was used in this fashion. 14 15 I concluded that the Microsoft '180 products Α. 16 infringed the '180 patent. 17 Q. Thank you, Professor Jones. Now, next, I think, in our -- in our road map 18 19 here, we've got to talk about the investigation that you 20 performed. I'd like to start looking at that. 21 Α. Okay. 22 Is it reasonable to assume that you have, at Q. this point, a detailed understanding of the patents that 23 are in this lawsuit? 24 25 Yes, sir. I've studied the patents carefully, Α.

as well as the file history for those patents and the 1 claim constructions that Judge Davis has given us to 2 3 use. Okay. Can you introduce us to some of the 4 Ο. 5 first few pages of the -- of the patent? I'd like to do -- this is Page 1 of the 6 Α. Yes. 7 '135 patent, and in the upper right-hand corner is the full number, 6,502,135, and that's the '135 for short. 8 9 0. Okay. And what do we see under that? 10 Α. That's the date that the Patent Office awarded the patent to the inventors, December 31st, 2002. 11 12 Q. And I believe Judge Davis gave us a pretty 13 good introduction to this, so we might kind of run through these -- these quick parts here. 14 15 Yes, sir. Α. The title? 16 Ο. 17 There's the title, and then the list of the Α. inventors underneath, and we see the two familiar names, 18 19 Mr. Munger and Dr. Short. 20 Munger and Dr. Short. Q. 21 Α. Then the company to which the patent was 22 assigned, who they were working for. That's SAIC. 23 Q. Okay. 24 And then it was filed on February 15th, 2000. Α. 25 Q. Thank you.

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MR. CALDWELL: Mr. Moreno, can I get you 1 2 to pull up Plaintiff's Exhibit 1? 3 (By Mr. Caldwell) Now, there's some other 0. information on this page that I'd like to pull out here. 4 5 MR. CALDWELL: If you could, Mr. Moreno. It's below that, actually. There you go. And now also 6 7 in the upper right-hand corner. 8 (By Mr. Caldwell) We see references cited. Q. 9 What is all this information we're seeing right here, Professor Jones? 10 These are patents and other publications that 11 Α. the Patent Office considered when determining whether or 12 13 not to issue this patent. 14 MR. CALDWELL: Can we go to the next 15 page, Mr. Moreno? (By Mr. Caldwell) And what are all these 16 0. 17 documents right here, Professor Jones? Well, this is a list continued from the front 18 Α. 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, basically, Page 32 of the document? 23 24 (By Mr. Caldwell) Now, I see Figure 26 here. Ο. 25 What is Figure 26?

This is one of the figures in the section that 1 Α. 2 Judge Davis described earlier. This is a figure that --3 or a block diagram describing some of the parts of the inventions and some of the ways that those parts can 4 5 talk. What is a block diagram? 6 Q. 7 It's a high-level description or drawing that Α. 8 engineers use to show some of the parts of a system. 9 0. Now, if all you do is look at this figure, 10 does that tell us what all the various components are and exactly what they send back and forth? 11 12 No, sir. This is just a high-level view. Α. We 13 need to look into the text of the patent, the detailed description, to get more information on this. 14 15 And I believe the jurors have a copy of the Q. patent with them in their binder if they want to follow 16 17 along, but my understanding is, there are dozens of columns of text? 18 19 Yes, sir, many in this patent. Α. 20 MR. CALDWELL: Can we flip to Page 39, Mr. Moreno? 21 22 (By Mr. Caldwell) What are we seeing right Q. 23 here? 24 Well, this is the beginning of the -- of the Α. 25 detailed description, and this is the part called the

background of the invention when the inventors will talk 1 2 about sort of the state of the art at the time. 3 Then that's followed in the lower right by the summary of the invention where the inventors give a 4 5 brief summary of what they have invented. You said that's a brief summary, so I assume 6 Q. 7 that there must be something that's a little bit less 8 brief that describes the invention. 9 Α. 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 Page 57, Mr. Moreno? 12 13 And now, there's an element I want you to highlight there in the upper left corner. 14 15 (By Mr. Caldwell) What do we see here in Q. 16 Column 37 of the patent? This is a section entitled Use of a DNS Proxy 17 Α. to Transparently Create Virtual Private Networks. 18 This 19 is where the inventors go into more detail on examples 20 of how to build and use their invention. And does this document refer back to the 21 Ο. 22 figure that you just showed us? 23 Yes, it does. Α. 24 All right. But, Dr. Jones, is this the 0. 25 portion of the patent that we look to in order to

determine if the patent is infringed? 1 No, sir. This is just where the inventors are 2 Α. 3 teaching about the invention and giving some -- some examples of how to use it. We would turn to the claims 4 5 to determine whether or not the patent is infringed. Well, here in the detailed description, all 6 Q. 7 this column after column after column, are those the 8 only ways to practice the invention? 9 Α. No, sir. They're just examples of how to 10 practice the invention. Well, then let's turn to those claims that you 11 Ο. referred to. 12 13 MR. CALDWELL: Can we go to Page 62, Mr. Moreno? And I want to pull out Claim 1 here. 14 15 (By Mr. Caldwell) All right. Tell us what Q. 16 we're seeing here. 17 Well, this is the beginning of the claims of Α. the '135 patent starting underneath the highlighted 18 19 portion, and this is the first claim of that patent, 20 Claim 1. 21 With regard to this patent, the '135 and the Ο. 22 '180 patent, is it fair to say that they contain very 23 technical information? 24 Α. Yes, sir, it is. 25 So who is the target audience of this patent? Q.

Well, the target audience for this patent is 1 Α. someone -- an engineer who would want to construct this 2 3 invention or use this invention. I've got a lot of family members who are -- I 4 0. 5 think are smart anyways, and they -- but they're just really not into computers. Would this patent be written 6 7 to teach them how to use the invention? 8 No, sir. Its purpose -- it's written for Α. 9 people who are termed ordinary skill of the art; people 10 who would be using the invention or building it in one way or another. 11 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 In this patent, it would be someone who has a Α. 16 master's degree in computer science or computer 17 engineering, a couple of additional years in -- in computer networking, as well as computer security. 18 19 So if that's the person this is -- this patent Q. 20 is targeted towards, how do you use that concept when 21 you review the patent and analyze infringement? 22 Well, when I read the patent for infringement, Α. I put myself in the shoes of that person of ordinary 23 24 skill in the art at the time of the filing of the 25 patent, approximately the year 2000.

As opposed to, say, the mindset of just sort 1 Q. 2 of a layperson that doesn't work in the computer 3 industry? That's correct, sir. 4 Α. 5 Now, you also mentioned the prosecution Q. history of the patents. What is that? 6 7 The prosecution history is a record of what Α. the Patent Office considered or how it made its 8 9 considerations from the time the application was filed 10 until the patent was issued. And it also -- it includes communications between the Patent Office and the 11 inventors. 12 13 So, Dr. Jones, have you reviewed that Q. prosecution history? 14 15 Yes, sir, I have. Α. Is this it (indicates)? 16 0. 17 Yes, it is. Α. I want to talk to you in a little bit more 18 Ο. 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? The claims of the patent determine the 22 Α. 23 boundaries of the property rights that the Patent Office 24 have granted to the inventors. 25 Q. Okay. I want to get --

MR. CALDWELL: Your Honor, if I may move 1 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. (By Mr. Caldwell) Now, I know the jury may not 6 Q.. 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 along, but where -- where would they find Claim 1 in the 11 '135 patent? 12 13 This on the last two or three pages of the Α. '135 patent. 14 15 All right. So if we have the claim, Claim 1, Q. 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 government? 18 19 Well, we have to look at each and every Α. 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. I mean, I -- if somebody buys a plot of land, 23 Q. 24 there's normally a deed or a description of the property 25 that says: Here are the lines.

Yes, sir. 1 Α. 2 Is that analogous to what we're seeing here? Q. 3 Yes, sir. You can essentially think of this Α. as the lines, the boundary lines of the property. 4 The elements of this -- this claim define those lines. 5 Now, Professor Jones, has Judge Davis also 6 Q. 7 provided some guidance about the meaning of words that 8 appear in this claim? 9 Α. Yes. Judge Davis has provided definitions for 10 several of the terms in the '135 patent, as well as the 11 '180. Now, I recall this, I think, came up in jury 12 Q. 13 selection. It might be the thing that's in the very front of your binder, if I remember correctly, the claim 14 construction with the terms, in case anybody is curious. 15 So how do those definitions from Judge Davis fit into 16 17 your analysis? 18 Well, everywhere I see those words used, I Α. 19 used Judge Davis' definition for those words. Okay. Well, let's start here in Claim 1. 20 Q. 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 Α. Yes, sir, it is.

Q. Can you see that on the screen? 1 2 Α. Yes. 3 Ο. We have the claim construction chart. And then blowing up, virtual private network 4 Α. 5 or VPN is a network of computers which privately communicate with each other by encrypting traffic on 6 7 insecure communication paths between the computers. 8 Q. Now, have you used that definition when you 9 evaluate the patents? 10 Yes. Everywhere I see that in the claims, I Α. used the definition. 11 12 Q. Have you done that for all of the terms on 13 Judge Davis' chart? 14 Α. Yes, sir. 15 Have you done that for all of your opinions? Q. 16 Α. Yes, sir. 17 Professor Jones, so if you have the claim, Q. you have Judge Davis' definitions, and then you know 18 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 Well, I have to compare those products to each Α. 23 of the elements of the claims and determine whether each element is in Microsoft's products. Every element has 24 25 to be present for there to be infringement.

Now, I see these three basic chunks of this 1 Q. claim, three basic pieces. Must Microsoft software have 2 3 only those three pieces and nothing more in order to infringe? 4 5 No, sir. They can have more and still Α. infringe, but they have to have every element. 6 7 Okay. Now, Professor Jones, if we're going Ο. 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 No, sir. If there's just an insubstantial Α. 12 difference between the product and the claim, the 13 claim -- or the product still infringes. Does that concept have a name? 14 0. 15 Yes, it does. It's one of the two ways to Α. 16 infringe that Judge Davis mentioned called the Doctrine of Equivalents. 17 All right. Thank you. 18 Ο. 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 Well, I started by studying their manuals and Α. user guides and other information that they put on their 23 24 website. 25 I looked at deposition testimony from

Microsoft engineers. I looked at source code from 1 Microsoft. I looked at technical documents from 2 3 Microsoft. And I also operated the Microsoft products. Now, you mentioned technical documents. 4 0. Ι 5 want to follow up on that just briefly. I can go down to Barnes & Noble -- I think it's down on Broadway 6 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 No, sir. Those documents might -- that you're Α. 13 talking about there might be something more like a user guide. What I'm talking about are internal confidential 14 15 Microsoft documents. So if they're confidential internal Microsoft 16 0. 17 documents, how were you able to get them and study them? Well, as part of this case, Judge Davis put 18 Α. 19 into place orders that allowed me access to those 20 documents. 21 Q. And did you mention software source code? 22 Yes, sir, I did. Α. 23 What is source code? Q. 24 Well, source code is the language or the way Α. 25 of describing a program. For example, a computer

programmer would write source code in a programming 1 2 language, and that would ultimately become an 3 application or software. I'm not sure I'm clever enough to work the 4 Ο. 5 document camera. There we go. Now, I won't -- I don't really intend to 6 7 belabor this, Dr. Jones, but this is a portion of the 8 source code, fair? 9 Α. Yes, sir. 10 And I see what to me looks like a whole bunch Ο. of gibberish with pound sign, include, alt engine dot H, 11 12 and down at the bottom slash, slash, state SIP off, 13 something. 14 What are we looking at here? 15 We're looking at the source code, and this is Α. 16 written in a programming language, and this language 17 would ultimately be turned into something that would -an application or an execute -- a program that would 18 19 execute on a computer. 20 And do you have training in interpreting this Q. sort of source code? 21 22 Well, yes, sir. In computer science, this Α. is -- we write source code, and this is something I read 23 24 and write on a daily basis. 25 Q. Thank you, Dr. Jones.

Have you looked at a large amount of source 1 2 code for this case? 3 Yes, sir. Thousands of pages of source code. Α. Can we rest comfortably knowing that you're 4 0. 5 not going to walk us page by page through thousands of pages of source code? 6 7 Yes, sir. We won't be spending a lot of time Α. 8 looking at source code. 9 Ο. Have you taken it into account, though, in 10 your opinions? 11 Oh, absolutely. My opinions are based on Α. 12 looking at the source code. 13 Well, if you had the technical documents, why Q. was the source code for their software helpful? 14 15 Well, the source code is sort of the ultimate Α. 16 way to determine what's going on in the programs, and I 17 used it to confirm the understandings I reached from the documents I was reading. 18 19 Q. Now, Professor Jones, you also mentioned 20 deposition testimony. 21 Α. Yes, sir. 22 Tell us what that is. Q. 23 Well, Microsoft engineers were under oath and Α. 24 were asked a series -- questions about how the Microsoft 25 products operated and how they were designed.

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All right. So with all your information from 1 Q. 2 your study of the patents and all the information that 3 you got on Microsoft, what did you do with all of that information that you analyzed? 4 5 Well, I took that information, and I studied Α. it and formed opinions. I then wrote those up in some 6 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 other pile. 11 12 They're actually these -- these right Α. Yeah. 13 here (indicates). And those are double-sided, Professor Jones? 14 0. 15 Yes, sir, they are. Α. 16 Have copies of your reports been provided to Q. 17 Microsoft so they can see exactly what your opinions 18 are? 19 Yes, sir. Α. 20 All right. Now, the next issue that we need Q. 21 to talk about, according to our road map, is discussing 22 the invention of the '135 patent. And we've already had some introduction to that, so I'll try to keep it brief. 23 24 But you told us that we were going to need to look at the claims of the patent in order to determine if 25

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1 there's infringement.

2 A. Yes, sir.

3 How many claims do we need to look at in order 0. to know whether or not the patent is infringed? 4 5 To know that, we only have to look at one Α. 6 If one claim is infringed, then the patent is claim. 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 property right for the invention that Dr. Short taught 11 us about. 12 13 Can you do that for us? 14 Α. Yes, sir. All right. 15 Now, we've -- we've seen this -- we've seen Q. 16 this animation before, but now I want to walk through it 17 with the claims and see where everything fits in. 18 All right. Α. 19 The first thing we have in this patent in the Q. 20 claim is the introduction sometimes known as the 21 preamble. 22 A method of transparently creating a It says: 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:

Transparently creating a virtual private network? 1 2 Α. Yes, sir. He's shown a virtual private 3 network being established between the client computer in the upper left and the computers in acme.com at the 4 5 lower right. Now, Professor Jones, the first step of that 6 Q. 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. Now, where is that in the presentation that 11 12 Dr. Short provided? 13 That happens in the -- when the application Α. 14 takes its domain name, www.acme.com, and that goes to 15 the DNS proxy server. 16 0. Now, the next step that we see in the claim is 17 determining whether the DNS request transmitted in step one is requesting assess to a secure website. 18 19 Where is that in Dr. Short's presentation? 20 That happens in the DNS proxy server where the Α. 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

automatically initiating the VPN between the client 1 2 computer and the target computer. 3 What is happening in that step? In that step, the DNS proxy server has 4 Α. 5 determined that a VPN should be set up, and it's sending a request to the gatekeeper to start the process of 6 7 setting up the VPN. 8 And so then the gatekeeper receives it, and Q. 9 what happens? 10 At that point, the VPN will be created. Α. And I note this claim uses the word website. 11 Ο. 12 Yes, sir. Α. 13 I'd like to talk to you about website for a Q. 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 on the term website by saying: It's important from our 18 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 definition or an equivalent to a website, and I think 23 24 that sort of argument tells you exactly what their 25 position is.

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Do you recall that? 1 2 Α. Yes, sir, I do. 3 Now, first of all, did Mr. Powers' statement 0. to the jury that almost everything is a website 4 5 accurately characterize VirnetX's position in this trial on what constitutes a website? 6 7 No, sir, it doesn't. Α. 8 Q. Why not? 9 Α. Well, the statements that were being referred 10 to there were in regard to opinions given before we had a definition from the Judge as to what a website is and 11 what we were to use in this case. 12 13 And now you've gotten the definition Q. Okay. from Judge Davis about website? 14 15 Yes, sir. Α. 16 And what are you doing with those definitions 0. now that we know the Court's definitions of terms in the 17 18 patent? 19 Well, that's the definition that I'm applying. Α. 20 Well, I'm still curious there, Dr. Jones. Q. 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 recall him holding up a phone, if memory serves, saying: 23 24 A phone can be a website. 25 I snuck your phone into the Court today, and

my -- it's turned off, but I snuck your phone in. 1 Can 2 this phone -- this iPhone that you can go buy at Best 3 Buy or wherever else, can this be a website? Absolutely. I have a website on that phone. 4 Α. 5 You can have web servers and websites in lots of devices. You can put them in printers. They're all 6 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 20 years ago. 11 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 Α. No, sir. 16 Well, let's get to what we are talking about. 0. 17 Next on our road map is, we want to talk about the accused products, the Microsoft '135 products, and how 18 19 they -- how they operate. 20 Can you put those products back up? 21 Α. Yes, I can. 22 Thank you. Q. 23 Now, we've heard Microsoft -- we've heard the 24 '135 patent described as relating to a DNS-triggered 25 virtual private network.

Do any of these Microsoft products include a 1 DNS-triggered virtual private network? 2 3 Α. Yes. That's what these products do, sir. Do any of these products have the DNS proxy 4 0. 5 service? Yes. The DNS proxy server is in the operating 6 Α. 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 Α. The -- two things called -- and I apologize for more acronyms, but the RTC API and the UCC API. 11 Okay. And that's -- I guess that's nine --12 Q. 13 nine new letters we add to our alphabet soup. Can you break that down for us, what the RTC APIs and UCC APIs 14 15 are? 16 Α. Yes. Let me put up a slide for that. RTC is real-time communications. And then the next one, 17 UCC is unified communications client. And then these 18 19 are both APIs, which are application programming 20 interfaces. 21 So the two that are listed on the left side, 0. 22 RTC, real-time communications, and unified 23 communications client, is there a relationship between those two? 24 25 Yes, sir. The unified communications is a new Α.

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version of the real-time communications. 1 2 0. Now, Professor Jones, is there a name by which we can refer to all of these so we don't have the -- all 3 the letters, something that's not guite as much of a 4 5 mouthful? 6 Yes, sir. I like to use the term RTC Α. 7 interfaces. 8 Q. Now, are these RTC interfaces standalone 9 software products you buy from Microsoft? 10 Α. No. They're part of the Windows XP and Vista 11 operating systems. 12 Do they come with Windows XP and Vista? Q. 13 Well, they're built into Windows XP. They're Α. not preinstalled in Windows Vista. 14 15 So how do the interfaces get installed into Q. Windows Vista then? 16 17 Well, a person could download them from the Α. internet, or they could come with an application that's 18 19 using them and be installed on the user's computer. 20 And when you showed us all the Microsoft Q . 21 products that we were talking about, there were user 22 applications in the lower left, correct? 23 Α. Yes, sir. 24 Do any of those come with the RTC interfaces? 0. 25 Α. Yes, they do.

Is that the Office Communicator products? 1 Q. 2 Α. Yes. The Office Communicator products come 3 with them. All right. Well, let's just be clear, though, 4 Q. 5 if you say that the RTC interfaces do not come preinstalled in Vista, why is it you say that they are a 6 7 part of Vista? 8 Well, first, the RTC API, no one disagrees Α. 9 that that's part of Windows XP. 10 Q.. The older one. And this newer one called the UCC API is just 11 Α. a newer version of those RT -- or the RTC API. 12 13 Second, these APIs, their purpose is to enhance the functionality of Windows. 14 So they're 15 enhancing the functionality of Windows Vista and are a free product for that. 16 All right. Now, the right-hand side of that 17 Q. last slide talked about application programming 18 19 interfaces --20 Α. Yes, sir. 21 -- sometimes called APIs. Ο. 22 Α. Yes, sir. 23 What do APIs do? Q. 24 Well, an API is a way that an application or a Α. 25 program running on a computer could basically send

requests to the operating system to ask it to do things, 1 2 a way to communicate with the operating system to 3 perform tasks for it. So can you give us an example of an 4 Q. 5 application programming interface? Yes, sir. Let's say you had a word processing 6 Α. 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. All right. So why is it a good idea to have 11 Q. 12 the word processing program, like Microsoft Word or Word 13 Perfect, something like that, ask the operating system, Windows, to open the file on behalf of the word 14 15 processor? 16 Α. Well, basically, it makes it easier to write 17 these applications. For example, lots of programs need to open files. We talked about the word processing 18 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 having that functionality in every single program, you 23 24 can have that functionality in one place, in the operating system. 25

Q. Can you demonstrate that for us? 1 Yes, sir. 2 Α. 3 So here's the -- what I've described as each of these programs, a word processor, a spreadsheet 4 5 program, say for doing taxes, and a picture-viewing program, we could have each one of them having the code 6 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. So is it important to have these kind of 11 Ο. interfaces in the operating system? 12 13 Yes, sir. It makes it much easier to develop Α. programs. And basically, when it makes it easier to 14 15 develop programs, that makes an operating system platform much more attractive to developers to write new 16 17 programs. It's really the new programs that are the reason that people buy operating systems. 18 19 Ο. So while we're discussing the Windows 20 operating system, does Microsoft Windows software get 21 updated from time to time? 22 Yes, sir, it does. Α. 23 And does that apply to the RTC interfaces as Q. 24 well? 25 They receive several updates over Α. Yes, sir.

the course of time, including this transition to the UCC 1 2 API. 3 So what versions of the RTC or UCC interfaces Ο. are -- have you investigated and are pertinent to your 4 5 opinions? Well, I've looked at the Versions 1.2 and 6 Α. 7 later of the RTC API, as well as the -- all versions of the UCC API. 8 9 Ο. Do companies write programs to take advantage of these RTC interfaces? 10 Microsoft does. They have written those 11 Α. 12 applications we saw on the lower left side, such as Office Communicator. 13 What is Office Communicator used for? 14 0. 15 It's used for large groups of people to Α. 16 communicate with one another. For example, employees in 17 a large company send back and forth things like instant messages and get presence information on other 18 19 employees. 20 Can you give us examples of some of the Q . 21 features that are offered by Office Communicator? 22 Yes, sir. Let me show you -- this is a screen Α. 23 shot that I prepared. 24 So you had a computer where you set it up to Ο. 25 test the software?

Yes. I set up a few computers running Office 1 Α. 2 Communicator and Office Communication Server, and this 3 is essentially a picture I took of the operation of Office Communicator. 4 5 All right. Now, I thought you mentioned --Q. well, can you show us what we're seeing on the screen? 6 7 I'm sorry. 8 Α. Yes, sir. 9 On the left side, I want to show you a bit of 10 the -- what's called that presence information. So you see a list of names there, and one of 11 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 Ο. And then what do we see on the right-hand side? 17 On the right side are an example of some 18 Α. 19 instant messages I sent back and forth between the computers. For example, the first one from Andy Jacobs 20 21 is: How are your sales calls going today? 22 Now, were these sort of like the kind of Q. messages we saw in Dr. Short's example where they sent a 23 24 message saying, Cut our prices today, or something like 25 that?

Yes, sir, they are. 1 Α. 2 Now, does this messaging that you're showing Q. 3 us here in Office Communicator take place over a virtual private network in Microsoft's software? 4 5 It does when those products are -- operate in Α. the default mode, yes, sir. 6 7 Now, what is the significance of using a Ο. 8 virtual private network for those communications? 9 Α. Well, the virtual private network allows those 10 communications to be protected from someone trying to snoop them, for example, on the internet. 11 12 So if there's this presence information and Q. 13 instant messaging and whatnot, how does Office Communicator and the related products keep all that 14 15 straight, all that information straight inside the 16 virtual private network? It uses something called the session 17 Α. initiation protocol or SIP for short. 18 19 Q. So what is a protocol? 20 A protocol in a network is an agreement Α. 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. So that protocol needs to be very precise. 25

So they generally indicate, for instance, who 1 Q. sent the message? 2 3 Yes, sir. The SIP protocol would indicate who Α. sent the message and who received it. 4 5 Protocols in general are going to -- are they Q. going to generally indicate -- I guess networking 6 7 protocols, are they generally going to indicate that 8 sort of information? 9 Α. Yes, sir. Many of them will. 10 0. We've heard about internet protocol numbers, some of those strings of numbers that are used for 11 12 addressing. Are internet protocol addresses the only 13 kind of addresses you can use inside those VPNs? 14 Α. 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 Now, sorry for the interruption about Q. protocols, but can you please continue explaining how 18 19 this Microsoft product forms a virtual private network? 20 Α. Yes, sir, if I could show an example here. 21 Let me start --22 Q. That's -- I noticed the title on this one says: Microsoft Office Communicator Unsecure Mode. 23 So 24 the products can be set up in a non-VPN mode? 25 Yes, sir. The user could configure the system Α.

differently or could reconfigure the system in a way 1 2 that would be not secure, if they chose to. 3 So show us what we -- what we have here. Ο. Okay. This is starting off with Dr. Short's 4 Α. 5 example of sending a message. And for example, Cut our prices today, that could be put inside a sent message 6 7 with a source and destination address. 8 Q. So instead of those numbers, like the IP address kind of addresses, we have a different form of 9 10 address used with the SIP protocol? Yes, sir. 11 Α. 12 Q. All right. What do we see next? 13 Next, that would be put into an IP packet, for Α. 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 our message? 18 19 Well, at this point, the hacker would be able Α. 20 to read everything in that message, including the cut 21 our prices today, as well as the source and destination SIP addresses. 22 Okay. Now, is there a secure mode throughout 23 Q. 24 this communicator? 25 Yes, sir, there is. We basically start off Α.

again with the cut our prices today message --1 2 Q. Okay. 3 -- and put that into the SIP package just as Α. Now, this time the difference is, we're going 4 before. 5 to encrypt that, put it in this -- basically, at that point, it's not readable. 6 7 Ο. Okay. 8 Put that into that IP packet and send it over Α. 9 the internet. 10 Q. I see. And now, Dr. Jones, what happens if our hacker 11 12 intercepts this message? 13 Well, if the hacker intercepts this message, Α. the hacker won't be able to make any sense of what's 14 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 Is this communication private? Ο. 19 Yes, sir, it is. Α. Now, if Office Communicator is in this mode, 20 Q. 21 do you believe that it infringes? 22 Yes, I do. I believe it infringes the '135 Α. 23 patent. 24 And so how is it that you know that Windows XP 0. and Vista and the other products -- the other Microsoft 25

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'135 products operate like this? Α. Well, I know this from Microsoft's documents, but I also know it from experiments that I've done myself. So, I mean, we've looked at a lot of things Q. through animations, because that definitely helps, I know, me understand what's going on better, but I want to get to some real -- sort of the hard evidence of what a hacker could see. So I'm going to ask you to play hacker for us a little bit today. Do you have a way of showing us exactly what a hacker might see if they intercepted one of those messages going across the network? Α. Yes, sir. I can use a tool I downloaded from the internet. What's the name of that tool? 0. That tool is called Wireshark. Α. Wireshark. 0. Can you tell us, first of all, what Wireshark is? Α. Wireshark is a program that can collect all the network traffic on a particular network link and store it and allow it to -- and record it. Did you save up a whole bunch of money to buy Ο. Wireshark?

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A. No, sir. It's free.
 Q. And so this could be just a bored teenager who

3 wants to see what's -- what's happening on the network? Yes, sir, or the students in my classes. 4 Α. 5 Okay. So show us a screen of what Wireshark Q. looks like. I'm fairly confident I don't understand all 6 7 of the stuff that's on here, so can you show us what we 8 are seeing on the screen? 9 Α. Yes, sir. This is going to be a collection of 10 the packets that are going back and forth, and I highlighted a few places in there to explain what's 11 12 going on. 13 Okay. So tell us what we're seeing. 0. Well, I blew those up a little 14 Α. All right. In that packet, we're seeing the two outer IP 15 bit. 16 addresses; for example, 192.168.0.81; and then some of 17 the data within that packet is also shown there; for example, AJ@Fabrikam.com. 18 19 Okay. Now, I'm going to try this little touch Q. 20 screen wizardry here, and I just see a bunch of seeming chaos down here. What is all that? 21 22 Well, that's just data that's sent in that Α. packet. Some of it is readable by humans, and other 23 24 parts are not. 25 So does the Wireshark program translate it to Q.

make it a little bit better? 1 2 Α. Yes. It understands the -- how the packets 3 are formatted and then can present that in a way that's a little easier to analyze. 4 5 Now, Professor Jones, I know I recognize some 0. words here. This is from some of those log-in screens 6 7 you showed us. Excuse my really, really awful oval, but 8 do you see where it's @Fabrikam.com? 9 Α. Yes, sir. 10 0. Now, am I supposed to be able to read that on this Wireshark? 11 12 Yes, you are. This is -- this packet isn't Α. 13 part of the VPN. This is other traffic that I collected. I'm collecting all the network traffic on 14 15 the system. 16 Q. I see. Okay. 17 And you gave us an example earlier about how Office Communicator can be in the unsecure mode or in 18 19 the secure mode. 20 Can you walk us through what you would see on Wireshark if Office Communicator is reconfigured to be 21 22 in that unsecure mode? 23 Α. Yes, sir. 24 So this is another screen shot of when I used 25 Wireshark, and I was collecting this data when

Communicator was operating in the unsecure mode, and I'd 1 2 like to show you a little bit of what I captured there. 3 0. Okay. So the first part I captured in this unsecure 4 Α. 5 mode were the source and destination addresses. Now, you mentioned SIP addresses earlier. 6 Q. Ιs 7 that what we're seeing? 8 Α. Yes, sir. 9 0. Okay. What else can you see? 10 Well, I can also see the message itself, that Α. how is your work going message that we saw earlier, that 11 12 shows up in plain and readable. 13 This is the example of the hacker who sees cut Q. 14 our prices today, for example, or whatever it may be. 15 Yes, sir, whatever message is going across. Α. 16 Q. All right. Now, what else do you see in the 17 unsecure mode. Well, so I can also -- well, let me show you 18 Α. 19 where these fit into the packet --20 Q. Okay. 21 Α. -- then show you what else I can see. 22 Fair enough. Q. So I can put in the two addresses, so I'll 23 Α. 24 show you where those fit. Remember, this SIP packet sits inside another packet to go over the internet, and 25

that other packet is the IP packet. 1 2 Q. Right. 3 Α. Okay. So what are we seeing here, Dr. Jones? 4 0. 5 Well, those are the two IP addresses, the Α. source and destination addresses that go in that outer 6 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 screen, but can you explain to us why we're sort of 11 simplifying this a little bit and what other kinds of 12 13 information might be there? Well, there would be information about the 14 Α. 15 underlying network sending this, ethernet. There's all kinds of things in these packets that -- that I'm not 16 17 showing. 18 You're not -- you're not trying to suggest to 0. 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, are you? 21 22 No, sir. No, sir, there's not. And I put all Α. 23 this information and made it available to Microsoft as 24 well. 25 All right. Thank you. Q.

Now, can you compare this to what we would see 1 in secure mode? 2 3 So this is a screen shot of Wireshark that I Α. captured when operating Office Communicator in that 4 5 secure mode. Q. Can we pop up that sort of stylized packet at 6 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 Yes, sir, we can still see those. In fact, Α. 11 we'll always see those. 12 Q. Okay. Why do you always see those? 13 Those are the addresses that are used to Α. transport or to direct this packet over the internet. 14 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. Ο. I see. 18 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 No, sir. That's not the test that we use. Α. Wе apply the Judge's construction. 23 24 Ο. 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.
14 15	anything inside that. Q. I see.
15	Q. I see.
15 16	Q. I see. And where would those go in the message?
15 16 17	Q. I see. And where would those go in the message? A. Those would go into the lower right.
15 16 17 18	<ul> <li>Q. I see.</li> <li>And where would those go in the message?</li> <li>A. Those would go into the lower right.</li> <li>Q. Now, Dr. Jones, do you remember yesterday when</li> </ul>
15 16 17 18 19	Q. I see. And where would those go in the message? A. Those would go into the lower right. Q. Now, Dr. Jones, do you remember yesterday when Microsoft's lawyer told the jury during opening
15 16 17 18 19 20	Q. I see. And where would those go in the message? A. Those would go into the lower right. Q. Now, Dr. Jones, do you remember yesterday when Microsoft's lawyer told the jury during opening essentially that we can see the IP address numbers for
15 16 17 18 19 20 21	Q. I see. And where would those go in the message? A. Those would go into the lower right. Q. Now, Dr. Jones, do you remember yesterday when Microsoft's lawyer told the jury during opening essentially that we can see the IP address numbers for computers using Office Communicator, so it's not
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15 16 17 18 19 20 21 22 23	Q. I see. And where would those go in the message? A. Those would go into the lower right. Q. Now, Dr. Jones, do you remember yesterday when Microsoft's lawyer told the jury during opening essentially that we can see the IP address numbers for computers using Office Communicator, so it's not anonymous A. Yes, I did.

correct in your opinion? 1 2 Α. No, sir. 3 0. And why is that? Well, it -- that's not the definition of 4 Α. 5 anonymity. We can -- we can always see these outer IP 6 addresses. 7 I mean, are there certain other kinds of tools Ο. 8 you could use to make it where you could hide those IP 9 addresses? 10 Α. Yes. There are -- there are something called IP address hopping, which is really another claim that's 11 not at issue in this case. 12 13 Ο. I see. So then in your opinion, in a VPN, would you 14 15 expect those addresses to be visible? I expect in a VPN on the internet to see 16 Α. Yes. these -- to see source and destination addresses. 17 18 So, now, Dr. Jones, in your opinion, when 0. 19 Office Communicator is used in that secure mode, does it 20 form a virtual private network as that term has been defined by Judge Davis? 21 22 Α. Yes, it does. 23 Now, Dr. Jones, I'm sorry to keep going back Q. 24 to opening statements, but there's one other thing, 25 while we're on it, I'd like to clear up.

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Do you recall Microsoft's lawyer very quickly 1 2 flashed up a document, and it had some statement about 3 don't need a VPN, something of that nature? Yes, sir, I believe I do. 4 Α. 5 I went back and I found that document, with 0. their help, actually, and we looked at that, because I 6 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 about the eighth page. Can you zoom in on the area 11 12 there that's highlighted? 13 (By Mr. Caldwell) Now, what Microsoft's lawyer Q. 14 told the jury was, and I quote, do we say it's great because of the VPN, and therefore, it's secure? 15 Well, actually, we tell you the opposite. It doesn't require 16 17 a VPN, and it needs only an internet connection, so it's the opposite. 18 19 Does this document say that Office 20 Communicator and Office Communicator Server do not form 21 a VPN? 22 It says you won't -- you won't need Α. No, sir. a VPN or an additional VPN to provide the security. 23 24 Ο. So what does that mean? Explain. 25 Well, what it's saying is that you don't need Α.

to use a separate VPN product, like PPTP, because this 1 2 product is forming a VPN that will provide the security 3 that you need. Thank you. Ο. 4 5 Now, Professor Jones, all this Wireshark data, did you provide all that to Microsoft? 6 7 Yes, sir, I did. Α. 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 Α. Yes, sir, it is. 12 Excuse me. Can you explain to us how that Q. 13 works? Yes, I'd like to do that. 14 Α. 15 Now, what are we seeing here? Q. 16 Α. This is the screen you see when you start off 17 Office Communicator and you sign into it. And you sign into it with a name like AJ@Fabrikam.com. 18 19 0. So how -- is there a domain name there? 20 Yes, sir, that Fabrikam.com. Α. 21 Ο. How will that be used to set up a VPN? 22 Well, that is going to -- once the user types Α. that into the application on the client computer, that 23 24 domain name is going to be sent to the RTC interfaces 25 acting as to proxy server.

That's what I was going to ask you. Q. Did you 1 2 tell us earlier that those RTC interfaces that we looked 3 at, RTC and UCC, that those are a DNS proxy server in your opinion? 4 5 Yes, sir. Α. So can you walk us through how they are a DNS 6 Q. 7 proxy server? 8 Yes, sir. They're going to receive that Α. 9 domain name. Then they'll examine the domain name and 10 then look out on the internet to determine what connections are available for that domain name. 11 Okay. So will they determine whether the user 12 Q. 13 is requesting access to a secure site? 14 Α. Yes, sir, they will. 15 How do they make that determination? Q. 16 Α. 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 I see the laptop, and I see the servers, so Q. 21 what do you mean what kind of connections? Is there not 22 just a single kind of connection that it could make? 23 No, sir. We talked about the secure and Α. 24 unsecure conditions. There are also external and 25 internal connections that are available.

Okay. And so that using encryption or not --Q. 1 2 and what do you mean by internal or external? 3 The question is about whether or not the user Α. is inside the company network or outside the company 4 5 network. Why might not the connection differ if the 6 Q. 7 user is connecting inside the company versus outside the 8 company? 9 Α. Well, in some situations, we might be much 10 more concerned with security. So inside the company, we might be willing to send things that are unencrypted, 11 but outside we would be more likely to send them in an 12 13 encrypted mode. Now, by my count, that gives us four 14 0. 15 alternative ways of connecting. There's internal network with encryption, an internal work that doesn't 16 17 use encryption, external with encryption, or an external network without; is that fair? 18 19 Α. Yes, sir. So how did the RTC interfaces here from 20 Q . 21 Windows, the RTC interfaces in Windows, determine which 22 connection types should be used? 23 Well, they send out a question over the Α. 24 internet and ask servers associated with the company 25 what kind of connections are available.

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Q. And is this how the program normally operates? 1 2 Α. Yes, sir, it is. 3 0. Have you seen that in Microsoft's technical 4 documents? 5 Α. Yes. I'd like to show that to you. Please do. 6 Q. 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 interrupt you. Before we get into that, I think we'll 11 take our afternoon break at this time. We've been going 12 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 afternoon break. We'll be in recess. 16 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

Exhibits 567 and 606 from Plaintiffs be admitted. 1 2 I think there's agreement between the 3 I just forgot to tell, Your Honor. parties. THE COURT: All right. Be admitted. 4 5 (By Mr. Caldwell) Okay. Professor Jones, Q. let's resume where we were. I think I had asked you if 6 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 Α. Yes, sir. What are we looking at here? 11 0. 12 This is a Microsoft design document talking Α. 13 about those four connections, and it reads, the highlighted portion: In automatic configuration mode, 14 15 the client application will extract the domain name from the user URI and use this API to obtain SIP servers 16 associated with the domain name. 17 Now, I'm quite confident the court reporter is 18 Ο. going to smack one of us upside the head for all these 19 20 acronyms, but can we unpack those just a little bit and spell those out? 21 22 What is the URI referring to? 23 That's that information that the user typed in Α. 24 with the domain name. And so that aj@Fabrikam.com, and 25 they'll take the Fabrikam.com information out of there

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and use that to determine whether or not to make a 1 2 secure connection. 3 Ο. And now in order to perform this automatic configuration mode, do we know that the RTC interfaces 4 5 are going to look for those four -- which of the four kinds of connections to make? 6 7 Yes, sir. I'd like to look at another page as Α. 8 part of that document. 9 0. What are we seeing here? 10 Well, these are those four questions we talked Α. about earlier. The first one is internal TLS; that's 11 encrypted. Internal TCP; that's unsecure. External 12 13 TLS; that's the encrypted connection. And then external TCP; that's the unencrypted one. 14 15 So these are the four requests you mentioned? Q. Yes, sir. 16 Α. 17 What happens to these requests? Q. These requests are sent over the internet to a 18 Α. 19 server associated with the company that will provide 20 answers as to what kind of connections are available for that domain name. 21 22 Now, have you verified that all of this really Q. 23 happens? 24 Α. Yes, sir. Using that same Wireshark program, 25 I have prepared a screen shot.

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Q. Okay. And what are we seeing here? 1 2 Α. This is a record of what network traffic is 3 going on while trying to determine whether or not to make a secure connection. 4 5 So you have the four questions that were identified in the Microsoft document. The first one is 6 7 asking for that encrypted internal connection. 8 Q. Okay. 9 Α. We've got another one for the unencrypted 10 internal connection, the encrypted external connection, and the unencrypted external connection. 11 12 Q. I see. So can we go back to our animation to where all of this fits in? 13 14 Α. Yes, sir. 15 Now, we are trying to connect across the Q. internet instead of inside Acme, so which kind of 16 responses are we likely to get back in terms of 17 identifying a server that's available? 18 19 Α. We would like to get back responses for the 20 external network. 21 Okay. Just to be clear, could you set up a Q. VPN on the internal network as well? 22 Yes, sir. 23 Α. 24 Are internal connections sometimes public Ο. 25 links?

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Yes, they can. For example, Virginia Tech 1 Α. 2 owns its links, but they wouldn't necessarily be secure 3 links. Lots of people can see the traffic on them. Now, in our example, we decided that we would 4 0. like to use an external connection; fair? 5 Yes, sir. 6 Α. 7 Now, will I find a server that will allow me Ο. 8 to connect encrypted and unencrypted? Will I have two 9 different options? 10 You may have both options. It depends to what Α. policies that the company has established. 11 What do you mean? 12 Q. 13 The company is going to determine for that Α. domain name whether it will make secure and unsecure 14 15 connections available. 16 0. I see. And if I understand you correctly, 17 you're saying that the company might choose not to allow unencrypted communications so that company business 18 19 isn't sent on encrypted? 20 Yes, sir. Especially in the external case, Α. 21 the company might very well choose to only allow 22 encrypted connections. 23 Well, in either case, when the Windows RTC Q. 24 interfaces pick a server name to choose to connect to, 25 what do they do then?

Well, once they determine, for example, in 1 Α. 2 this case, to make an encrypted connection, they need to 3 get an address for the server to talk to, an IP address. What do they do with that address then? 4 0. 5 With that address, they will use that to Α. establish -- or to send a request to set up the VPN. 6 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. I see. Now, if these RTC interfaces find out 11 0. 12 that the company allows both unencrypted or encrypted 13 connections and they get back responses saying you can connect encrypted or you can connect unencrypted, how do 14 15 the RTC interfaces determine which way the client is 16 requesting to connect? 17 Well, there's logic in the source code in Α. these RTC interfaces that determines to pick the 18 19 encrypted connection first, if that's available. 20 So when we started down this path talking Q . 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 Α. Yes, sir.

Q. So when do we set up our virtual private 1 2 network? 3 Α. Well, once we've made this determination, we send out this request to initiate the virtual private 4 5 So it goes out over the network to Office network. Communications Server, which is the -- acting as 6 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? No, sir. Only users who are authorized to 11 Α. make that connection will be allowed to establish the 12 13 secure connection. Now, I know we simplified things for the 14 Ο. presentation here. But how many copies or instances of 15 Office Communications Server or Live Communication 16 17 Server might be running back at Acme, or whatever the company may be? 18 19 Well, there may be several copies or instances Α. 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 Why else might you need different servers set Ο. 25 up?

Different servers may play different roles. 1 Α. 2 There may be different servers involved in external 3 connections than there are in internal connections. I see. Now, when we looked through the claims 4 0. 5 of the '135 patent, one of the words that we talked about -- we talked about it with regard to the cell 6 7 phone -- was websites. 8 Α. Yes, sir. 9 0. In the case of Office Communicator, is our 10 user accessing a secure website? No, sir, they're not. 11 Α. 12 Q. What is the user accessing? 13 The user is accessing Office Communications Α. Server, which doesn't literally -- which is not 14 15 literally a website, and it doesn't literally send web 16 pages back and forth. Instead it does similar communications to a website between Office Communicator 17 18 and Office Communications Server. 19 Ο. Does it work like a website? 20 In many respects it does, yes. Α. 21 Q. In what ways does it work like a website, for 22 example, just at a high level? 23 At a high level, once the VPN is established, Α. 24 the kind of traffic that goes back and forth between the 25 two is not material to what's happening in these claims.

Now, in your example, I want to say that we 1 Q. saw a picture referring to Office Communicator 2007. 2 3 But how does this explanation correlate to the other versions of the Microsoft '135 products? 4 5 Well, this explanation is the same for each Α. The only exception is Live Communications 6 one of them. 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 product? 11 12 In the first version, it was -- just encrypted Α. 13 or unencrypted were the two questions. Was there still a determination made as to 14 Ο. 15 whether to connect in the secure VPN mode or the unsecure mode? 16 17 Yes, sir. Α. Now, how do you know that all the different 18 Ο. 19 versions are consistent in this regard? 20 Α. Well, I know that by reading, for example, 21 deposition testimony from Microsoft employees. 22 All right. Now, I think it's time for us to Q. 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

'135 patent to the Microsoft products. 1 2 What claims of the '135 patent are you going 3 to talk with us about today? I'm going to talk about Claims 1, 10, and 12. 4 Α. 5 Now, remind us, do we need to show that every Q. claim in the patent is infringed? 6 7 No sir. If one claim is infringed, the patent Α. 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 then you can show us some different things and explain 11 it to us. 12 13 So I want to start with the preamble of the claim, which says: A method of transparently creating a 14 15 virtual private network between a client computer and a target computer. 16 Is that what we do in Office Communicator and 17 the remaining Microsoft '135 products? 18 19 Yes, it is. That's what happens when the Α. 20 remote computer establishes a VPN to the computers back 21 at Acme.com. 22 Are there words in here that Judge Davis has Q. 23 defined for us? 24 A. Yes, there are. 25 As we saw earlier and the definition I read

was for virtual private network. 1 2 Q. And you've already read that definition to us. 3 Did you apply it in analyzing these claims? Α. Yes, sir. 4 5 Now, let's move to the first step, which is 0. generating from the client computer a domain name 6 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 Davis provide us definitions for that term? 11 12 Yes, he did. For two of those terms. Α. 13 The first one is domain name service, and that is a lookup service that returns an IP address for a 14 requested domain name. And the second one is the 15 definition of domain name, which is a name corresponding 16 to an IP address. 17 18 So did you find that in the Microsoft '135 Ο. 19 product? 20 Α. Yes, I did. That is when the -- for example, 21 the application is sending that domain name to the RTC interfaces. 22 23 Did you find that element met in all of the 0. Microsoft '135 products? 24 25 Α. Yes, sir, I did.

Q. Now, Professor Jones, we have check boxes 1 2 here. 3 What I want to know is, can I check off that element as being met in the Microsoft '135 products? 4 5 Yes, sir. Α. The second element of the claim says -- the 6 Q. 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 some of the words there? 11 12 Α. Yes, sir. 13 Secure website, and the definition for that is a website that requires authorization for access and 14 that can communicate in a VPN. 15 16 For website, it's one or more related web 17 pages at a location on the worldwide web. Now, in the Microsoft '135 products, did you 18 0. 19 find that the RTC interfaces determine whether the DNS 20 request is requesting access to a secure site? 21 Α. Yes, I did, as I described for the DNS proxy server with those four questions about available 22 23 connections. 24 Q. Does the site require authorization for 25 access?

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Yes, sir. As discussed, the user has to be an 1 Α. authorized user or the gatekeeper computer will not 2 3 allow the connection. Now, more specifically, in the Microsoft '135 4 Q. 5 products, did you find that the RTC interfaces determine whether the DNS request is requesting access to a secure 6 7 website? 8 Α. No, sir, I did not. 9 0. Okay. Why not? 10 Well, as I mentioned earlier, the Office Α. Communications Server is not literally a website. 11 12 Q. Well, Professor Jones, if you found the 13 Microsoft '135 products do not involve requesting access to a secure website, does that mean that this element of 14 15 the claim is not met by the Microsoft '135 products? No, sir, it doesn't. 16 Α. 17 Just making a small change does not mean that you don't infringe. If -- if the product is 18 19 insubstantially different from the claims, then it still 20 infringes under this Doctrine of Equivalents that we talked about earlier. 21 22 Well, Professor Jones, did you determine this Q. Office Communicator features offered over the virtual 23 24 private network are not substantially different than a 25 secure website?

Yes, sir, I did. 1 Α. For instance, would the virtual private 2 Q. 3 network be triggered any differently, if it were to carry website traffic? 4 5 No, sir, it wouldn't. Α. The -- the triggering mechanism here would 6 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. Would the virtual private network itself 10 Q. operate any differently in a significant way if the 11 12 information sent across it were a web page instead of, 13 say, an instant message? No, sir, it wouldn't. 14 Α. 15 Now, did you do anything -- rather than just Q. 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 Yes, sir, I did. I applied by what's called Α. 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 Now, let's be clear. Is this an analysis that Q.

you came up with yourself? 1 2 Α. No, sir. This is an analysis that the courts 3 use. So were you able to determine if the Microsoft 4 Ο. 5 '135 products perform substantially the same function as a secure website? 6 7 Yes, sir, they do. They make use of computers Α. 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. Were you able to determine if the Microsoft 11 Ο. 12 '135 products perform in substantially the same way as a 13 secure website? Yes, sir, they do. 14 Α. 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 so in a way in which the client's and servers cooperate 18 19 to ensure that the clients are authorized to connect. And finally, did you determine whether the 20 Q. 21 Microsoft '135 products achieve substantially the same 22 result as a secure website? Yes, sir, I did. 23 Α. I found that the result achieved was that the 24 25 client is able to communicate with computers in a VPN.

It does so over a public network and in a way in which 1 2 only clients that are registered are able to communicate 3 in that network with those servers. And, Professor Jones, did you conclude that 4 Q. 5 the Microsoft '135 products meet the element of determining whether the DNS request in Step 1 is 6 7 requesting access to a secure website? 8 Α. Yes, sir, I did under the Doctrine of 9 Equivalents. 10 Q.. May I check that element? Please do. 11 Α. 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 Α. 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 I think you touched on this earlier, but is Q. 24 that VPN just always going to be to a single Office 25 Communications Server?

No, sir. As I mentioned earlier, that's a 1 Α. group of servers as well as other computers that form a 2 3 network back at the company. Now, has Judge Davis provided any additional 4 0. 5 definitions that help us with this claim element? Yes, sir. 6 Α. 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 In the Microsoft products, after it is Ο. determined that the DNS request pertains to a secure 11 site, do the products automatically initiate a VPN 12 13 between the client computer and the target computer? 14 Yes, sir, they do. They send that request to Α. 15 the gatekeeper computer to -- or the RTC interfaces sent that request to the gatekeeper computer to initiate the 16 VPN. 17 Will that gatekeeper computer make sure that 18 0. 19 the proper credentials are presented? Yes, sir, it will. 20 Α. 21 0. 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

that, this all happens behind the scenes automatically. 1 2 Ο. Professor Jones, did you find this last element met in the Microsoft '135 products? 3 Yes, sir, I did under the Doctrine of 4 Α. 5 Equivalents. May I check that box? 6 Q. 7 Α. Please do. 8 Well, Professor Jones, we have checked all the Q. 9 boxes on Claim 1. What does that mean? 10 Well, that means that the Microsoft '135 --11 Α. 12 '135 products infringe Claim 1 of the '135 patent, and, 13 therefore, they infringe the '135 patent. Okay. We've talked about Claim 1, but did 14 Ο. 15 you -- did you find that the Microsoft '135 products 16 infringe other claims of the '135 patent? 17 Α. Yes, sir. Claims 10 and 12. May I pull those up now? 18 0. 19 Α. Yes, sir. 20 Now, I put Claim 10 up here, and the preamble Q. 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 Α. Yes, sir, it is. This is the same --

essentially the same as what we're seeing in Claim 1. 1 Now, I want to ask you, if I remember 2 Q. 3 correctly, Claim 1 starts with a method of transparently, whereas Claim 10 starts with a system of 4 5 transparently. Is that significant? 6 7 Α. 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. In Claim 10, it -- to infringe Claim 10, you would have 11 to assemble the parts of Claim 10, basically assemble 12 13 the system to infringe it. So did you find that the Microsoft '135 14 Ο. 15 products have a system that transparently creates a 16 virtual private network between a client computer and a 17 secure target computer? Yes, sir, I do as we discussed for Claim 1. 18 Α. 19 Same as Claim 1. 20 Now, Professor Jones, in case the jury --Q. 21 excuse me; I'm sorry -- in case the jury is following 22 along in the patent, I know that the Patent Office's printing of this claim, it looks a little bit different 23 in that all of this information is kind of squished 24 25 together in one really, really long block.

Now, will you explain to us why you've chosen 1 to break it out into three pieces here? 2 3 Yes, sir. I thought that one big block was a Α. pretty big mouthful, but also there are three basic 4 5 requirements going on here. One is that the proxy server is going to 6 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 piece by piece to make sure I didn't miss anything. 11 So the same words? 12 Q. 13 Yes, sir. Α. Now, the first section that we have is a DNS 14 Ο. 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 Α. 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 of a DNS. 22 23 What is the DNS proxy server that you've Q. 24 identified in the Microsoft '135 products? 25 It is the RTC interfaces in Windows XP and Α.

1 Vista. 2 Q. Now, let's be clear about something. 3 The RTC interfaces, those are software, correct? 4 5 Α. Yes, sir. But this element says it's got to be a DNS 6 Q. 7 proxy server. 8 Let me pull up the -- the construction and Α. 9 explain that. 10 We've been told that a DNS proxy server could be a computer or program, and it doesn't have to be one 11 or the other. So it could be hardware or it could be 12 13 software. But did you find that first piece of the claim 14 0. met in the '135 products of Microsoft? 15 Yes, sir, I did. 16 Α. 17 May I check that? Q. Α. Please do. 18 19 Q. Professor Jones, the second set -- the second element is: Wherein the DNS proxy server returns the IP 20 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 In that step, after the DNS proxy server has Α.

made its determination, if it finds that a non-secure 1 2 website has been requested, it's just going to return an 3 IP address so that an unsecure connection could be formed. 4 5 Did you find that element in the Microsoft Ο. '135 products? 6 7 Yes, I did and in the RTC interfaces. Α. 8 Now, I note that this element says -- it Q. 9 refers to a non-secure website, access to a non-secure 10 website has been requested. What about website? 11 12 Well, just as in Claim 1, the website is not Α. 13 literally present in the Microsoft products, but it's present under the Doctrine of Equivalents. 14 15 The second way of infringing that was Q. 16 identified by Judge Davis? 17 Α. Yes, sir. So what did you conclude for the second piece 18 Ο. 19 of Claim 10? 20 Α. I concluded that the Microsoft '135 products 21 meet this under the Doctrine of Equivalents. 22 Now, Professor Jones, the third piece says: Q. 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

to a secure website has been requested. 1 What's happened in that piece of the claim? 2 3 Well, in this case, the DNS proxy server Α. determines that access to a secure website has been 4 5 requested and is going to send a request to create the 6 VPN. 7 Now, candidly, I should have done this Q. 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 got -- the DNS proxy server receives the request. 11 Where was that in our animation? 12 13 That's when -- the DNS proxy server is on the Α. laptop computer, and it's receiving that from the 14 15 application. So that's when A.J. at Fabrikam.com moved down 16 0. to the RTC interfaces? 17 Yes, sir. 18 Α. 19 Then in the instance where, if you were trying Q. 20 to connect to an unsecure site, what would happen? 21 Α. Well, that, again, happens in the RTC 22 interfaces on the user's computer where it determines that an unencrypted connection is going to be made and 23 24 that IP address comes up, that number we saw appear 25 there.

Now, when we see this third part here, if 1 Q. 2 you're trying to connect to a secure site, the DNS proxy 3 server generates a request that the VPN keeps that up. Where was that in the animation? 4 5 That is after the DNS proxy server has made Α. its determination on the user's computer, on the client 6 7 computer. That request is sent over the internet and 8 will ultimately go to the gatekeeper computer. 9 0. So that's when we had our laptop, and after 10 the DNS proxy server figures out we want to connect encrypted and the message goes across the internet to 11 the gatekeeper? 12 13 Yes, that -- that -- the computer is at the Α. bottom -- in the basement of that Acme.com building. 14 15 Did you find this third piece of Claim 10 met? Q. Yes, I did under the Doctrine of Equivalents. 16 Α. 17 Now, the last element for this claim says: Q. Α gatekeeper computer that allocates resources for the VPN 18 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 Yes, I did. Α. 24 That happens when the Office Communications 25 Server, which is the gatekeeper computer, receives that

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request from the DNS proxy server and makes, for 1 2 example, allocates -- well, allocates resources for that 3 VPN. So what do you mean by allocates resources for 4 Ο. 5 the VPN? For example, the Office Communications Server 6 Α. 7 will allocate connection records to make the connection 8 for the VPN possible. 9 Ο. And what is the secure web computer? 10 Α. The secure web computer is one of those instances of Office Communications Server that were 11 12 discussed, or another computer. 13 Now, Office Communications Server is -- is Q. software that comes on a DVD, right? 14 15 Α. Yes, sir. All right. But do you see that this element 16 Q. 17 requires a gatekeeper computer? 18 Yes, I do. Α. 19 Can that gatekeeper computer portion of the 0. 20 claim be met by Microsoft's software as opposed to only being met by hardware? 21 22 Yes, it can be met by the Microsoft software, Α. 23 the functionality of that in the Office Communications 24 Server product. 25 Is that kind of like when we looked at the DNS Q..

1 proxy server? 2 Α. Yes. As you recall, the DNS proxy server 3 could be either a computer or program. And in this case, the gatekeeper computer is the Office 4 Communications Server software. 5 Well, does the expert retained by Microsoft 6 Q. 7 agree with you on that point, that this element of a 8 gatekeeper computer can be met by the software? 9 Α. No, sir, he does not. 10 Q.. What does he say? Well, he says it has to be -- that the 11 Α. 12 gatekeeper computer must be hardware. 13 Well, Professor Jones, even if he's right that Q. the gatekeeper computer has to be hardware, would that 14 15 mean that Microsoft doesn't infringe the claim? 16 Α. No, sir, it doesn't. Well, first of all, that Office Communications 17 Server software is meant to run in a computer. 18 Ιt 19 doesn't have any other purpose. 20 Second, Microsoft itself puts that software on 21 computers and infringes these claims. 22 So, Professor Jones, did you find that the Q. 23 last element of Claim 10 is met by the Microsoft '135 24 products? 25 Yes, sir, I did under the Doctrine of Α.

1 Equivalents. 2 Q. And what have you concluded about Claim 10? 3 I have concluded that the Microsoft '135 Α. products infringe Claim 10 of the '135 patent. 4 Now, let's look at Claim 12. 5 Q. The entirety of Claim 12 is the system of 6 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 the request to create the VPN. 11 12 Professor Jones, why is this claim so much shorter than the others? 13 This is one of the dependent claims, that type 14 Α. 15 of claim that Judge Davis talked about that refers back to another claim. 16 This one refers back to Claim 10. 17 Okay. And so what do you need to show in 18 0. 19 order to prove infringement of Claim 12? 20 Α. You have to show that Claim 10 is -- that the elements in Claim 10 are met as well as the elements in 21 Claim 12. 22 23 And we've already shown Claim 10? Q. 24 Α. Yes, sir. 25 So what more must be shown for Claim 12? Q.

We have to show that these terms here are 1 Α. 2 present in the Microsoft '135 products. 3 0. And what are those terms? These are wherein the gatekeeper computer 4 Α. 5 determines whether the client computer has sufficient security privileges to create the VPN. 6 7 Okay. Let's start with that one. Q. 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 Yes, sir, it does. Α. 13 As we discussed, the user has to be authorized to connect to the VPN. 14 15 So can we check that box? Q. 16 Α. Yes, sir. 17 Then if the client computer lacks sufficient Q. security privileges, rejecting the request to create the 18 19 VPN, does Office Communicator Server and Office 20 Communications Server software from Microsoft do that? 21 Α. Yes, sir, if it does. 22 If you're not authorized, the request to create that VPN, the connection will be terminated. 23 24 So do you have any proof of that you can show Ο. 25 us?

Yes, sir, I do. 1 Α. 2 What are we seeing here, Professor Jones? Q. 3 This is some of the deposition testimony that Α. I talked about earlier. This is from Mr. Mu Han. 4 He is 5 a Microsoft engineer, a man who's programmed parts of this -- these products that we've been talking about. 6 7 And he was designated by the company as someone who 8 could answer these questions for us. 9 0. And what did he tell us? The question he was asked: So when the client 10 Α. cannot be authenticated, can you describe for me how the 11 connection is terminated? 12 13 And his answer -- and let me just go down to the highlighted portion -- is: 14 If the access proxy does 15 not see the valid success code, the access proxy would drop the connection. 16 17 Q. I see. And just so nobody -- nobody thinks you're 18 19 running from the first part of that answer, what is he explaining there? In fact, you can tell us if you --20 21 Α. 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

success return message and keep the connection up. 1 Then if the access proxy does not see that 2 Q. 3 valid success code, it will drop the connection? Yes, sir. 4 Α. 5 What did you conclude about Claim 12, 0. Professor Jones? 6 7 Α. I concluded that the '135 Microsoft products 8 infringe Claim 12 of the '135 patent. 9 0. So one tiny piece of good news is I think 10 that's our check marks for the '135 patent, but we have a little bit more to talk about on the '135 patent, 11 12 which is you said that Microsoft infringes directly and 13 indirectly. 14 Α. Yes, sir. 15 Can you tell us what you mean there? Q. 16 Α. Well, what I mean by that is that Microsoft 17 itself infringes these claims as well as through the design of its products and how it advertises those and 18 19 instructs its customers, it indirectly infringes the 20 claim. 21 0. Well, in what ways does Microsoft directly 22 infringe the '135 patent? 23 They do that, for example, through the way --Α. 24 when they test their products, but they also do it when 25 they -- when they use it internally themselves.

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1 Well, does Microsoft make, use, sell, or offer Q. for sale products that include the DNS proxy server? 2 3 Α. Yes, they do. The products that include the DNS proxy server 4 5 are Windows Vista and Windows XP, and those are things that they make, use, sell, and offer to sale. 6 7 Do they make, use, sell, or offer for sale the 0. 8 gatekeeper computer of the asserted claims? 9 Α. Yes, sir, they do. That's Office Communications Server and Live 10 Communications Server. 11 Now, does Microsoft use the DNS-triggered 12 Q. 13 virtual private networks internally at Microsoft? 14 Α. Yes, they do. 15 They -- they run this system for communication among their own employees. 16 17 So does Microsoft perform the method of Claim Q. 1 and make use of the build or make use of the systems 18 19 of Claim 10 or 12? 20 Α. Yes, they do. They do all of those things, 21 sir. 22 Now, how do you know that? Q. Well, I know that from Microsoft deposition 23 Α. 24 testimony as well as internal Microsoft documents. 25 How many employees at Microsoft are using the Q.

1 '135 patent? Well, it's my understanding that -- sorry; 2 Α. 3 wrong one -- that Microsoft has over -- or approximately 80,000 employees using this system, and some are --4 5 between 40 and 50,000 of those employees are in the 6 United States. 7 80,000 with 40 or 50,000 in the U.S.? 0. 8 Α. Yes, sir. 9 0. Where did you get those numbers? 10 I got that from the deposition testimony of Α. Mr. Mu Han as well as documents from Microsoft that 11 12 describe how to set up and run this system and the best 13 ways to do it. Well, that's what I was going to ask you. 14 0. 15 Do you know how Microsoft actually sets up their software? 16 17 Yes, sir, I do. Α. And how do you know that? 18 Ο. 19 I know that from deposition testimony and Α. 20 those same documents. I'd like to show you that deposition testimony. 21 22 Q. Okay. So this is, again, deposition testimony from 23 Α. 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 discover the servers. 4 5 Q. They always? Yes, sir. 6 Α. 7 Do you have other evidence of how Microsoft Q. 8 configures their own Office Communicator products 9 internally at Microsoft? 10 Α. Yes, sir, I do. MR. CALDWELL: Mr. Moreno, can you pull 11 12 up Plaintiff's Exhibit 130? 13 (By Mr. Caldwell) Now, what are we seeing in Q. this document right here? 14 15 This is a document where Microsoft describes Α. 16 the -- basically recommended ways in which to set up the 17 system. And as an example of that, they describe how Microsoft IT does that at Microsoft. 18 19 Q. And when Microsoft deployed it, did they use 20 DNS service records to create a virtual private network? 21 Α. Yes, sir, they did. I'd like to --22 So, Professor Jones, in your opinion, does Q. 23 Microsoft directly infringe Claims 1, 10, and 12? 24 Α. Yes, sir, they do. 25 Now, let's move on to indirect infringement. Q.

You introduced us to indirect infringement briefly, but 1 2 what did you -- what did you tell us indirect 3 infringement was? Essentially, Microsoft indirectly infringes by 4 Α. 5 inducing or encouraging others to infringe the patent as well as contributing to the infringement of others. 6 7 Let's talk about induced infringement. Ο. 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 form your opinions and analysis? 11 12 Α. Yes, sir. Let me walk through that. 13 To -- to induce infringement, Microsoft would need to have knowledge of the patent. They would have 14 15 to encourage or instruct others to perform acts that 16 infringe. Others would have to infringe the claims. And then Microsoft would have had to have 17 known or should have known that encouragement or 18 19 instruction would result in others infringing. So for the first element, did you find that 20 Q. 21 Microsoft had -- did you find evidence that Microsoft 22 had knowledge of the '135 patent? 23 Α. Yes, sir, I did. I'd like to show that to 24 you. 25 This is Plaintiff's Exhibit 401. Q. Okay.

What are we seeing here? 1 2 Α. This is an information sent from the U.S. 3 Patent & Trademark Office from -- well, from there to Microsoft representatives during the -- what's called 4 5 the prosecution of a patent by Microsoft. So Microsoft was applying for a patent on some 6 Q. 7 technology it wanted to patent? 8 Α. Yes, sir. 9 0. And this is correspondence from the United 10 States Patent Office back to Microsoft? Yes, it is, and it's dated September 26th, 11 Α. 12 2003. 13 Now, where does Mr. Munger and Dr. Short's Q. '135 patent fit into this document? 14 15 Well, let me turn to a little bit later part Α. 16 of it. 17 So I've highlighted two portions of this document. The first one says, essentially, that the 18 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 Claim 12, Munger teaches the method of Claim 9 wherein 23 the communication device is a proxy server. 24 25 Q. So does this mean that the patent claims that

Microsoft was trying to get, that in September of 2003, 1 2 they were rejected because of the Munger '135 patent 3 we've talked about? Α. Yes, sir. 4 5 And this is the record of the information or the discussion that the Patent Office sent back to 6 7 Microsoft's representatives. 8 So have you seen other evidence besides this Q. 9 patent document that indicates Microsoft had knowledge 10 of the '135 patent? 11 Α. 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 We believe the '135 patent would be of interest 18 below: 19 to your company in connection with its Live 20 Communications Server 2005 product with Service Pack 1 and in connection with its Office -- Microsoft Office 21 22 Communicator 2005 product. So, Professor Jones, have you found evidence 23 Q. 24 that Microsoft knew of the '135 patent? 25 Yes, sir. It's my conclusion that Microsoft Α.

had knowledge of the '135 patent. 1 2 Ο. The second element is encouraged or instructed 3 others to infringe. Have you found evidence of that? 4 5 Yes, sir. Α. For example, in that deployment guide we saw a 6 7 few pages ago, where Microsoft tells people how to 8 install and operate its system. 9 0. What about websites? Have you seen any information on websites? 10 Α. Yes, sir. 11 I've examined many technical documents as well 12 as information on Microsoft's website that describes how 13 to use these products in the way that infringes. 14 15 Now, does Microsoft allow software developers Q. 16 to download the code they need to use these ATIs? Yes. It -- Microsoft has what's called a 17 Α. software development kit that you can download for these 18 19 RTC interfaces that will allow you to develop 20 applications and includes examples. 21 0. It's sort of common sense, does Microsoft want 22 people to buy Office Communicator Communications Service 23 and use them? 24 Α. Yes, sir. Definitely, they do. And they --25 they, obviously, encourage people to do that and use

those products and tell them how to do it. 1 2 Ο. So can we check that element? 3 Α. Yes, sir. Now, what about others infringing the claims? 4 0. 5 Have you found that others -- or others have infringed 6 the claims? 7 Α. 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. And are you telling us that only Intel and HP 11 Ο. 12 do? 13 No, sir. Those are just two examples that Α. were cited in the Microsoft deposition testimony. 14 But also, Microsoft basically sells these products, and 15 they sell the software, and they expect you to use them. 16 17 My understanding is that Mr. Reed is going to Q. testify later more about the amount of sales that 18 19 Microsoft has. That's not something that's been inside 20 the scope of your investigation, correct? 21 Α. That's correct, sir. And did we understand that Microsoft's own 22 Q. 23 internal IT department installs the -- the products in 24 these ways? 25 Α. Yes, sir.

That was that deployment guide where we 1 2 talked -- and -- and the discussion of 80,000 employees 3 at Microsoft using it. We saw a document earlier that referred to the 4 0. 5 four different kinds of connections you check for. Ιt said checking for these four connections is the default 6 7 case -- default case. 8 What does that mean? 9 Α. Well, a default operating mode is the way in 10 which the product operates when you first get it. Ιn this case, it's the recommended way to operate it. 11 12 To operate it in a different way, you have reconfigure 13 the product. Is it your understanding that customers 14 Ο. 15 typically deploy software in the default mode? 16 Α. That's my understanding, yes, sir. 17 So how many different ways can Microsoft's Q. customers infringe the '135 patent, for example, the 18 19 method Claim 1 that we saw? 20 Well, they can infringe Claim 1 by using the Α. 21 software, and they can infringe Claim 10 by assembling 22 the system. 23 The same for Claim 12? Q. 24 Yes, sir. Α. What about using that system? 25 Q.

Well, simply as a -- so if they were to use 1 Α. 2 the system of Claim 10 or of Claim 12, that would also 3 infringe. So have you concluded that others have 4 0. 5 infringed the claim? 6 Α. Yes, sir. 7 All right. Now, can we look at the final Q. 8 element? 9 Microsoft -- the final element to prove 10 inducement is that Microsoft knew or should have known that their encouragement or instruction would result in 11 others infringing the claim. 12 13 Do you believe Microsoft should have known that the software they were selling and the way they 14 15 were encouraging users to use the software would result 16 in others infringing? 17 MR. POWERS: Object, Your Honor. No foundation for the reasons and our earlier motion in 18 19 limine on this subject. 20 THE COURT: Overruled. 21 Α. 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

would have resulted in infringing the '135 patent. 1 2 (By Mr. Caldwell) Did you find that last Q. 3 element met? Yes, I did. 4 Α. 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 Α. Yes, sir. The -- there has to be -- Microsoft would have 11 12 to have knowledge of the patent. Others would have to 13 infringe the claims. Microsoft would have to sell a component or apparatus for use in practicing the claimed 14 15 invention. And there would be no substantial 16 non-infringing uses of the component or apparatus. 17 Now, the first two are probably easy. I think Q. we addressed that in the last test. 18 19 Have you found that Microsoft had -- evidence 20 that Microsoft had knowledge of the patents? 21 Α. Yes, sir. 22 And did you determine that others are Q. 23 infringing? 24 A. Yes, sir. 25 Okay. But now let's talk about this other new Q.

part here: Sale of a component or apparatus that's for 1 2 use in practicing the claimed invention. 3 Have you identified a component that Microsoft is selling for use in practicing the claimed invention? 4 5 Α. Yes, sir. This is the automatic connection feature or 6 7 mode of the RTC interfaces, which are part of Microsoft 8 Windows XP and Windows Vista. 9 0. And does use of that component infringe method Claim 1? 10 Use of that component in combination with the 11 Α. applications infringes method Claim 1. 12 13 Okay. What about system Claims 10 and 12? Q. Does use of that component infringe the system Claims 10 14 15 and 12? 16 Α. Yes, it does. 17 Did you find that element met? Q. Yes, sir. 18 Α. 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 connection mode component that you've identified? 24 25 No, sir. I don't find any other -- any Α.

substantial non-infringing uses of it. 1 2 Q. Does Microsoft disagree with you on that 3 point? Yes, they do. 4 Α. 5 And they've identified, for example, what they call high-security mode as being a substantial 6 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? Yes, they have, but I've identified those as 11 Α. 12 just non-uses rather than non-infringing uses. 13 Ο. Not using the component at all? That's right. 14 Α. 15 Q. I see. 16 So as your final last item, you put 17 contributory infringement, right? Yes, sir, I did. 18 Α. 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 I concluded that Microsoft directly and Α. indirectly infringes Claims 1, 10, and 12 of the '135 24 25 patent through the Microsoft '135 products.

Q. Thank you, Dr. Jones. 1 2 Now, can we see the next step of our road map? 3 Now, I want to kind of give a ray of hope My understanding is that this second portion will 4 here. 5 go a little faster than the part before now that we've been through it once. 6 7 Yes, sir. I believe we'll be able to complete Α. 8 this quite a bit faster. 9 0. So let's move on to that second case with a 10 case, to use your words. Now, remind us generally what the '180 patent 11 12 covers. 13 Well, the '180 patent is -- covers a secure Α. domain name service that's used to facilitate the setup 14 15 of VPNs. 16 Ο. Is that an important idea? 17 Yes, sir, it was. Α. Why is it important? 18 Ο. 19 Well, it's important because there's a need Α. 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 Ο. So we've seen slides like this before, but can 3 you run through quickly some of the key parts of the '180 patent. 4 5 Α. Yes, sir. Do you see the number? 6 Q.. 7 The number is the '180 patent. Α. Yes, sir. 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. Munger. And this patent was -- the rights for the 11 12 patent are assigned to VirnetX. 13 Now, we've already spent some time looking at Ο. the '135 patent. Is this '180 patent just a completely 14 15 new, starting-from-scratch patent? 16 Α. No, sir, it's not. It's what's called a 17 continuation-in-part patent where the inventors add new material describing a new invention to their original 18 19 application, as well as new claims. 20 Do you remember when they added the new Q. material and filed the continuation? 21 22 That was two months after the previous Α. application. I believe that was in April of 2000. 23 24 MR. CALDWELL: Mr. Moreno, I want you to 25 introduce us just a little bit to the new material. Can

you go to Plaintiff's Exhibit 4, Page 39? 1 (By Mr. Caldwell) Okay. This is Figure 33 of 2 Q. 3 the '180 patent. What do we see here? This is one of the block diagrams that we 4 Α. 5 talked about earlier. This is a new one for this patent, and this is in that figures and drawings section 6 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 Yes, sir. There's a more detailed description Α. 11 of this figure, as well as the new invention in the detail description later on. 12 13 Ο. Can we take a look at that real quick? And what do we see here, Professor Jones? 14 15 Well, this is a new section that's entitled Α. One-Click Secure Online Communications and Secure Domain 16 Name Service. 17 The present invention provides a technique for 18 0. 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 Α. Yes, sir, it is. 24 Okay. Now, I'm going to pull up Claim 1 of 0. 25 the '180 patent.

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Professor Jones, I'd like to quickly run 1 through how Claim 1 defines a property right for the 2 3 '180 invention that Dr. Short described. So let's look at the claim here. I see a 4 5 whole bunch of words, but can you boil this down for us a little bit; just give us the high-level overview of 6 7 what's happening in this claim? Yes, sir. This is a method for a client 8 Α. 9 computer to find an address for VPN communications and 10 to use that address to set up a VPN link where it will ultimately make a request for information over that VPN 11 12 link. 13 Now, the preamble of this claim at the top Q. 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? Yes, sir. 18 Α. 19 So here we have a computer with an application that has a secure domain name, and that domain name in 20 21 this example is john.acme.scom, as Dr. Short showed us earlier. 22 23 Is that received into the computer? 0. 24 Yes. That will be received on to the user's Α. 25 computer, and then we'll move on to the next step of the

1 claim. And the next step of the claim is sending a 2 Q. 3 query message to the secure domain name service requesting from that secure domain name service a secure 4 5 computer network address corresponding to the secure 6 domain name. 7 What is that? 8 In that step, that query message gets sent out Α. 9 to the secure domain name service saying, I'd like an address to use to make this connection. 10 11 Now, let's be clear. Where is this secure 0. domain name service? 12 13 Well, the secure domain name service could be Α. on the client computer, or it could be on another 14 15 computer out on the internet. 16 Ο. Does it -- I mean, does it really matter where the secure domain name service is? 17 No, sir. The claims don't specify where the 18 Α. 19 secure domain name service is. They're flexible on that. 20 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 Α. Yes, sir. So -- yes. A query message goes 25 out, and it's received by the secure domain name

1 service.

So then the next step is receiving from that 2 Q. 3 secure domain name service a response message containing the secure computer network address corresponding to the 4 5 secure domain name. Now, what happens there? 6 7 Well, what happens there is, the secure domain Α. 8 name service responds with an address that goes back to 9 the user's computer. 10 Now, Professor Jones, I mean, I hate to Q. interrupt the animation here for a second, but I want to 11 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? Correct. 16 Α. 17 The response came back in this element. Q. What I don't see between those elements is 18 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? Well, the claims are flexible with respect to 23 Α. how the secure domain name service determines what the 24 25 answer should be, and the patent gives different

1 examples of how that can happen. 2 0. I see. 3 But even the examples in the patent, are those the only way that the secure domain name service can 4 5 come up with the address? No, sir. The claims don't specify how that 6 Α. 7 must happen. 8 So at this point, we've got our address back. Q. 9 Can we set up our VPN? 10 Yes, we can. Α. All right. And now I see that the very last 11 0. 12 step here is sending an access request message to the 13 secure computer network address using a virtual private network communication link. 14 15 What happens there, Professor Jones? 16 Α. 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 Now, Professor Jones, do you recall that in Q . 21 the last patent, it had the word website, talking about 22 secure target website, things like that? 23 Α. Yes, sir, I do. 24 All right. Is there any requirement in the 0. '180 patent, any requirement at all in these claims, 25

that what is being accessed is a website of any sort? 1 No, sir. The claims don't -- aren't 2 Α. 3 restricted to a website or any other kind of specialized or special server. 4 5 Q. And then do you also recall back when we were talking about the other patent, that Claim 10 required a 6 7 gatekeeper computer? 8 Α. Yes, sir, I do. 9 0. Do these '180 patent claims require any kind 10 of traditional, dedicated server at all? No, sir, they don't. They're very flexible. 11 Α. There's no specified gatekeeper computer here, for 12 13 example. So what alternatives could you have to a 14 Ο. 15 traditional server? Well, for example, we could remove that 16 Α. 17 server, and this could just include the normal network at acme.com without the need for a specialized server. 18 19 Q. Well, thank you for that introduction to the 20 What's next on our road map? patents. 21 Α. If I can get it upright. There we go. 22 The next thing we'll talk about are the operation of Microsoft products that are related to the 23 '180 patent. 24 25 In your opinion, are there Microsoft products Q.

that have this secure domain name server? 1 2 Α. Yes, sir. The Microsoft Windows XP and 3 Windows Vista products that we talked about earlier have a secure domain name service. 4 5 Same operating systems as for the other Q. 6 patent? 7 Yes, sir. Α. 8 Q. What is the name of that secure domain name service in Windows XP and Vista? 9 10 Α. That's the peer name resolution protocol service that lies on there, and the short for that is 11 12 PNRP. 13 What kinds of software would use the peer name Q. resolution protocol? 14 15 That would be something like -- peer-to-peer Α. 16 applications would use that. 17 Well, peer-to-peer, that's a relatively new Q. term for us. What does it mean? What is peer-to-peer 18 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 before, we had the client and we had a server. Well, 23 24 peer-to-peer doesn't require that there be a centralized 25 server.

Have you seen any documents from Microsoft 1 Q. 2 that describe how a peer-to-peer network differs from a 3 more traditional client server model? Yes, sir, I have. 4 Α. Can you show those for us? 5 Ο. Now, what is this document that we're seeing? 6 7 This is a Microsoft document that described --Α. 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. Α server computer typically has vast resources and 11 12 responds to requests for resources and data from client 13 computers. Can you give us a practical -- oh, I'm sorry. 14 0. 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 Yes, sir. Actually --Α. 20 These aren't consecutive locations in the Q. 21 document, right? I think the graphic is, by accident, a 22 little bit misleading there. 23 Α. Yeah. 24 The second paragraph you're pointing to is --0. the first one was from Page 6. The second one is from 25

Page 10. I just didn't want anyone to be confused about 1 2 that. 3 Α. Right. But what does this document -- how does it 4 0. 5 summarize peer-to-peer networking? So as it says -- well, I --6 Α. 7 You know what? Actually, that's not -- that Ο. 8 it is from Page 10, isn't it? I misspoke. 9 So how does this document describe peer-to-peer networking? 10 Well, essentially, peer-to-peer networking, 11 Α. 12 the peers don't rely on a centralized server. They 13 share resources with one another without the need for that centralized server. 14 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 Α. 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 they are going to work together to turn this thing in as 23 24 a group project. 25 And their laptops could communicate with one

They could all see and work on the same 1 another. 2 document without setting up a single centralized server. 3 0. I see. And is this an important technology for 4 5 Microsoft? Yes, sir, it is. This technology is 6 Α. 7 something -- they're building what's called a 8 peer-to-peer platform. 9 Ο. Well, what kinds of data could someone share on a peer-to-peer network? 10 Well, we talked about that term paper, but --11 Α. 12 or documents, but you could also share music. You could 13 share video files. You could share pictures of family and friends. It's also possible to share software over 14 15 a peer-to-peer network. 16 0. If you want to have one of these peer-to-peer 17 groups, peer-to-peer meetings, do all of the participants need to be sitting at that same library or 18 19 sitting around the same conference table? No, sir. There's no need for that. 20 Α. 21 For example, in our -- with the students in 22 the UT library working on the term paper, perhaps one of them is actually, instead of being at the library, home 23 24 celebrating a family member's birthday and logged in 25 from home.

Another family member could be -- or I'm 1 2 sorry -- another group member could be on a job 3 interview and working remotely from a coffee shop. Are there any unique challenges that are 4 0. 5 presented by peer-to-peer networks as opposed to the traditional client/server model? 6 7 Yes, sir. One of those is trying to find the Α. 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 remember names like Amazon.com, and those names are 11 essentially going to remain unchanged and have addresses 12 13 that change very, very infrequently. If I'm talking to people in a group, say a 14 15 group of students, well, I may not know -- or it's 16 unlikely I know the names of their computers. Ιn 17 addition, those -- their addresses for their computers are likely to change frequently. 18 19 Well, in the peer-to-peer setting, is it Q. 20 important to be able to know that the computer you're 21 connecting to is the right computer if you're going to share data? 22 23 Yes, sir. And this gets back to that naming Α. 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.

If I'm -- think I'm talking to someone I 1 2 trust, but instead I'm talking to someone, say a hacker, 3 I could give them important information, information I'd like to keep private. 4 5 So is this an important problem for Microsoft Ο. to be able to address? 6 7 Yes, sir, it is. Α. 8 Have you seen documents that confirm how Q. 9 important this is to Microsoft? 10 Α. Yes, sir. MR. CALDWELL: Mr. Moreno, can you pull 11 12 up Plaintiff's Exhibit 151? 13 (By Mr. Caldwell) What are we seeing in this Q. document right here, Plaintiff's Exhibit 151, Professor 14 15 Jones? 16 Α. 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 So, I mean, does -- a software architect, does Q. 23 that mean that he's sort of a high-up programmer or 24 something of that ilk? 25 Yes, sir. He's a person who is designing the Α.

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systems rather -- he might not be the person who's 1 2 implementing every last bit of the code. He's a higher 3 level designer. MR. CALDWELL: So can we flip to Page 3 4 5 of this document? (By Mr. Caldwell) What is Microsoft saying on 6 Q. 7 this page of this presentation? 8 Well, they're describing their goal, which is Α. 9 making Windows a great platform for P2P, and P2P means 10 peer-to-peer. 11 Ο. 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 No, sir, it's not. Α. What -- why are we seeing that date? 16 Ο. 17 I believe that's the date it was printed out Α. 18 on. 19 I see. Okay. Just didn't want that to be Q. 20 hanging over our heads here. 21 Now, what is the key to making Windows a great platform for peer-to-peer like Microsoft wanted? 22 23 Well, the key to that is this naming issue I Α. 24 discussed earlier. You have to be able to find the 25 computers you want to talk to and know that they're the

right ones. 1 2 Q. Can we see that on Page 4? 3 Yes, sir. Α. Explain what we're seeing here, Professor 4 0. 5 Jones. Well, this is a slide entitled Naming: 6 Α. 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 (By Mr. Caldwell) Tell us what Microsoft has Q. 13 figured out about this problem, at least as of this 14 presentation. 15 Well, they figured out that the Number One Α. 16 design goal is security; that the names have to resolve 17 to the intended addresses so that another person, a hacker, can't fake and give you fake -- fake that 18 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?

Well, in something like the client/server 1 Α. model, the address of somebody like Amazon.com is not 2 3 going to frequently change. But in peer-to-peer, take our example in the 4 5 Those student laptops are not going to be as library. stable as Micro -- or sorry -- as, say, Amazon servers, 6 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 change as well. So they won't have stable addresses. 11 12 MR. CALDWELL: Now, can we pull up PowerPoint Slide 54? 13 (By Mr. Caldwell) Has Microsoft recognized 14 Ο. 15 this problem with addresses changing? 16 Α. 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 And then it goes on to talk about -- it was Q. comparing some of the more traditional computers, but 23 24 what does it say about peer computers specifically in 25 the lower highlight?

Well, it explains that peer computers, on the 1 Α. other hand, have resources to share. However, they 2 3 still have transient connectivity. And what is that telling you? 4 Ο. 5 Well, that's telling us that essentially those Α. peer -- the addresses for those peers are going to 6 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 Well, before I ask you whether it was Ο. 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 Microsoft Windows? 14 15 Well, the peer name resolution protocol is Α. 16 part of the -- what's called the PeerNet interfaces or the PeerNet API. 17 18 MR. CALDWELL: Thank you, Mr. Moreno. 19 (By Mr. Caldwell) So can you use those PeerNet Q. interfaces built into Microsoft Windows to set up a 20 21 virtual private network? 22 Yes. You can make use of the PeerNet Α. interfaces to find the address of a computer that you 23 24 wish to talk to. And that virtual private network in the PeerNet interface is what's called a group. 25

1 Q. In what ways are the communications in a 2 PeerNet group private? 3 Α. Well, first of all, all communications in the PeerNet group are encrypted. 4 5 Second, in the PeerNet group, you cannot see -- you cannot determine who the sender of an 6 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 receive information sent over the VPN. 10 11 So, in your opinion, are the transmissions 0. within that group anonymous? 12 13 Α. Yes, sir. Are they private? 14 Ο. 15 Α. Yes, sir. 16 0. Have you seen additional documents or 17 presentations confirming the privacy of communications 18 in the group? 19 Α. Yes, I have. 20 MR. CALDWELL: Okay. For the record, we identify also Plaintiff's Exhibits 151 and 245. 21 22 (By Mr. Caldwell) How does the peer name Q. 23 resolution protocol fit into the formation of a secure 24 group? 25 Well, the peer name resolution protocol can be Α.

used to find a member of the group, to find the address 1 2 with whom the computer wants to speak. 3 0. So at a high level, how does that work? Well, let me show you. 4 Α. 5 I think -- I think the part you're thinking of Q. 6 is going to come later. 7 Α. Okay. 8 So just give us an overview and --Q. 9 Α. Yeah. 10 So the basic -- basically, the idea is that a computer or an application will want to become a member 11 of the group. That application will -- will have a 12 13 domain -- secure domain name to contact, and it will need to get an address from the -- from PRNP, from the 14 15 secure domain name service, to make a connection in the VPN. 16 17 Has Microsoft released any applications that Q. use these PeerNet interfaces to create groups? 18 19 Yes, they have. They've released an Α. 20 applications called Windows Meeting Space. 21 Q. Can you show us that? 22 Yes, sir. Α. 23 What are we seeing here, Professor Jones? Q. 24 This is a screen shot of a test I ran using a Α. 25 couple of computers running Windows Meeting Space.

On the right side are two participants in the 1 I just gave them the names Admin 1 and Admin 2 meeting. 3 2. And then on the left side is what their -- is 4 5 a desktop that they're sharing between them. And let's talk about that a little bit. 6 Q. 7 You say they're sharing a desktop. Are you 8 saying -- there's, basically, two computers here? 9 Α. Yes, sir. 10 Q.. And one computer is called what? Admin 1, and another is Admin 2. 11 Α. 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 All right. The -- the entire slide is Α. 16 what's -- the picture of Windows Meeting Space where 17 basically the computers screen on Admin 1. 18 Okay. And what are we looking at inside the Ο. 19 screen on Admin 1? 20 Α. 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 screen of -- I believe it's Admin 2. 24 25 Q. Okay.

And then what's showing inside of the little 1 Α. 2 red -- or the smaller red box is for -- is the desktop, 3 the screen of the computer, Admin 1. So on one of the computers, we could work on a 4 Ο. 5 word processing document, we could type a term paper, and then the other folks on their computer screen could 6 7 see it? 8 Yes, sir. Everybody will see -- whatever's Α. 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 slide here? 12 13 Α. Yes, sir. (By Mr. Caldwell) And now, tell us where all 14 Ο. 15 the parts fit together. 16 Α. Okay. The Windows PeerNet interfaces are on 17 the laptop computer, that remote user. The secure domain name service, which is the peer name resolution 18 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 Can you -- you say that there's a secure group 0. 25 name that's used to find the group. Can you give us an

example of what the secure group name looks like? 1 2 Α. Sure. The secure group name -- one example of 3 this is given on this slide. This is a long string of characters on the left side followed by a dot and then a 4 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 Α. It's unlikely that they would have done so. 10 It's much more likely that they would have gotten this in an e-mail to use to connect to the group 11 12 with. That way they could just click on a link, for 13 example, rather than having to type all this in. 14 Ο. So can you give us an example of what the name 15 would look like if it were an unsecure group name? 16 Α. Yes, sir. 17 So -- and -- well, or an unsecure peer name in Windows PeerNet interfaces is something like 0.PeerNet. 18 19 It's much simpler. 20 Does Windows refer to -- I'm sorry -- does Q. 21 Microsoft refer to secure group names as secure group 22 names? 23 Yes, sir, I believe they do. I believe I've Α. 24 seen documents that say that. But it falls into the 25 class of names called secure peer names.

Okay. Well, Professor Jones, though, are you 1 Q. calling a secure group name a secure domain name for 2 3 purposes of these patents just because they both say the word secure? 4 5 I'm not calling it just because they use No. Α. I analyzed these and matched them to 6 that name secure. 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 Ο. So why does the secure group name look like 10 that, all that crazy chaos, the 5fe531661, et cetera? Well, it looks like that so that you can have 11 Α. 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. So my computer knows I want to join a group by 16 Ο. that name? 17 Yes, sir. 18 Α. 19 What does it do with that name? 0. 20 Well, it uses that name, sends it to the Α. 21 PeerNet interfaces, and the PeerNet interfaces would 22 send those to PNRP. Now, can we just take that name and send it to 23 Q. 24 the ordinary domain name server that Dr. Short told us 25 about?

1 If we send that name to the ordinary Α. No. 2 domain name service, all we'll get back is an answer 3 that says something like error, not found. Have you verified that? 4 0. 5 Α. Yes, sir, I have. Have you seen testimony from Microsoft's 6 Q.. 7 engineers to that effect? 8 Α. Yes. Let me show that to you. 9 0. Okay. 10 This is deposition testimony, sworn testimony Α. from Mr. Christian Huitema. He was asked: Can you tell 11 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 like www.microsoft.com, whereas a peer name, a secure 16 17 peer name, in particular, will include a sequence of 32 hexadecimal digits. 18 19 Well, so we've got a crazy secure group name. Q. 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 That's correct. Α. So how do the Windows PeerNet interfaces find 24 Ο. the right secure computer network address for that group 25

1 name? 2 Α. Well, they can -- they do that by asking other 3 computers around them for a secure computer network address associated with that name. 4 5 Well, let me back up a little bit, because I Ο. did -- I did a bad job of introducing something earlier. 6 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, something to say: Hey, it's time to join our group 11 12 meeting and work on a paper together? 13 Α. Yes. That's essentially what happens. For example, you can receive -- if you're --14 15 if somebody wants to make you a part of the group, you could receive an invitation file to allow you to join 16 17 that group. And that invitation file would have, for example, the secure group name. 18 19 Ο. Well, if they're sending me an invitation 20 file, why don't they just go ahead and send me the address I'm going to need in order to connect to the 21 22 group? Well, at times, they actually -- they do send 23 Α. 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

somebody that's on the group that we want to connect to, 1 can we join the group? 2 3 No. You won't be able to join the group if Α. you don't know how to reach anyone in it, and that would 4 5 be pretty frustrating, so... So has Microsoft built in a failsafe way of 6 Q. 7 getting the address you need in order to connect to one 8 of these secure groups? 9 Α. Yes, they have. That's that peer name 10 resolution protocol. That will find the name of a group member if it can be found. 11 12 THE COURT: Counsel, let me ask you, it's 13 almost 5:00 o'clock. Are you at a good stopping place or close to one? 14 15 MR. CALDWELL: I guess I could stop now. I could probably finish in 30, 35 minutes. 16 17 THE COURT: I think we'll go ahead and quit for the day today. We'll come back in the morning 18 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 Thank you for your careful attention. Jury. I've looked over there several times, and you've been really 23 24 paying good attention. 25 So remember my instructions. Have a safe

drive home. We'll see you back here in the morning 1 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? THE COURT: Sure. You can mark them and 11 12 offer them in the morning. 13 MR. CALDWELL: Okay. Thank you. THE COURT: All right. We're going to 14 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 of Dr. Reed, and I think what I'm going to do with those 23 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 the bench or let me know, and I'll take it up at that 4 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. THE COURT: All right. 14 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 Mr. Reed's testimony, and then we'll discuss the 18 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

Honor, is that there are 80 of them. 1 2 THE COURT: How many? 3 MR. CASSADY: I think there's 80 plus. THE COURT: 4 Okay. 5 MR. CASSADY: I can go through the process of identifying them through the testimony, but, 6 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 needing to rely on those documents with regard to his 11 12 opinions, or do you get to those very promptly into -or very quickly into his testimony? 13 14 MR. CASSADY: I think the first set or 15 first group is pretty quickly, at the beginning of his testimony, and then there's two other groups that happen 16 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.

And then the second group, if you see the 1 2 sequence start over? 3 THE COURT: Yes. MR. CASSADY: The second group, I 4 5 believe, is the summaries. MR. SAYLES: Correct. 6 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. Yeah. Financial data goes down through 11 12 the top of Page 6, first item, right? And then you get 13 into the licenses. MR. CASSADY: Top of Page 6, and that's 14 15 where the -- I believe that's when the -- yeah, correct. That's the licenses. 16 17 No. Actually, Your Honor, I apologize. It says licenses, but that's actually -- I apologize, 18 19 Your Honor. Yes, that's the licenses. You got that 20 correct. 21 And then --THE COURT: Then there's a bunch of 22 23 summaries of -- irrelevant financial data is the 24 objection, right? 25 MR. CASSADY: Yes.

THE COURT: And maybe you can help us 1 here, Mr. Sayles. I'm just trying to get -- are there 2 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 See you in the morning. 16 adjourned. 17 COURT SECURITY OFFICER: All rise. 18 (Court adjourned.) 19 20 21 22 23 24 25

1 2 CERTIFICATION 3 4 I HEREBY CERTIFY that the foregoing is a 5 true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the 6 7 best of my ability. 8 9 10 11 /s/\_ SUSAN SIMMONS, CSR Date 12 Official Court Reporter State of Texas No.: 267 13 Expiration Date: 12/31/10 14 15 16 /s/\_ JUDITH WERLINGER, CSR Date 17 Deputy Official Court Reporter State of Texas No.: 731 18 Expiration Date: 12/31/10 19 20 21 22 23 24 25

EXHIBIT F5

IN THE UNITED STATES DISTRICT COURT 1 FOR THE EASTERN DISTRICT OF TEXAS 2 TYLER DIVISION 3 VIRNETX Civil Docket No. 6:07-CV-80 \* 4 VS. \* Tyler, Texas 5 \* \* March 10, 2010 \* 6 MICROSOFT CORPORATION 9:00 A.M. 7 TRANSCRIPT OF JURY TRIAL 8 BEFORE THE HONORABLE JUDGE LEONARD DAVIS UNITED STATES DISTRICT JUDGE 9 10 11 APPEARANCES: 12 FOR THE PLAINTIFFS: MR. DOUGLAS CAWLEY MR. BRADLEY CALDWELL 13 MR. JASON D. CASSADY MR. LUKE MCLEROY McKool-Smith 14 300 Crescent Court 15 Suite 1500 Dallas, TX 75201 16 MR. ROBERT M. PARKER 17 Parker, Bunt & Ainsworth 100 East Ferguson 18 Suite 1114 Tyler, TX 75702 19 20 APPEARANCES CONTINUED ON NEXT PAGE: 21 22 COURT REPORTERS: MS. SUSAN SIMMONS, CSR Ms. Judith Werlinger, CSR 23 Official Court Reporters 100 East Houston, Suite 125 24 Marshall, TX 75670 903/935-3868 25 (Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

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1	
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20	* * * * * *
21	<u>PROCEEDINGS</u>
22	COURT SECURITY OFFICER: All rise.
23	THE COURT: Please be seated.
24	(Jury in.)
25	THE COURT: All right. Good morning.
20	ing cooki, hit right, cook morning.

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All right. Are y'all ready to go? 1 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 of exhibits admitted on March 9. 11 Any objection to that? 12 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 Honor. And I believe it was one exhibit from yesterday 18 19 that we need to formally move into evidence. That is 20 DX3578, and that was the Gabriel user's guide, in addition to the four that are listed on the list. 21 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.

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Any objection to it, as far as what was admitted 1 2. yesterday? 2 3 MR. McLEROY: No, Your Honor. THE COURT: Be admitted. 4 5 All right. Anything else before we 6 begin? 7 MR. POWERS: Not from Microsoft, Your 8 Honor. 9 THE COURT: Okay. MR. CALDWELL: Are we ready, Your Honor? 10 11 May we proceed? MARK T. JONES, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN 12 13 DIRECT EXAMINATION 14 BY MR. CALDWELL: 15 Professor Jones, let's remind everybody where Q. 16 we were very briefly just to get our context back. 17 Could we look at the road map you provided us? Yes, sir. 18 Α. 19 Okay. So yesterday we talked about the '135 Q. 20 patent, and can you refresh us which products are at 21 issue in the '135 patent? 22 Yes, sir. Up at the top, you see the two Α. 23 operating systems, Windows XP and Vista. On the left 24 are the client applications, and the right bottom side are the server applications, such as Live Communications 25

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Server and Office Communications Server. 1 Professor Jones, how do those products fit 2 Q. 3 into your infringement analysis for the '135? So the application running on the user's 4 Α. 5 computer would be one of those applications on the bottom left, such as Office Communicator or Windows 6 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 acme.com was the gatekeeper computer, which is Office 11 Communications Server. 12 The Live Communications Server? 13 Ο. 14 Α. Yes, sir. 15 And what did you conclude about the '135 Q. 16 patent? 17 I concluded that when these applications use Α. the automatic connection feature of the Windows RTC 18 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 you've already discussed the description of the '180 23 24 patent. You provided that yesterday. And we were 25 talking about the operations of Microsoft's products

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related to the '180 patent. 1 2 Α. Yes, sir. 3 What products do you believe infringe the '180 Ο. patent? 4 5 These are the Microsoft operating systems that Α. we saw on the -- a couple of slides ago, Windows XP and 6 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 Α. Those are peer-to-peer networks that form --12 through grouping, form VPNs. 13 Can you remind us what peer-to-peer networks Q. are like? 14 15 Those are networks like we saw, the -- the Α. 16 example I talked about of the students working on a 17 project together in the UT-Tyler library. Can you show us that picture? 18 0. 19 Α. Yes, sir. 20 Now, did we hear that the '180 patent involved Q . 21 a secure domain name service that's used to find an address? 22 Yes, we did. And that secure domain name 23 Α. 24 service we see in the center there is the peer name 25 resolution protocol running on a computer, say on the

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internet or on the user's computer. 1 2 Q. Professor Jones, when did this functionality 3 get added to Microsoft Windows? This was added, for example, in 2003 in the --4 Α. 5 -- when Microsoft released the advanced networking when pack. 6 7 Was the advanced networking pack an update for Ο. 8 Microsoft Windows? 9 Α. Yes, it was. 10 0. So that was in 2003? Is that what you said? Yes, sir. 11 Α. When was that in relation to when Dr. Short, 12 Q. 13 Mr. Munger, and their colleagues filed their application that became the '180 patent? 14 15 That was three years after they filed the Α. 16 application. They filed the application in 2000. 17 All right. So Microsoft released these Q. PeerNet interfaces as part of the advanced networking 18 19 pack in '03, but was the advanced networking pack the 20 only way to get these PeerNet interfaces into XP? 21 Α. They were part of, for example, Service No. 22 Pack 2 and other updates for Windows. What is a service pack for Windows? 23 Q. 24 Well, a service pack, for example, is a set of Α. 25 updates that may be new functionality or repairs to old

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functionality that can update something like Windows XP. 1 2 Ο. Professor Jones, how does an update like 3 Service Pack 2 get into Windows? Updates into Windows can come by the user 4 Α. 5 going to the Microsoft website and downloading those, or, for example, Microsoft recommends you set up your 6 7 computer so that they can automatically be downloaded 8 into your computer and installed. 9 0. Now, on my work computer, sometimes I see this 10 little bubble that pops up that says updates are installed; we need to restart; or updates need to be 11 12 installed, that sort of thing. Is that what you're 13 talking about? 14 Α. Yes, sir. 15 Okay. But would it always have to come in Q. 16 through an update? 17 In other words, could the Service Pack 2 and all these PeerNet interfaces be preinstalled in your 18 19 copy of Windows? 20 Α. Yes, they could. For example, a manufacturer, like Dell, could 21 22 have them installed on a new computer. You could also 23 get them from retail copies. 24 That's what I was going to ask. Let's say I 0. cruised into Best Buy a couple of years ago, and I want 25

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to go in and buy Windows XP, even before Windows Vista 1 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? Yes, it would, for when the Microsoft began to 4 Α. sell Windows XP with Service Pack 2 in it. 5 Now, Professor Jones, I'm holding up retail 6 Q. 7 copies of Microsoft Windows. This is a box that could 8 have -- you could have bought this at Best Buy? 9 Α. Yes, sir. 10 0. This is Plaintiff's Exhibit 830. I note right here it promotes right across the top Service Pack 2 11 with Advanced Security Technologies. 12 13 Does this include the PeerNet interfaces? Yes, it does. 14 Α. 15 And do you know what the significance of the Q. 16 green box is? 17 I believe that's a -- if I read properly, Α. that's a different edition. That may be the home 18 19 edition of Windows XP. 20 Your eyesight is -- checks out fine. Q . 21 Now we have the blue box, but it also says 22 Service Pack 2 with Advanced Security Technologies. 23 What is this? That's another version of Windows XP. 24 Α. Ι 25 believe that may be the professional version, which has

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some additional features. 1 2 Q. Yes, sir, it is, and that's Plaintiff's 947. 3 Do both of those have the PeerNet interfaces built right in on the disc? 4 5 Yes, sir. Α. Now, those are the XP products. Let's talk 6 Q. 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 a service pack or anything. Does Windows Vista have the 10 PeerNet interfaces on it? 11 12 Α. Yes. Windows Vista had the PeerNet interfaces 13 from its inception. Now, did you test these products to make sure 14 Ο. they had the PeerNet interfaces in them? 15 16 Α. Yes, sir. I did those installations on my own 17 computer to ensure that they did have the PeerNet interfaces on them. 18 19 Now, did you also just test how the PeerNet Q. 20 interfaces operate? 21 Α. Yes, I did. 22 Can we look back at your slide? Q. 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?

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Yes, sir. 1 Α. 2 Q. Have you identified a secure domain name? 3 Α. Yes. That's the secure group name. Will you refresh our memory on what the secure 4 0. 5 group name looks like? Yes, sir. This is that long string of digits 6 Α. 7 and numbers and letters followed by a dot and then that 8 string at the end. 9 Ο. Professor Jones, is it fair to say the secure 10 group name looks different than a standard domain name? Yes, it does. It's designed to be a secure 11 Α. 12 name, a name that can't be faked by someone trying to 13 get you to talk to the wrong person. And will an ordinary domain name server 14 Ο. provide an address for that name? 15 16 Α. No, it won't. An ordinary domain name server 17 would return something like: Error, not found. 18 So how do we get an address for that secure 0. 19 domain name you've identified? 20 Α. We would have to use the peer name resolution 21 protocol to resolve that address. 22 And if the peer name resolution protocol Q. resolves that and gives us an address, can we establish 23 24 a VPN connection using the PeerNet interfaces? 25 A. Yes, sir.

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Now, will you please walk us through how the 1 Q. 2 PeerNet interfaces setup a VPN using secure domain names 3 and the peer name resolution protocol? Yes, sir. 4 Α. 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. So Windows Meeting Space, was that the 11 Ο. Okav. 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 Α. Yes, sir. When they're sharing -- for 17 example, a group of people sharing a desktop working on a document. 18 19 So if that's the application that's running, 0. 20 how do we kick off the process of joining that group? 21 Well, the user, for example, would press a key Α. 22 or click their mouse, and that would result in a request 23 to join the group. That would result in that secure group name going to the PeerNet interfaces. 24 25 Q. Okay. And now, there might be some

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circumstances where the PeerNet interfaces already know 1 2 the correct address; is that fair? 3 Yes, there would be. For example, it could Α. come in an invitation file, and they might already have 4 an address to which to connect. 5 Will that always work? 6 Q. 7 No, sir, it won't. There will be cases, like Α. 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. So if the PeerNet interfaces do not know the 11 Ο. 12 correct address they need and they need to find the 13 address, how does that work? 14 Α. Well, they need to send a request to PNRP, a 15 request for an address. 16 0. All right. So will you show us what the PeerNet interfaces do with the name? 17 Well, they send out a request message that 18 Α. 19 goes from the user's computer over the internet to 20 another computer on the internet. 21 Ο. Now, how is it that there are other computers 22 on the internet that would be able to receive that name and know what to do with it? 23 24 Well, there would be other computers on the Α. 25 internet running Windows. They would also be running

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the PeerNet resolution protocol. And they cooperate 1 2 with one another and, basically, agree to help one 3 another find the address. And so the PeerNet interface that's running on 4 5 this user's computer would send out a request to another one of those computers asking, do you know where I can 6 7 find this address? 8 And might the same thing happen if we weren't Q. 9 talking about the context of the internet, but it was 10 a -- another -- a new student that walked into the 11 library? 12 Α. Yes, sir. 13 Okay. Now, we've -- we've sent a request Q. 14 message to another computer that's connected to the 15 internet, fair? 16 Α. Yes, sir. 17 What happens if that computer does not know Q. the address that we need? 18 19 Α. Well, if it doesn't know the address, it may 20 point us in the direction of another computer that does. 21 Ο. Well, what happens if it thinks it does have the address we need? 22 23 Α. 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.

All right. So our -- our user, who we're 1 Q. 2 calling a remote user, receives back that address on 3 their computer -- but at that point, do they know they have a secure computer network address? 4 5 No, they don't know that. As we talked about Α. earlier, there could be someone faking the address. 6 7 They're not certain yet that this is the right address. 8 Well, does the user's computer, then, take any Q. 9 additional steps to make certain that it has found an 10 address that's corresponding to the secure domain name? Yes, sir. They would send out a request to 11 Α. that address to verify or for verification information 12 13 on whether this is the correct address. Now -- so we send it to one -- to one of the 14 Ο. 15 group members over here in the library that we would 16 like to connect to? 17 Α. Yes, sir. Is that peer or that group member going to 18 Ο. 19 send us something back to tell us, here's your 20 legitimate address; you found it? 21 Α. Yes. They're going to send -- send back 22 They're going to send what's called a certified proof. 23 peer address. 24 And let's talk about a certified peer address Ο. 25 for a little bit. What is -- or what all is inside a

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certified peer address? 1 2 Α. Well, the certified peer address has an IP 3 address in it. It has a port number. It has a protocol, as well as information that can be used to 4 5 verify the address. Now, what's going to happen -- this whole 6 Q. 7 thing is the certified peer address that we're seeing on 8 the screen right here? 9 Α. Yes, sir. 10 Q. And, again, I'm not very good at drawing 11 ovals. 12 What's going to happen with that certified peer address? 13 That's going to be sent back in a message to 14 Α. 15 the user's computer, and there the PeerNet interfaces 16 will receive it and use that verification information to ensure that this is the correct address. 17 Okay. So at that point, do we know then that 18 Ο. 19 we have a secure computer network address? 20 Α. Yes, we do. So now that we have the address back at our 21 0. 22 computer, what does our computer do? 23 Α. 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

joining the VPN? 1 2 Α. After becoming part of the group, part of the 3 VPN is going to send a request to a computer -actually, that same computer asking it for information, 4 5 for records. So does our user get any further information 6 Q. 7 indicating that it is now certified as a member of the 8 group? 9 Α. 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 Okay. Now, you've described several details. Q. What does the user really have to do here? 13 14 Α. Well, the user had to press a key or click on an invitation file, something along those lines. 15 And 16 after that, everything else happens behind the scenes. 17 Well, Professor Jones, you have described Q. using the peer name resolution protocol to find an 18 19 address and newly join a virtual private network, but is 20 that the only time the client computer will use PNRP? 21 Α. No, it's not. The -- for example, the client 22 computer may need to make new connections to the group, and that will happen whenever that -- whenever it needs 23 to make those new connections, it will use PNRP. 24 25 Q. Well, Professor Jones, if you already have a

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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

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This one describes how peer-to-peer grouping 1 about. 2 works. 3 MR. CALDWELL: Mr. Moreno, can I have you flip to Page 23? And make that as big as you can for 4 5 us. (By Mr. Caldwell) Will you tell us what's 6 Q. 7 illustrated here, Professor Jones? 8 Well, what we're seeing in this illustration Α. 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 members in some cases. 12 13 O. I see. 14 And now, I'm going to point at one of these new members, hopefully. Okay. The one that's -- the 15 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 one, two, three, four, five different connections? 18 19 Yes, sir. Α. 20 Now, are there also specifications for Q . 21 graphing and grouping that explain this process? 22 Α. Yes, there are. 23 MR. CALDWELL: We'll identify Plaintiff's 24 Exhibit 811 and 288. 25 Your Honor, we also identify Plaintiff's

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Exhibits 1027 and 1028 and move those into evidence. 1 2 THE COURT: Any objection? 3 MR. POWERS: No objection, Your Honor. THE COURT: Be admitted. 4 5 (By Mr. Caldwell) Does the client computer Q. 6 send another request for those records that you 7 mentioned if it connects to a second peer or a third 8 peer? 9 Α. Yes, sir, it does. 10 Q.. Each time? 11 Α. Every time. 12 Okay. So now, if we can go back to our Q. presentation, and I'll clear the screen. 13 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 talking about today? 18 19 Yes, sir. We're talking about Claims 1, 4, Α. 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 Well, Professor Jones, I see a fair number of 0. 25 claims there. I mean, is the list there, one, two,

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three, four, five, six, seven, eight on there, is it 1 2 really sort of starting from scratch eight times? 3 No, sir. There -- there's quite a bit of Α. similarity between these claims, and I think it will 4 5 move pretty quickly. Okay. Well, let's start with Claim 1, if 6 Q. 7 you're okay with that. 8 Α. Yes, sir. 9 Now, Claim 1 is on the foam board. I'm going 0. 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 Α. Yes, sir, he has. And what has he defined? 17 Q. 18 Α. 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 Did you apply that construction? Q. 23 Α. Yes, sir, I did. 24 So what is the secure computer network address 0. 25 in the Windows PeerNet system?

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That's the address of the group member that 1 Α. you're -- to which you're connecting that we described 2 3 in that animation. Does it require authorization for access? 4 0. 5 Yes, it does. Α. The -- when the client computer is connecting 6 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 Now, do the Windows PeerNet interfaces perform Ο. 11 a method for accessing a secure computer network address? 12 13 Yes, they do, just -- just as I described in Α. that animation. 14 15 All right. Professor Jones, I want to start Q. 16 with the first element now of the claim: Receiving a secure domain name. 17 Has Judge Davis provided us any definitions in 18 19 that first part of the patent? 20 Α. Yes, sir, he has. 21 For secure domain name, we have a domain name that corresponds to a secure computer network address. 22 Do the Windows PeerNet interfaces receive a 23 0. 24 secure domain name? 25 A. Yes, sir, they do; for example, when they

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receive it from an application like Windows Meeting 1 2 Space. 3 Was that the secure group name you pointed to? Ο. Yes, sir. 4 Α. Do we need a secure computer network address 5 0. in order to join the group? 6 7 Yes, we do. We have to find a way to connect Α. 8 to that group securely and form a VPN. 9 Q. Well, what did you find, then, for this claim 10 element? 11 I found that the -- that this is -- this claim Α. 12 element is met by the Windows PeerNet interfaces. 13 Ο. May I check the element? 14 Α. Yes, sir. 15 Now, the second claim element, Professor Q. Jones, says: Sending a query message to a secure domain 16 17 name service, the query message requesting from the secure domain name service a secure computer network 18 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 Α. Yes, sir, he has. 25 For secure domain name service, we have a

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lookup service that returns a secure network address for 1 2 a requested secure domain name. 3 Ο. Now, do the Windows PeerNet interfaces send a query message to a secure domain name service? 4 5 A. Yes, they do, when the -- when the PeerNet interfaces require an address for that secure domain 6 7 name. 8 Q. Do they send -- did you say they send query 9 message to -- to what? 10 Α. TO PNRP. Now, what is this -- what is that secure 11 Ο. domain name service? 12 13 That secure domain name service is the peer Α. name resolution protocol running as part of the PeerNet 14 15 interfaces. 16 Q. All right. Now, I want to dig into that a little bit. 17 18 Professor Jones, you call the peer name 19 resolution protocol a form of domain name service or 20 DNS, right? A. Yes, sir. 21 22 Does Microsoft acknowledge that PNRP is a Q. special form of DNS? 23 24 A. Yes, sir, they do. 25 Q. Have you seen that on their web page, for

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```
1
   example?
2
        Α.
             Yes. I've seen it on their web pages.
3
        0.
             Can we take a look at that?
             Yes, sir.
 4
        Α.
5
                  MR. CALDWELL: Mr. Moreno, I'd like to
  pull up Plaintiff's Exhibit 148.
6
7
                  And can you pull us in on the first
8
   couple of sentences there?
9
        Ο.
             (By Mr. Caldwell) What is this page, first of
   all?
10
11
        Α.
             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
             It says: The peer name resolution protocol,
        Α.
16
   PNRP, name space provider, NSP, is a serverless DNS
17
   technology.
        Q. So if Mr. Cawley gives me a few minutes to
18
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
            No, sir, you wouldn't see that.
        Α.
25
            Why is that?
        Q.
```

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Well, during the -- last spring, during the 1 Α. 2 course of the litigation, this web page was changed. 3 Okay. What does it say now? Can we look at Ο. that? 4 5 A. Yes. 6 MR. CALDWELL: Can we pull up 507, 7 Mr. Moreno? 8 (By Mr. Caldwell) And what does it say where Q. 9 it used to say serviceless domain service? 10 Well, now it says serviceless name resolution Α. 11 technology. 12 The words DNS were removed? Q. 13 Yes, sir. Α. But were you able to print it off before it 14 0. 15 got changed? Yes, I was. 16 Α. 17 All right. Professor Jones, regardless of Q. what changes have been made to Microsoft's website, have 18 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?

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This is a document where Microsoft --1 Α. 2 THE COURT: Let me interrupt you for a 3 moment. Let me just ask the juror, are you okay, or do we need to take a short break, or --4 5 Take a break. JUROR: THE COURT: Okay. Let's -- we'll take 6 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 well, tell the court security officer, and I'll visit 11 12 with you. 13 (Jury out.) 14 (Recess.) 15 COURT SECURITY OFFICER: All rise. 16 (Jury in.) THE COURT: Please be seated. 17 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 to take it. 22 23 Mr. Powers? 24 MR. POWERS: Yes, Your Honor. 25 Ms. Ferguson has reminded us of a

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housekeeping matter, that DX3339 has not been formally 1 offered. 2 There is no objection. 3 THE COURT: Okay. Is that correct? MR. McLEROY: I believe that's right, 4 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 (By Mr. Caldwell) Now, Professor Jones, we had Q. 13 seen here that on Microsoft's website, they used to call the peer name resolution protocol a serverless DNS? 14 15 Yes, sir. Α. 16 0. And what has happened to that? 17 That page has since been changed during the Α. course of this lawsuit. 18 19 Now, can we look at other technical documents Q. 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?

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This is an internal Microsoft document 1 Α. 2 describing the -- the grouping aspect of these PeerNet 3 interfaces. MR. CALDWELL: Can we go to Page 5, 4 5 Mr. Moreno? 6 And will you zoom in on -- yes, sir. 7 Thank you. 8 (By Mr. Caldwell) What do we see here, Q. 9 Dr. Jones? 10 This is another description of how they -- how Α. PNRP is a serverless DNS technology. It reads: Peer 11 12 networking is providing a serverless DNS technology 13 entitled PNRP. Now, is this the only other document Microsoft 14 Ο. 15 has referring to PNRP as a form -- a special form of DNS? 16 17 A. No, sir, it's not. 18 MR. CALDWELL: Can we take a look at 19 Plaintiff's Exhibit 938? 20 (By Mr. Caldwell) And now, we've seen this Q . 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, Professor Jones? 24 25 A. They say that PNRP, peer name resolution

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protocol, and they describe that as a distributed DNS. 1 2 Q. So these are some of the confidential 3 documents you've been telling us about? Yes, sir. 4 Α. 5 All right. Now, back to applying the claim, Ο. Professor Jones, is the query message requesting from 6 7 the secure domain name service a secure computer network 8 address corresponding to the secure domain name? 9 Α. Yes, sir. That's the message to PNRP. 10 0. And what did you conclude with regard to this claim element? 11 I concluded that the Microsoft PeerNet 12 Α. interfaces meet this element of the claim. 13 We talked about this briefly yesterday, but 14 0. 15 before we get to the receiving step, do we need to talk 16 about the specific nitty-gritty details of how the secure domain name service comes up with the address? 17 No, sir. These claims are flexible, and they 18 Α. 19 don't place -- they don't describe a specific 20 requirement on how it resolves that address. 21 Ο. So the next thing is the receiving back step, 22 correct? 23 Α. Yes. 24 And that element says: Receiving from the 0. 25 secure domain name service a response message containing

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the secure computer network address corresponding to the 1 2 secure domain name. 3 Do the Windows PeerNet interfaces receive from the secure domain name service a response message 4 5 containing the secure computer network address? That happens when the certified 6 Α. Yes, they do. 7 peer address, as we saw in that animation, is returned 8 to the user's computer. 9 0. And what's in that certified peer address? 10 That has, for example, an IP address, port, Α. number, it has protocol, as well as verification 11 information. 12 13 And is that secure computer network address Q. corresponding to the secure domain name? 14 15 Yes, sir, it is. Α. 16 Okay. Dr. Jones, does it matter which one of 0. 17 the peers out there running the PeerNet interfaces is the one who sends back the certified peer address in 18 19 terms of analyzing the claim? 20 No. In terms of the claim, the claim says Α. 21 that it's a -- it's a receiving step. So it matters that the -- that it receive the message. 22 What did you conclude for this claim element, 23 0. 24 Professor Jones? 25 A. I concluded this claim element is met by the

PeerNet interfaces. 1 2 Q. Now, the final element of this claim says: 3 Sending an access request message to the secure computer network address using a virtual private network 4 5 communication link. Did you find this element met in the Windows 6 7 XP and Vista products? 8 Α. 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 information from the group. 11 Does that occur if the connection made to the 12 Q. VPN is the client computer's first connection to the 13 14 VPN? 15 Yes, sir, it does. Α. 16 0. What about if one of those supplemental maintenance connections is made? 17 It also occurs then as well. 18 Α. 19 0. So what did you conclude for this final 20 element? 21 Α. I concluded this element is met by the PeerNet interfaces. 22 All right. Professor Jones, we've checked all 23 Q. 24 the elements of Claim 1. Can you tell us what that 25 means?

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Well, that means that the Microsoft PeerNet 1 Α. 2 interfaces, part of the Windows XP and Vista operating 3 systems, infringe Claim 1 of the '180 patent, and therefore, infringe the '180 patent. 4 5 Thank you, Professor. Q. Now, we're going to get two for one on this 6 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 same method from Claim 1 wherein the response message 10 contains provisioning information for the virtual 11 12 private network. 13 Do the PeerNet interfaces receive a response message that also includes provisioning information? 14 15 Yes, sir. That's the certified peer address Α. that contains, for example, the port number, protocol, 16 and verification information. 17 Did you conclude that Claim 4 was infringed? 18 0. 19 Α. Yes, I did. 20 All right. And then Claim 15. Claim 15 is Q. 21 the method of Claim 1 performed by a client computer. 22 Was that method of Claim 1 performed by a client computer for the accused products? 23 24 Yes, it was. All of those steps took place on Α. 25 the client computer in the explanation that I gave.

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Q. Can I check these two boxes for these two 1 2 claims? 3 Yes, sir, please do. Α. All right, Professor Jones. We have another 4 0. 5 long independent claim, but, I mean, is this going to take us quite as long as it appears? 6 7 No, sir. We'll see that the bottom portion of Α. 8 it is similar to Claim 1. 9 0. Well, at a high level, how does this claim differ from Claim 1? 10 Well, this is a computer-readable storage 11 Α. 12 medium claim. It requires a computer-readable storage 13 medium, which would be like a storage area, as well as computer instructions for performing the steps that we 14 just discussed for Claim 1. 15 So are the Microsoft Windows XP and Vista, 16 0. 17 therefore, the PeerNet interfaces, distributed on computer-readable storage media? 18 19 Yes, they are. For example, they can be Α. 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 Okay. And for example, in this box, what's in Q. 24 here? 25 That would contain a CD or DVD that has Α.

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computer-readable -- it has a storage area, and it's a 1 2 computer-readable storage medium. 3 Now, have you -- I mean, that may sound 0. trivial, but have you checked if this is a 4 5 computer-readable media in this box, and it has a 6 storage area? 7 Α. Yes, sir, I've done exactly that. 8 So remind us, what other kinds of media does Q. 9 Microsoft use just besides the DVDs? 10 Well, for example, they have a master disk Α. that they give to manufacturers like Dell to allow them 11 12 to install this on their computers. 13 They also have the storage media on their web It would also be on computers that Microsoft 14 servers. 15 itself uses. Now, remember when you discussed updates, like 16 0. 17 the Advanced Networking Pack and Service Pack for XP 2 18 (sic)? 19 Α. Yes, sir. 20 Were those on computer-readable media? Q. 21 Α. 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 Now, does that media, in all cases, contain a Ο. 25 storage area?

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Yes, sir, it does. 1 Α. 2 Q. And then -- so may I check the storage area 3 off? Please do. 4 Α. 5 Now, on the storage area -- on a Q. computer-readable storage media -- excuse me -- are 6 7 there computer-readable instructions for a method for 8 accessing a secure computer network address? 9 Α. Yes. They contain the PeerNet interfaces, 10 which the computer can read those, and those perform the method that we just talked about as in Claim 1. 11 12 Can we be fairly confident that the DVD that's Q. 13 in this Windows Vista box is computer-readable? 14 Α. Yes, sir. 15 Same for the versions? Q. 16 Α. Yes. 17 Have you found this element met? Q. Yes, I have. 18 Α. 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 Α. Yes, sir. 24 Okay. So first, did you find that the accused 0. 25 products have -- they receive a secure domain name?

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Yes, I did, just as explained for Claim 1. 1 Α. 2 And did you find that they send a query Q. 3 message to a secure domain name service, the query message requesting from the domain name service a secure 4 5 computer network address corresponding to the secure domain name? 6 7 Yes, I did, as explained for Claim 1. Α. 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 corresponding to the secure domain name? 11 12 Α. Yes, I did, as explained for Claim 1. 13 And finally, did you find sending an access Q. 14 request message to the secure computer network address 15 using a virtual private network communication link? Yes, sir, I did, as explained for Claim 1. 16 Α. 17 Professor Jones, what have you concluded about Q. Claim 17? 18 19 I concluded that Microsoft infringes Claim 17 Α. 20 of the '180 patent. So we're rolling now, Professor Jones. 21 0. 22 Computer readable medium, according to Claim 17 -- I think we've seen this before -- wherein the response 23 24 message contains provisioning information for the 25 virtual private network.

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Did you find that element met? 1 2 Α. Yes, sir, I did, as explained for Claim 4. 3 0. What did you conclude about Claim 20? That Microsoft infringes Claim 20. 4 Α. 5 Now, 31. A computer-readable medium, again 0. from Claim 17, wherein the method is performed by a 6 7 client computer. 8 Did you find that, Professor Jones? 9 Α. Yes, I did, just as explained for Claim 15, 10 and I find that Microsoft infringes Claim 31 of the '180 11 patent. 12 Now, Claim 33 is a data processing apparatus. Q. 13 Can you give us an example of what that might be? 14 Α. That would be a computer. 15 Do they comprise a processor? Q. 16 Α. Yes. A computer would have a processor, and 17 it would have a memory to store those instructions. So I can check the processor part of it? 18 Ο. 19 Α. Yes, sir. 20 I'm going to ask you about this: A memory Q. storing computer-executable instructions, which when 21 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?

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Yes, sir, I did. When the PeerNet interfaces 1 Α. 2 are on a computer, they'll be stored in memory, and they 3 are computer-executable instructions that will cause those steps to be performed. 4 5 May I check this box? 0. 6 Α. Yes, sir. 7 Now, back to our familiar steps. Ο. 8 First, did you find receiving a secure domain 9 name? 10 Yes, sir, I did, as explained for Claim 1. Α. 11 0. 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 Yes, sir, I did, as explained for Claim 1. Α. 16 Professor, did you find receiving from the 0. 17 secure domain name service a response message containing the secure computer network address corresponding to the 18 19 secure domain name? 20 Yes, sir, I did, for the same reasons as given Α. in Claim 1. 21 22 And did you find sending an access request Q. message to the secure computer network address using a 23 24 virtual private network communication link? 25 Α. Yes, sir, I did, as explained for Claim 1.

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1 Professor Jones, what did you conclude about Q. 2 Claim 33 of the '180 patent? 3 Α. I concluded that Microsoft infringes this when they, for example, put the PeerNet interfaces on 4 5 computers. And finally, Claim 35, the apparatus of that 6 Q. 7 Claim 33, wherein the response message contains 8 provisioning information for the virtual private 9 network. 10 Did you find that claim met? Yes, sir, I did, as explained for Claim 4, the 11 Α. same reasons. 12 13 What did you conclude about Claim 35? Q. That Microsoft infringes Claim 35 of the '180 14 Α. 15 patent. All right. Professor Jones, can we see the 16 0. 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 Α. Yes, they do. 24 How do you know? Ο. 25 I know from deposition testimony from Α.

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Microsoft employees that they use Windows Meeting Space 1 2 with grouping, and that uses PNRP. 3 Have you been able to tell -- have you been Ο. able to find evidence that Microsoft used it internally? 4 5 Yes, I have, from -- from deposition Α. 6 testimony. 7 Did you find that Microsoft directly infringes Ο. 8 the '180 patent in other ways? 9 Α. Yes, I did. 10 For example, when they put the updates or essentially put the PeerNet interfaces on computers to 11 12 allow people to download them, they would infringe the 13 claims of the '180 patent. They would also do so when they sell -- like 14 15 make, use, sell, or offer to sell these disks that we've been talking about for Windows XP and Microsoft Windows 16 Vista. 17 Now, finally, the computer -- the data 18 Ο. 19 processing apparatus claims of 33 and 35, did you find 20 that Microsoft directly infringes those, too? 21 Α. 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

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each of the claims of the '180 patent you've gone 1 2 through today? 3 Α. Yes, sir. Now, can we talk about induced infringement? 4 0. 5 Α. Yes, sir. We went through this -- I guess we're actually 6 Q. 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 Yes, sir. This patent issued shortly after Α. 13 the lawsuit was initiated, and Microsoft was made aware 14 of the patent at that time. And that's because the '180 patent is the more 15 Q. 16 recently issued of the two, fair? 17 Α. Yes, sir. Now, can we check that element? 18 0. 19 Α. Yes, sir. 20 The second element, encouraged or instructed Q . 21 others to perform acts that infringe, did Microsoft --22 did you find evidence that Microsoft encouraged or instructed others to perform acts that infringed? 23 24 Α. Yes, sir, I did. 25 For example, Microsoft describes how to

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connect to a group on their -- and how to use the 1 2 PeerNet APIs on their website. 3 Do they also work with developers to teach 0. them how to use the peer name resolution protocol? 4 5 Yes, sir. They provide example codes showing Α. them how to use the PeerNet resolution protocol, as well 6 7 as the PeerNet interfaces and make that available for 8 download. 9 Ο. What do you mean that they provide example 10 code? Well, they have a software development kit 11 Α. 12 that they describe for the PeerNet interfaces. 13 Ο. Can we check that element? 14 Α. Yes, sir. 15 Did you find evidence that others have Q. 16 infringed? 17 Yes, sir, I did. Α. And how -- how -- let's start with the method 18 0. 19 claims. 20 What is your -- what kind of evidence have you 21 seen that others are performing the methods? 22 Α. The evidence I found for that would be, for example, what's called Microsoft -- Microsoft employees 23 24 describing SQM data. That's short for S-Q-M or a way of saying S-Q-M. 25

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That's data that Microsoft collects from 1 users' computers -- selected users' computers that 2 3 indicates what actions those users are taking. Does Microsoft collect the data from every 4 0. 5 single copy of Windows that's out there being used? No, sir, they don't do that. 6 Α. 7 Is it -- do you know how big of a subset it Ο. 8 is? 9 Α. I believe it's, according to the deposition 10 testimony, somewhere between 8 and 12 percent perhaps. Now, what about the computer-readable medium 11 0. 12 claims of 17, 20, and 31 and the system claims of 33 and 13 35? Have you found evidence that others infringe? 14 Α. 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 computer-readable media, and they will also be, 18 19 obviously, putting them on a computer, which mean the 20 data processing apparatus. 21 0. Can we check that element, sir? 22 Yes, sir. Α. And now, finally, the last element is that 23 Q. 24 Microsoft either knew or should have known that the 25 encouragement or instructions would result in others

infringing. 1 2 What did you find with regard to that piece of 3 the inducement analysis? Well, I found that given Microsoft's knowledge 4 Α. 5 of how its own products operate, as well as the fact that they knew about the '180 patent and were notified 6 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 offers Demonstrative Exhibits 6 through 14 into 13 evidence. 14 15 THE COURT: All right. Any objection? 16 MR. POWERS: No objection as demonstratives. 17 THE COURT: All right. Be admitted. 18 19 (By Mr. Caldwell) Professor Jones, we are now Q. 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? Yes. I have concluded that Microsoft 23 Α. 24 infringes the claims of the '135 and '180 patent 25 patents.

MR. CALDWELL: Pass the witness. 1 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. MR. POWERS: May I proceed, Your Honor? 6 7 THE COURT: Yes, you may. 8 CROSS-EXAMINATION 9 BY MR. POWERS: 10 Q.. Good morning, Dr. Jones. Good morning. 11 Α. 12 Now, you're here as an expert in network Q. 13 security, correct? 14 Α. Yes, sir. 15 And you've followed developments closely in Q. that field over the last several years, haven't you? 16 17 Yes, sir, I would say so. Α. Probably at least since the late 1990s? 18 Ο. 19 Yes, sir, at least since then. Α. 20 Now, you testified here that you thought the Q. 21 patents-in-suit were important inventions. 22 Do you recall that? 23 Α. Yes, sir. I believe that. 24 In fact, you had never heard of them before 0. 25 this lawsuit; isn't that true?

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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.

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You need the applications as well. 1 Q. 2 You need an application. And in the case of, Α. 3 say, Windows XP, that could be Microsoft Windows 4 Messenger. 5 Now, the -- let's start with Vista. And let's Ο. 6 put up your Slide 5. 7 MR. POWERS: If we could, Chris. 8 (By Mr. Powers) This was your slide that you Q. 9 showed to the jury about the products that you thought 10 infringed the '135 patent, right? Yes, sir. 11 Α. 12 Now, starting with Vista, it was your opinion Q. 13 that you needed those interfaces, those APIs, in order to infringe, right? 14 15 Yes, sir. Α. And Vista doesn't come with those APIs, does 16 0. 17 it? Not -- not installed, no, sir. 18 Α. 19 So for every copy of Vista that was shipped Q. 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 Α. Yes, sir. 24 And as far as you know, that's millions and 0. 25 millions and millions of copies of Vista.

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I don't know the numbers, sir. 1 Α. You have no idea? 2 Q. 3 Α. That's correct. Now -- so Vista can't infringe any of the 4 0. 5 claims of the '135 patent as shipped, correct? I believe that's correct, sir. 6 Α. 7 Now, with respect to XP, that does ship, as I 0. 8 understand your opinion, with the APIs that you're 9 accusing in this case; is that fair? 10 Yes, sir, once those updates are part -- once Α. 11 the updates have been applied. But even XP won't infringe until it's used 12 Q. 13 with one of the applications that you've listed on Slide 5; isn't that true? 14 15 I wouldn't agree with that, sir. Α. 16 XP, I believe you said earlier, has to be used Q. 17 with an application in order to infringe, true? I believe I said that for Claim 1, sir. 18 Α. 19 Q. Okay. So let's take Claim 1. 20 Claim 1's a method claim. 21 Α. Yes, sir. 22 It's not infringed by anybody until somebody Q. uses that method described in the patent, right? 23 24 Α. That's my understanding. 25 So for every copy of XP shipped by Microsoft, Q.

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there's zero infringement of Claim 1 of the '135 patent 1 unless somebody actually uses the method. 2 3 Α. Yes, sir. And for them to use the method, they have to 4 0. 5 use one of the applications that you've listed on 6 Slide 5. 7 Or an application they develop themselves, or Α. 8 something like Live Meeting Console, I believe is not 9 listed there. 10 And you have not testified about any Ο. applications that someone has developed by themselves, 11 have you? 12 13 Α. That's right, sir. All right. Now -- and for Claim 10 of the 14 0. 15 '135 patent, XP, as shipped, doesn't infringe that either, does it? 16 17 No, sir, it doesn't. Α. All right. Now, looking at your Slide 5 --18 Ο. 19 MR. POWERS: And, Chris, if we can 20 highlight a couple of these. (By Mr. Powers) -- you've listed as some of 21 Q. 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.

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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

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lawyers either, was it? 1 I don't believe so, no, sir. 2 Α. 3 So the very same products that you're now here 0. saying do use VirnetX's patents are the same ones that, 4 5 if I'm right about Kendall Larsen's testimony, are the ones that he was spending a lot of money trying to 6 7 modify in order to use the patents. 8 They're the same products, right? 9 Α. I would really have to look at his testimony. 10 I haven't -- I haven't seen that, so I don't know, sir. Well, okay. Then let's look at it. 11 Ο. 12 Did you look -- are you aware of a company 13 called Magenic? I'm not familiar with them. 14 No, sir. I've Α. 15 heard that name during this -- the course of this lawsuit. 16 17 But that's not one of the subjects that you Q. studied when you were coming up with your opinions about 18 19 infringement. 20 Α. I did not study that, sir, that's correct. 21 0. Were you even aware that Kendall Larsen, the 22 CEO of VirnetX, as one of the first things he did in spending the scarce money he had was hire Magenic in 23 24 order to modify Office Communicator and Live Communications Server, the two products you now accuse? 25

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Are you aware of that? 1 2 Α. No, sir, I'm not aware of that. 3 Let's look at DX3536. It should be in the Ο. binder in front of you, but we'll also put it up on the 4 5 screen. Chris, let's just pull up 6 MR. POWERS: 7 the first half of it or so, if you would, and see if we 8 can make that legible. 9 Ο. (By Mr. Powers) Dr. Jones, have you seen this document before? 10 Not -- not in my examination, sir. I think 11 Α. it's -- something like this might have been presented in 12 13 some of the other testimony during the lawsuit. 14 0. I'm sorry. Let me rephrase the question. 15 Yeah. Α. When you were doing your preparations, either 16 Q. 17 using the material that you thought -- that you asked for or the material that VirnetX's lawyers gave you, did 18 19 you see this document? 20 Α. 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 Yes, sir, I do. Α. 25 Q. And if you turn to the next page --

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1 MR. POWERS: And actually, Chris, let's 2 bring up --3 (By Mr. Powers) It's the page, Dr. Jones, that 0. at the bottom right has .004. 4 5 Α. I have that, sir. And -- I'm sorry. It's Page 002. Wrong page. 6 Q. 7 And there's that section called Project Goal about one 8 third of the way down. 9 Do you see that? 10 Yes, sir, I do. Α. MR. POWERS: Let's bring that up, if you 11 12 would, Chris, from Project Goal all the way down to 13 deliverables before that. Just a little bit more. Right there. 14 15 All right. That's not going to be easy 16 to read, is it? 17 All right. Now, that helps. Can everybody on the jury read that or 18 19 not? Okay. 20 (By Mr. Powers) So you see in this February Q . 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,

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I just want to get that from Dr. Jones. 1 Chris. 2 Α. Is that on Page 005? 3 (By Mr. Powers) Exactly. 0. I see the name. My copy doesn't have the 4 Α. 5 signatures, sir. 6 Q.. But you see Kendall Larsen, President and CEO 7 of VirnetX? 8 Α. Yes, sir, I do. 9 All right. So let's go back to Page 2 where Q. 10 we were, Project Goal. And I'll just read it to make sure we're all on the same page here. 11 12 The goal of the project, in short, is to come up with a solution for encrypted secure communication 13 streaming between multiple messaging end points. 14 This will be accomplished by implementing a first phase of a 15 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 Α. Yes, sir, I do. 24 All right. Ο. Now --25 MR. POWERS: Chris, if you could bring --

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let's try to make it bigger. So let's just start at the 1 2 deliverables and platform target section down below, and 3 bring that -- just that paragraph up to the bullets. That should do it. 4 5 Can we stretch that out to make it a little more legible? 6 7 (By Mr. Powers) And you notice that the Ο. 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 Yes, sir, I do. Α. 13 Now, those are the exact same two products 0. 14 that were on your Slide 5 that you said do use the 15 VirnetX patents; is that correct? 16 Α. Yes, sir. 17 Now, does that help you recall reading any Q. testimony -- deposition testimony from Kendall Larsen, 18 19 the CEO of VirnetX? 20 Α. No, sir. 21 Q. Do you recall any discussion by Mr. Larsen, 22 the CEO of VirnetX, regarding his attempt to modify those two Microsoft products in order to use the VirnetX 23 24 patented technology? 25 A. No, sir.

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Let's see if I can show you some to refresh 1 Q. 2 your recollection. 3 MR. POWERS: Chris, could you please bring up Kendall Larsen's deposition testimony? 4 5 And, Your Honor, it's from the July 21 transcript at Pages -- Page 299, Lines 15 to 19. 6 7 And let's blow that up so we can all see 8 it. 9 (By Mr. Powers) Question: One of Magenic's 0. 10 objectives -- now, Magenic is that company that this work order is with? 11 12 Α. Yes, sir. 13 One of Magenic's objectives, in attempting to 0. modify Microsoft's products, was the goal of utilizing 14 15 VirnetX's patented technology in Microsoft products, 16 right? Answer: That's correct. 17 Do you see that testimony from Kendall Larsen, 18 19 VirnetX's CEO? 20 I see that, yes, sir. Α. 21 Q. Had you read that exact deposition, or had you 22 been shown that testimony? 23 Α. No, sir. 24 All right. Now, let's talk about the '180 Ο. 25 products just for a minute at a high level. Let's just

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```
switch gears.
1
2
                  MR. POWERS: And could we put up, Chris,
3
   his slide with the '180 patent, which I believe is the
   very next slide?
                     Slide 7.
 4
5
            (By Mr. Powers) Now, the '180 products that
        Q.
6
   you listed, Dr. Jones, were the two operating systems
7
   alone, XP and Windows Vista, true?
8
        Α.
             Yes, sir.
9
             Now, switching our heads to the '180 patent,
        0.
10
   away from the '135, Claim 1 of the '180 patent is a
   method claim just the way Claim 1 of the '135 patent
11
12
   was, right?
13
             Yes, sir.
        Α.
             So, again, shipping Windows Vista or shipping
14
        Ο.
15
   Windows XP doesn't infringe those claims; they have to
16
   be used, fair?
17
             Yes, sir.
        Α.
             All right. Now, you testified about Claim 17,
18
        0.
19
   which was the storage medium claim.
20
             Do you remember that?
21
        Α.
             Yes, sir.
22
             And you testified that when Microsoft ships or
        Q.
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?
```

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Yes, sir. 1 Α. 2 Now, you know that a lot of people get XP or Q. 3 Vista by means other than buying a box at Best Buy. You know that, don't you? 4 5 Α. Yes, sir. And you didn't testify about those means, did 6 Q. 7 you? 8 I don't believe I did -- I believe I did. Ι Α. 9 thought I testified that this happens, for example, when Microsoft gives a master disk to a computer 10 manufacturer. 11 So when -- when Microsoft -- when Microsoft 12 Q. software is preloaded on a Dell computer, which I think 13 is one example you talked about, and a consumer buys the 14 15 Dell computer, Microsoft didn't give that disk to that 16 consumer, did it? 17 I -- I think in many of those cases, they do Α. include a disk with that from Microsoft. I believe they 18 19 do. 20 Have you done any analysis to determine Q . whether that's true and how often? 21 22 I do not know how often it occurs, sir. Α. All right. And in the situation where XP or 23 Q. 24 Vista is downloaded directly off of a website or some 25 other form, in that case, there's no storage medium

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either, true? 1 2 Α. That's not correct, sir. It would -- on the 3 website, there would be a storage medium to store what's to be downloaded. 4 5 But in terms of providing XP or Vista to the Ο. consumer; it's coming down -- not on a disk but over the 6 7 wires from the internet. That's true, isn't it? 8 A. Yes, sir. 9 Ο. 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 (By Mr. Powers) -- that's a data processing Q. apparatus. Do you recall testifying that that's a 13 14 computer? 15 Yes, sir. Α. 16 Ο. Now, Microsoft doesn't sell computers, does 17 it? It does sell computers, sir, but I don't think 18 Α. 19 that's what you're referring to here. 20 With -- putting aside the XBOX and things like Q . 21 that, talking about the use of XP and Vista, in that 22 context, Microsoft is selling the software, not the computer, right? 23 24 A. Yes, sir. They're -- they're -- I don't 25 believe they sell what we're talking about here at all.

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All right. So in the proper context of what 1 Q. 2 we are talking about, Microsoft does not sell or offer 3 to sell anything that is claimed in Claim 33 as a whole. Yes, sir, I believe that's correct. 4 Α. 5 All right. Now, yesterday you testified a bit Q. about the interfaces. 6 7 Do you recall that? 8 Α. Yes, sir. 9 And you called them a couple of names, and I 0. 10 just want to make sure we're all talking about the same 11 thing. 12 MR. POWERS: Chris, could you bring up Slide 17, please? 13 (By Mr. Powers) These are the interfaces that 14 Ο. 15 you were referring to in your testimony with regard to 16 the '135 patent? 17 Α. Yes, sir. And you were asked whether companies write 18 Ο. 19 programs or applications using these interfaces. 20 Do you recall that question? 21 Α. Yes, sir. 22 And your answer was that Microsoft has, right? Q. 23 Α. Yes, sir. 24 You have no opinion and didn't offer one on 0. 25 direct testimony about whether any third parties, not

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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.

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Yes, sir. 1 Α. 2 And if even just the VPN limitation is missing Q. 3 from Microsoft's product, in your view, then the jury should find for Microsoft of no infringement. 4 5 Yes, sir. Α. Now, on this particular limitation, the issue 6 Q.. 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 That's correct, sir. Α. So we're talking about whether one is 11 0. 12 literally there, and if it isn't, then there's no 13 infringement. 14 Do you agree? 15 That's what I testified to, sir. Yes, sir. Α. For all claims? 16 0. 17 Yes, sir. Α. All right. Now, you put up Judge Davis' order 18 0. 19 construing VPN, and it requires that the communication 20 be private. 21 Do you recall that? 22 Yes, sir. Α. And you know that the privacy in Judge Davis' 23 Q. 24 order requires anonymity. You know that, don't you? 25 Α. Yes, sir.

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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.

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So in unsecure mode, one of the things you can 1 Q. 2 see, according to your testimony yesterday, was those 3 two -- I believe you called them SIP addresses? Yes, sir. 4 Α. 5 And those SIP addresses correspond to those Ο. 6 two people at Fabrikam, whoever RL and AJ are. 7 Α. Yes, sir. 8 And you can also see -- and this is up at the Q. 9 top. It's labeled source of destination, and then there's these four numbers separated by dots that you 10 called IP addresses, right? 11 12 Yes, sir. Α. 13 And so this -- where it says source, and then Q. it says 192168 -- well, 192.168.0.80, that's the IP 14 15 address of the computer where RL happens to be sitting 16 at that time. 17 That's -- that's my recollection, sir. Α. I believe that's correct. 18 19 All right. And the destination is the Q. 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

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bottom of the slide --1 2 MR. POWERS: And, Your Honor, we're going 3 to label this slide as Defendant's Illustrative Exhibit 6 and later ask all these be admitted in the same manner 4 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 Yes, sir. Α. And all of that is in the unsecure mode? 11 Ο. 12 Yes, sir. Α. 13 All right. Now, let's go, then, to secure Q. 14 mode, which is Slide -- your Slide 25. 15 And this was an animation that you did, and we've got a capture of the things that you were doing in 16 17 the animation, but you were actually moving it around; is that fair? 18 19 Yes, sir. Α. 20 All right. Now, the secure mode -- this is Q. 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 Α. Yes, sir. And so you're taking the position that it 25 Q.

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satisfies this anonymity requirement, right? 1 2 Α. Yes, sir. 3 And I take it you believe that Office 0. Communicator is representative of all the other products 4 5 you accused, but this is really the only one you put up; is that fair? 6 7 Α. Yes, sir. 8 All right. Now, in secure mode, you don't see Q. 9 those two SIP addresses that correspond to RL and AJ, the two people, right? 10 That's correct, sir. 11 Α. 12 And you also don't see the content of the Q. message, how's your work going, true? 13 14 Α. Yes, sir. 15 But you do still see, down here at the bottom, Q. 16 the IP addresses of that original computer that RL was at and the OC server that we saw before? 17 18 Α. Yes, sir. 19 Now -- so if -- if the purpose of anonymity is Q. 20 to protect those IP addresses, you'll agree with me that 21 Office Communicator, even in secure mode, doesn't 22 protect them? Sir, I wouldn't agree with you that the 23 Α. 24 anonymity is about protecting those outer IP addresses. 25 Q. I understand. But I'm ask -- that's why I put

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the word if at the front. 1 2 Α. Okay. Sorry. 3 0. We'll get there, trust me. If the purpose of the anonymity, as required 4 5 by the Court in every claim, if the purpose of the anonymity is to protect those IP addresses, you'll agree 6 7 with me that what you've accused doesn't do that. 8 Α. Yes, sir. 9 So if the purpose of anonymity, as required by 0. 10 the Court, is to protect those IP addresses, there's no infringement. 11 12 You would agree with that? 13 And we're referring to these outer IP Α. addresses, sir? 14 15 Q. Yes. 16 Α. Yes, sir. Then I'll agree with that. 17 And these outer IP addresses, it's the same Q. address you had before in unsecure mode. That's the 18 19 address of the computer at which RL was sitting. That's 20 what you just testified to. 21 Α. Yes, sir. 22 And the destination was the address of the OC Q. server that RL is sending something to? 23 24 Α. Yes, sir. 25 All right. Now, as I understand your opinion Q.

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from your testimony yesterday, you thought that as to 1 Office Communicator that the anony -- anonymity 2 3 requirement of the Court was satisfied because you couldn't see the SIP addresses, right? 4 5 That -- that's -- yes, sir, that's essentially Α. 6 it. 7 All right. And you told us earlier, just a 0. 8 few minutes ago, that those SIP addresses corresponded 9 to the people who were sitting at those machines, RL and 10 AJ. Yes, sir. 11 Α. 12 Now, those SIP addresses don't actually Q. 13 identify a machine, do they? 14 Α. No, sir, not directly. 15 All right. Now, you will agree that in order Q. to accomplish anonymity with regard to the Court's 16 17 construction, that it has to be anonymous both as to the people and the machine. 18 19 You agree with that, don't you? 20 Yes, sir, I agree it has to be anonymous with Α. 21 respect to those, and I can explain a bit, if you'd 22 like. Well, let's -- for now, let's just stick with 23 Q. 24 the questions I ask, and we'll move forward. 25 Α. Yes, sir.

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And in your demonstration of how, under your 1 Q. 2 opinion, Office Communicator works in secure mode, the 3 SIP address corresponding to the people is scrambled and secure, true? 4 5 Yes, sir. Α. But the IP address corresponding to the 6 Q. 7 machine is not scrambled and is visible to an 8 eavesdropper, right? 9 Α. Yes, sir, it is. 10 0. In fact, you saw it right here in your Wireshark data. 11 12 Α. Yes, sir. 13 So if I'm an eavesdropper and I'm watching 0. Office Communicator work in what you call secure VPN 14 mode, I can see the IP address of the sending machine. 15 16 Α. Yes, sir, you can. 17 And I can see the IP address of the receiving Q. machine? 18 19 Α. You can see the IP address of the server, but 20 that's not the ultimate destination. 21 I didn't ask about the ultimate destination. 0. 22 I asked about the receiving machine. 23 Α. Yes, sir. 24 All right. So it's true that I can see both 0. 25 the IP address of the sending machine and the receiving

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machine, as shown on Slide 25. 1 2 Α. Yes, sir. 3 All right. Now, I take it you'd agree with me 0. that the CIA wouldn't be too happy with the IP addresses 4 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 0. Because you could -- from an IP address, you 10 can learn information about where that machine is and what's going on, can't you? 11 12 Yes, sir. Α. 13 All right. So let's talk about sort of a Q. 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. And the way that a -- that a typical VPN would 18 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

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talking about specific technology? 1 That's exactly what I just said, exactly, 2 Q. 3 precisely. 4 Α. Okay. 5 And one way of implementing a VPN is to have Ο. what's called a tunnel, right? 6 7 Yes, sir. Α. 8 And that tunnel would obscure both the IP Q. 9 address of the source and the destination as you've 10 shown it here on Slide 25, wouldn't it? That would depend on the situation, sir. 11 Α. 12 Q. But in a typical tunnel VPN, the IP address of 13 the sending machine is not visible to outside user, because it's wrapped in another IP address, isn't it? 14 15 No, sir. It -- the other IP address would be Α. 16 visible. 17 Of the original sending machine, of RL Q. Fabrikam? 18 19 Α. Yes, sir, in that situation. All right. So let's -- in that case, let's 20 Q . 21 move to Dr. Short's presentation. 22 Are you familiar with Dr. Short's presentation when he showed the typical VPN? 23 24 Yes, sir, I was here for that. Α. 25 Q. You were here for that, and you also saw it

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outside the courtroom, didn't you? 1 2 Α. I don't think I saw that, no, sir. 3 0. You never watched it yourself? No, sir, I don't believe I've ever seen that 4 Α. 5 typical VPN slide, no. 6 MR. POWERS: Chris, would you bring up 7 Plaintiff's Illustrative Exhibit No. 3? 8 (By Mr. Powers) We just pulled this straight Q. 9 off of Dr. Short's slide that he showed us, I guess, 10 yesterday? 11 Α. Yeah, if that's what you are referring to I 12 did see that, yes, sir. 13 Okay. Good. And you recall him describing Q. 14 this as a typical, generic VPN? 15 I believe so, yes, sir. Α. All right. And so let's just walk through 16 Q. 17 how that typical, generic VPN would work according to Dr. Short's presentation from yesterday? 18 19 Α. Yes, sir. 20 Now, we had our remote user up in the far Q. 21 left trying to communicate back with somebody at Acme over on the right. Do you recall that? 22 23 Α. Yes, sir. 24 And the person on the left what's called a 0. 25 private source address and a private destination

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```
1
   address?
2
        Α.
               Yes, sir.
3
               And the private source address is the IP
        0.
   address of that user's computer sitting right there?
 4
5
               It is an IP address of it, sir.
        Α.
               Right. And the private destination address
6
        Q..
7
   is the IP address of the computer he's trying to talk to
8
   over at Acme, right?
9
        Α.
               Yes, sir.
10
               All right. And the message that Dr. Short
        Q.
   used was, cut our prices today?
11
12
               Yes, sir.
        Α.
13
               And then he demonstrated how a typical,
        Q.
   generic VPN would protect that information as it went
14
15
   across the internet, right?
               Yes, sir.
16
        Α.
17
               All right.
        Q.
18
                  MR. POWERS: So, Chris, let's put up
19
   Defendant's illustrative Slide 4, please.
20
           (By Mr. Powers) And you recall this
        Q.
21
   portion --
22
                  MR. POWERS: Chris, could you please up
   the part in the middle left so we can see it a little
23
24
   better? Well, that's a little better.
25
               (By Mr. Powers) You recall this portion from
        Q.
```

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Dr. Short's presentation where he showed how that 1 2 information is protected? 3 Yes, sir. Α. And let's just make sure we all understand 4 0. 5 where we are. This far right -- there's something in yellow in the background -- there's three boxes in the 6 7 yellow background. Do you see that? 8 Α. Yes, sir. 9 0. Those three boxes correspond exactly to the 10 three boxes that we had in the prior slide. MR. POWERS: Chris, let's go back to that, 11 if we could. 12 13 (By Mr. Powers) Cut our prices today in the Q. source and destination address? 14 Yes, sir. 15 Α. 16 0. All right. So now let's go back to the next 17 one. 18 MR. POWERS: Bring it up. 19 (By Mr. Powers) So the source destination, Q. 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.

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I haven't started talking about those two 1 Q. I'm just talking about the three that were on the 2 yet. 3 prior slide. Yes, sir. 4 Α. 5 So the first two boxes in the yellow 0. section, those correspond to the IP address of the 6 7 remote user's computer and the IP address of the 8 computer he's trying the reach back at Acme, right? 9 Α. Yes, sir. 10 0. And those are scrambled? Yes, sir. 11 Α. 12 Q. And the text of the message was also 13 scrambled? 14 Α. Yes, sir. 15 Now, on the left, far left in bigger boxes Q. not the in yellow we have something called a source 16 17 address and a destination address, right? Yes, sir. 18 Α. 19 Q. And those are also IP addresses, right? 20 Yes, sir. Α. 21 Q. But they're not the IP addresses of either 22 the remote user or Bob over at Acme, are they? 23 I wouldn't agree with that, sir. Α. 24 It's the exact same number? 0. 25 It's an IP -- the source address would be an Α.

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IP address for the remote computer. 1 2 Q. Well, let's ask about the number. There was 3 a number over here in the box that's scrambled, right? Yes, sir. 4 Α. 5 That number corresponded to the computer 0. that our remote user was sending it from, right? 6 7 Α. Yes, sir. 8 That number that's scrambled here is not the Q. 9 same number that is sitting here in the source address 10 that is physical is it? Generally it wouldn't be. 11 Α. 12 Q. The same with the destination address, that's not the same number, is it? 13 14 Α. Generally not, no, sir. 15 All right. And, in fact, generally those Q. numbers would be the numbers of a router or some other 16 17 machine in between the computer -- the computer that our remote user was sitting at and the internet, right? 18 19 Not for the source address in this example, Α. 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

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named Comer, right? In fact, you used that book 1 2 in your class at the University of Tennessee, didn't 3 you? Yes, sir. 4 Α. 5 You used it as the basis for teaching your 0. 6 students? 7 I think I used it as a basis for forming the Α. 8 class. I don't usually use a book for class. 9 0. But you would agree since you used it with 10 the class that it's reliable and accurate, wouldn't 11 you? 12 I think it generally is, yes, sir. Α. 13 You're not trying to mislead the engineering Q. students at the University of Tennessee? 14 15 I hope not, sir. Α. 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 portion of it that I do want to talk about. And you 18 19 should have DX-3544 in front of you. That's a copy of 20 the book. 21 Α. Yes, sir, I have that. 22 Now, if you go to Page 426 of the document, Q. 23 it won't correspond exactly to four -- actually Page 24 425. 25 Sorry.

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I have that, sir. 1 Α. 2 Q. There's a title called "Private Network 3 Interconnection, VPN." Do you see that? Yes, sir. 4 Α. 5 And this is the chapter in the book that you 0. used, at least a part with your class at the University 6 7 of Tennessee about VPNs, the subject of this case? 8 Α. Yes, sir. 9 0. And this book addresses the issue that we 10 were just discussing; i.e., or, in other words, what IP address is visible in a VPN, whether it's the sending 11 machine or some router in between. It does address that 12 13 issue directly, doesn't it? 14 I'm sorry, can you ask that question again? Α. 15 Sure. Let's -- in fact, I will just make it Q. 16 easier. 17 Can you turn to Page 391 of the book. And it's dot 427 at the bottom. 18 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 Α. Yes, I do.

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Now, this is a description of exactly what 1 Q. we were just talking about, which is which addresses are 2 3 visible and which ones aren't in a VPN, right? I believe it's describing a mechanism called 4 Α. 5 tunneling and generally describes this idea of putting one IP packet within another like we just talked about, 6 7 yes, sir. 8 Right. And that tunneling is what Dr. Short Q. 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 Generally, yes, sir. Α. 13 All right. Now, if you go to the last two Q. 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." (By Mr. Powers) It says, "Furthermore, even 18 0. 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. Short's figure where the original IP address was 23 24 encrypted and it was inside this what's called encrypted 25 inner datagram, right?

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No, sir this is describing a different 1 Α. 2 configuration than what Dr. Short was showing us. Let me finish reading. "Even the identity 3 Ο. of the original source and destination are hidden 4 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 Α. No, sir. It depends on the configuration. 10 And this is the configuration being 0. described in the VPN chapter of the book you use, 11 true? 12 13 Yes, sir, this is one of them. I haven't Α. looked at rest of it. 14 15 Now, the next sentence says, "Thus, only Q. 16 addresses in the outer datagram header are visible. The source address is the IP address of the router at one 17 end of the tunnel, and the destination address is the IP 18 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 Yes, sir. Α. So now let's go back to this IP address for 23 Q. SIP address. 24 25 MR. POWERS: Chris, could you bring up --

back up, Slide 25. 1 2 MR. CALDWELL: Your Honor, may we 3 approach? THE COURT: Yes, you may. 4 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. Then when we argued anonymity in front of Your Honor at 11 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 a book pointing to IP tunneling and saying, hey, now 18 19 there's no. 20 infringement. You know --21 MR. POWERS: I am explicitly not doing 22 What I said was I'm not talking about the Court's that. construction. I am just talking about a typical VPN and 23 24 not all VPNs. And that's specifically what Short said was a typical VPN or generic VPN, and I'm not saying 25

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it's required by the Court or anything else. 1 I'm 2 talking about how one could implement it in order to 3 hide it. My point isn't --THE COURT: And what's the relevance of 4 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 the discussion. 12 13 THE COURT: Let's do so. (End of Bench Conference.) 14 15 (Pause in proceedings.) 16 MR. POWERS: Can we have the lights down, 17 please. (By Mr. Powers) When we broke we were back 18 0. 19 at Slide 25, which is your slide, Dr. Jones, about what 20 you can see and what you can't see in Office Communicator in secure mode. True? 21 22 Yes, sir. Α. 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?

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Yes, sir. 1 Α. 2 Q. And you can see the IP address of the OC 3 server he's sending it to? Yes, sir. 4 Α. 5 And what you can't see are those SIP 0. 6 addresses that correspond to the people sitting at those 7 machines? 8 Α. Yes, sir. 9 Q. All right. Now, the claims of the '135 10 patent are talking about computers not people, right? Yes, sir. 11 Α. 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 Yes, sir. Α. 16 0. And the SIP addresses that are hidden, those 17 correspond to the people, right? 18 Yes, sir, they do. Α. 19 Q. All right. 20 MR. POWERS: So let's bring up Claim 1, 21 please, Chris, of the '135 patent. 22 (By Mr. Powers) Now, what Claim 1 talks Q. 23 about is the VPN between the client computer and a 24 target computer, right? 25 Yes, sir. Α.

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And that client computer is identified with 1 Q. 2 that IP address that we've already identified, right? 3 Yes, sir. Α. And the target computer is identified with 4 0. that IP address that is visible also, right? 5 6 Α. It's one of the target computers, yes, 7 sir. 8 All right. Now, and if you go down in Q. 9 Section 1 in that communication of the claim, there is a 10 discussion explicitly of IP addresses associated with the target computer, right? 11 12 Α. Yes, sir. 13 It's not talking about SIP addresses Q. 14 anywhere, is it? 15 No, sir, it's not. Α. And it's not talking about the people 16 0. 17 sitting there, is it? No, sir. 18 Α. 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 (By Mr. Powers) You've read this portion of Q. 24 the specification, Dr. Jones? 25 A. Yes, sir.

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Q. Probably many, many times? 1 Yes, sir. 2 Α. 3 This is a portion that's specifically 0. talking about the anonymity requirement that the Court 4 5 has held exists. True? Let me read it a second. 6 Α. 7 Of course. Ο. 8 Yes, sir, it's discussing anonymity. Α. 9 0. And when it is discussing anonymity in this 10 very first column of the patent, it says, "It may be desired to prevent an eavesdropper from discovering that 11 terminal 100 is in communication with terminal 110." 12 13 Right? 14 15 Yes, sir. Α. 16 0. And that's talking about the sending machine and the machine it's sending it to? 17 Α. I -- I believe so. I think that's from --18 19 that may be from Figure 1 where that's the sender and the ultimate destination is my recollection. 20 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 internet." 24 25 Α. Yes, sir.

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So in the actual '135 patent when it's 1 Q. 2 talking about anonymity, it's saying you want to prevent 3 an eavesdropper from knowing that computer is in communication occasion with that computer, correct? 4 5 Yes, sir. Α. And if we go back to your Slide 25 real 6 Q. 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 that computer? 11 12 Α. Yes, sir. 13 Now, and you will agree that the '135 Q. patent, several places, talks about trying to hide the 14 15 IP address of the sending machine, right? I believe it does so, yes, sir. 16 Α. 17 All right. And the Office Communicator Q. product does not hide that IP address, does it? It's 18 19 right there in plain view for an eavesdropper? 20 Α. 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 Α. Yes, sir. 25 And over on the far left it says, Source Q.

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192, 168, the same one we have already gone through 1 2 several times. 3 Α. Yes, sir. That IP address of that machine is visible 4 0. 5 to any eavesdropper? 6 Α. Yes, sir. 7 Not at all hidden? Ο. 8 No, sir. Α. 9 0. So if I'm right that anonymity, as the Court 10 has said is a requirement, requires hiding the IP address of the sending machine, you will agree we don't 11 12 infringe because it's right there for people to see? 13 Α. If we're talking about that outer IP 14 address, yes, sir. 15 And that outer IP address in this case is the Q. actual IP address of our sending machine of, RL 16 Fabrikam's machine? 17 Yes. If that's never hidden and you're 18 Α. 19 correct about that, yes, sir. 20 Okay. That is also true of Live Q. 21 Communication Server and the other products that you 22 have listed as accused products here. In all of them this IP address of the sending and receiving machine, 23 24 the actual IP address is visible, isn't it? 25 Α. They operate in the same way as this one for

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```
1
   this purpose, yes, sir.
               Now, let's talk about some marketing
2
        Q.
3
  materials that you talked about in direct examination.
             Do you recall being asked by your lawyer that
 4
5
   when Office Communicator is being marketed, it's
  marketed that you don't need an additional VPN because
6
7
   one is already created?
8
               I think the document doesn't say that
        Α.
9
   explicitly. I think that's my interpretation of that
10
   document, yes, sir.
11
        Ο.
               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
        Α.
               That is what it's saying, yes, sir.
15
               I'm not sure that the record is going to be
        Q.
16
   clear. Which -- which is it saying?
17
               I said it explicitly -- I believe it says
        Α.
   that you don't need a -- to set up a VPN or something
18
19
   along those lines.
20
              Now, and let's just -- so there's no magic
        Q.
21
   about it. Let's bring up the actual exhibit.
22
        Α.
              Yes.
              It is DX-3111. It should be in the binder
23
        0.
24
   in front of you.
25
                 MR. POWERS: And, Chris, I think we can
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bring it up. 1 2 (By Mr. Powers) This is the document you Q. 3 were testifying about on direct examination, Dr. Jones. I believe that's correct. 4 Α. 5 And you were shown, I believe, Page 8, Q. again, referring to the .00s at the bottom. 6 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 (By Mr. Powers) That's the portion you were Ο. 11 testifying about in your direct examination, Dr. Jones? 12 13 Yes, sir. Α. Now, this says you don't need a VPN, 14 Ο. 15 right? Yes, sir. 16 Α. 17 And the products that you're accusing of Q. being VPNs are specifically saying in their promotional 18 19 materials that a benefit of them is that you don't need 20 a VPN, right? 21 Α. Yes, sir. 22 All right. But you're still saying they're Q. a VPN even though they're saying they're not? 23 24 Α. Yes, sir. 25 Now, there is a lot of other documents --Q.

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you will agree with me that you reviewed a lot of office 1 2 communication promotional materials, right? 3 Α. Yes, sir. And those materials consistently refer to 4 0. Office Communicator as not needing any VPN at all and 5 that that's a benefit of them, right? 6 7 I believe so. I think the language is Α. 8 similar to this. 9 0. That no VPN at all is needed, and that's a Is that fair? 10 benefit. I -- like I say, I think that's a fair 11 Α. 12 characterization of what's here, yes, sir. 13 Q. Okay. 14 MR. POWERS: Let's bring up PX-130. 15 (By Mr. Powers) This is one more example. Q. This is one of the exhibits you had actually looked at 16 17 and had originally listed as something you were going to refer to, wasn't it? 18 19 Α. Yes, sir. 20 MR. POWERS: And could we go to Page 4 of 21 that, Chris. 22 (By Mr. Powers) Do you see, Dr. Jones, on Q. Page 4 in the very first bullet when they're talking 23 24 about the benefits of it, it is internet access without 25 a VPN connection?

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Yes, sir. 1 Α. And then if you go forward to Page 11, 2 Q. 3 again, using the pages at the bottom. You see at the very bottom it says reduced use the next to the last 4 5 paragraph, it says, "Reduced use of VPN services reduces hardware, software, and operating costs. 6 More 7 importantly accessing real-time presence information 8 without requiring a VPN provides true real-time 9 indication of availability." Yes, sir, I see that. 10 Α. 11 Ο. 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, fair? 14 15 I don't believe that's what they're saying Α. 16 here, sir. I believe they are saying that you don't need an additional VPN software. 17 It doesn't say that, does it? It just says 18 Ο. 19 you don't need a VPN? 20 Α. Yes, sir. 21 And if you turn to Page 44, finally, in this Q. 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."

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(By Mr. Powers) That doesn't say no 1 Q. 2 additional VPN connections, right, Dr. Jones? 3 That's correct, sir. Α. It says "no VPN connections"? 4 0. 5 Α. 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 Α. Yes, sir. 10 -- while we're on this concept of anonymity. 0. 11 In the '180 patent, the application that you say is a VPN is the one that's called "Meeting Space"? 12 13 It's an application that uses a VPN that's Α. formed by the PeerNet interfaces. 14 15 It's that use of Meeting Space that you were Q. 16 testifying about creates the VPN and thus infringes, right? 17 Yes, sir, that's an example of it. 18 Α. 19 All right. Now, you did not in your direct Q. 20 testimony provide any evidence regarding whether the use of Windows Meeting Space is or is not anonymous, did 21 22 you? 23 You didn't discuss that issue? 24 I believe I did, sir. Α. 25 Q. Well then, I missed it, so let me ask you

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```
1
   about it.
2
                              You will agree with me that
3
   the Windows Meeting Space relevant to the '180 patent,
   that there the IP address of the sending machine is also
 4
   visible?
5
               It is visible on the first link yes, sir.
6
        Α.
 7
             All right. Let's go to the point that was
        0.
8
   raised. Let's put up your slide.
9
                  MR. POWERS: And that's going to be Slide
10
   56, Chris.
               (By Mr. Powers) This is the slide that you
11
        Ο.
12
   were using, the page you were using to describe how
13
   Meeting Space works in connection with the '180 patent,
   correct?
14
15
               Yes, sir.
        Α.
               And we have our remote user over here who's
16
        0.
17
   sitting at home, I think you said celebrating a
   birthday, who wanted to connect with the students who
18
19
   were sitting in the library and have a shared meeting?
20
        Α.
               Yes, sir.
21
        0.
               That was the example you used to illustrate
22
   the possible use?
23
        Α.
               Yes, sir.
24
               Now, the connection between this remote user
        0.
25
  here on the far left and the computer that that remote
```

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user attaches to, those two IP addresses will be visible 1 to a hacker or eavesdropper, won't they? 2 3 Yes, sir. Α. All right. So, again, if I'm right that 4 0. 5 anonymity requires concealing those IP addresses, you will agree it's not met in Windows Meeting Space 6 7 either? 8 Α. Yes, sir --9 THE COURT: I am sorry. I couldn't hear 10 your question. (By Mr. Powers) You will agree with me that 11 Ο. 12 if anonymity, as required by the Court, applies -- means 13 you can't see those two IP addresses, then, in fact, it's not met in this case? 14 15 Yes, sir. Α. 16 All right. Now, let's turn to another 0. 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 Α. Yes, sir. 22 And you will agree with me, and I think you Q. testified on direct examination, that everywhere a 23 24 website appears, Microsoft's products do not literally 25 infringe?

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Yes, sir. 1 Α. 2 All right. So what I'd like to do, if we Q. 3 could bring back up your easel and your slide --MR. POWERS: May I approach, Your Honor? 4 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. MR. POWERS: Anticipating that exact 10 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. Ι 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 (By Mr. Powers) Can you see that? Q. 18 Α. 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

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slightly different question. 1 2 If the box meant that there was literal 3 infringement, you wouldn't be able to put red checks in these boxes, would you? 4 5 Not in the second and third one, sir. Α. All right. So for two out of the three 6 Q.. 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? That's correct, sir. 11 Α. There wouldn't be check marks in these 12 Q. boxes? 13 14 Α. That's correct, sir. 15 And if we went to Claim 1 of the '180 --Q. 16 well, actually, let's do -- let's stay with the '135 for a minute. 17 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 Α. Yes, sir. 24 All right. So now let's talk about your --0. 25 the reason that you put red checks in those boxes

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despite the fact there is no literal infringement. 1 2 Okay? 3 Α. Yes, sir. Now, you took the position, as I understand 4 Q. 5 it, that the products you're talking about here with respect to the '135 patent, Office Communicator and the 6 7 others, even though they don't have a website literally, 8 are equivalent to that? 9 Α. Yes, sir. 10 Q.. And under what you were describing as the Doctrine of Equivalents, true? 11 12 Α. Yes, sir. 13 Now, let's orient ourselves a little bit. Q. You'll agree that the internet is different from the 14 15 worldwide web? 16 Α. Yes, sir. 17 The worldwide web, which is the subject of Q. the Court's instructions, that's what's required for the 18 19 claim, right? 20 Α. Yes, sir. 21 0. The internet is much broader and different, isn't it? 22 23 It -- it -- it is much broader than that, Α. 24 yes, sir. 25 In fact, the internet has existed since Q.

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```
1969, hasn't it?
 1
 2
        Α.
                In one way or form or another, yes, sir.
 3
        0.
               It started with ARPANET, right?
               Yes, sir.
 4
        Α.
 5
               Okay. Now, the worldwide web didn't really
        Q.
 6
   start until about 1993, right?
 7
               I believe that's correct, sir, somewhere in
        Α.
 8
   that range.
 9
        Q.
               Now, I take it you would agree with me the
   worldwide web has transformed our world in a meaningful
10
11
   way?
12
               Yes, sir.
        Α.
13
               In a huge way, hasn't it?
        Q.
14
        Α.
               For many people, yes, sir.
15
               Most people, wouldn't you agree with me
        Q.
16
   there?
17
               In our country, yes, sir.
        Α.
18
               All right. And there are massive companies
        Ο.
19
   that exist only on the worldwide web, right?
20
        Α.
               Yes, sir.
21
        Q.
               Amazon?
22
        Α.
               Yes, sir.
23
        Q.
               Google?
24
        Α.
               Yes, sir.
25
               eBay?
        Q.
```

Yes, sir. 1 Α. 2 Q. Yahoo! 3 Α. Yes, sir. Facebook? 4 0. 5 Yes, sir. Α. America Online? 6 Q. 7 Yes, sir. Α. 8 Q. Some of the biggest companies in the world 9 are only on the worldwide web and exist only because of the worldwide web? 10 Yes, sir. 11 Α. 12 Q. So the web has had a huge, substantial 13 impact on our lives? 14 Α. Yes, sir. 15 And the economy? Q. 16 Α. Yes, sir. Different from the internet? 17 Q. 18 Yes, sir. Α. 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 Yes, sir. Α. 23 So I could have a printer sitting right Q. there that has -- is on the internet because it has an 24 25 IP address, but it is not a website. You'd agree with

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that? 1 2 Α. It may or may not be, sir. 3 But it may not be? 0. Yes, sir. 4 Α. 5 The same with a phone, that could be Q. attached to the internet and not be a website? 6 7 Yes, sir. Α. 8 All right. Now, in your testimony you Q. 9 testified yesterday that you believed the Doctrine of 10 Equivalents was met here because of the application of what you called the function/way/result test; do you 11 recall that? 12 13 Yes, sir. Α. 14 0. 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 (By Mr. Powers) -- your testimony on that Q. subject and then we talk about it a bit. 18 19 So, first, function. You were asked yesterday at Page 108, "So were you able to determine if the 20 21 Microsoft '135 products perform substantially the same 22 function as a secure website?" That was your testimony about the "function" part of function/way/result, right? 23 24 Α. Yes, sir. And your answer was, "Yes, because they use 25 Q.

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computers to communicate in a VPN." Let's just stop 1 there for a minute. 2 3 I take it you would agree with me any VPN would meet that requirement. You have computers that 4 5 have VPN, right? Yes, sir, you do. 6 Α. 7 All right. "To present information to Ο. 8 clients." Well, that's true in any VPN, isn't it? 9 Α. Well, it depends on -- yes and no, sir. Ι mean there would be situations where you would be and 10 situations where you wouldn't, but that's not what I'm 11 12 discussing here. 13 The typical VPN you're presenting Q. 14 information to clients across the VPN, you would agree 15 with that? 16 Α. Not -- no, sir, I wouldn't. 17 You would agree often in VPNs, that you are presenting information to clients 18 19 Α. 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 Α. Yes, sir.

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And there are resources sitting in my office 1 Q. 2 that are on my network that I can access on my VPN, 3 right? Yes, sir. 4 Α. 5 Like things that are not on my laptop, I can 0. have shown -- sent to my laptop from my law firm? 6 7 Α. Yes, sir. 8 In that situation I am using a computer to Q. 9 communicate on a VPN to present information to me, the 10 client. That's true, isn't it? No, sir, that doesn't meet what I'm talking 11 Α. about here. 12 13 Well, I'm presenting information? Q. No, sir. Those devices would be presenting 14 Α. 15 information, not the VPN. 16 0. The devices on the other side of the VPN? 17 Yes, sir. Α. Well, of course. That's always what is 18 0. 19 presenting information, right, some device on the other 20 end of the pipe? 21 If they are acting as a server they would Α. 22 be, yes, sir. So any situation where you have a VPN with a 23 0. 24 client and a server, that server is presenting 25 information to the client across the VPN, true?

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By the server are you referring to the other 1 Α. end of the VPN or a server that's in the virtual private 2 3 network? I'm talking about a server 4 0. that's at the other end of the VPN. 5 If it's just forming part of the tunnel, 6 Α. 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 Okay. Α. I try to get information from my law firm 11 0. 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 Α. Yes, sir. 15 That's a typical use of the VPN, right? Q. Yes, sir. 16 Α. 17 And in that typical use of the VPN, Q. I'm having information presented to me across that VPN, 18 19 true? 20 Yes, sir. Α. 21 Q. All right. Now, the next thing you say 22 is to require that clients be authorized to access the That's also typical on VPNs, isn't it? 23 servers. 24 Yes, sir. Α. 25 Q. So now let's go to your testimony about

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substantially the same way. 1 2 MR. POWERS: Let's bring that up, please, 3 Chris. (By Mr. Powers) The very next question and 4 0. 5 answer in the transcript. You were asked: "Were you able to determine if the Microsoft '135 products perform 6 7 in substantially the same way?" And the next answer it 8 was your testimony on that subject, wasn't it? 9 Α. Yes, sir. 10 And you said a lot of the same words, "They 0. make use of computers to communicate on the VPN." 11 12 That's the same as what we just talked about, right? 13 Α. Yes. 14 0. Now, using protocols that's true on any 15 VPN? Sir, I think you're misunderstanding what 16 Α. 17 I'm saying. I am asking you a question about it. 18 Ο. 19 VPNs use protocols, yes, sir. Α. 20 Okay. "They present information to Q. 21 clients." That we've already talked about. Now you say, "through windows." And by "windows" I take it you 22 mean -- you meant capital W meaning our product 23 Windows? 24 25 A. Sir, I meant the windows in an operating

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system that you typically see --1 2 Q. Okay. 3 -- the visible windows. Α. Let's stop on that. The '135 patent doesn't 4 0. 5 say anything about using Microsoft's Windows operating system, does it? 6 7 No, sir, it doesn't, I don't believe. Α. 8 It is not a requirement in any claim, not Q. 9 discussed anywhere in the patents at all? 10 It's certainly not a requirement of the Α. claim. I don't recall if it's somewhere else in the 11 specification. 12 13 You certainly didn't rely on that, did Q. 14 you? 15 No, sir. Α. Now, over the internet -- most VPNs go over 16 0. 17 internet, don't they? When I'm sitting in my the hotel room here dialing back to my law firm, I'm going 18 19 over the internet, aren't I? 20 Α. Yes, sir. 21 0. And that's a typical use of the VPN? 22 Α. Yes, sir. 23 "In a way in which the clients and servers Q. 24 cooperate." Well, I think we talked about that before. 25 If I'm connecting to my server, they are cooperating,

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```
aren't they?
1
               Yes, sir.
2
        Α.
3
               That's typical in a VPN, isn't it?
        0.
               Yes, sir.
 4
        Α.
5
               "To ensure that the clients are authorized
        Q.
  to connect." That's what we've already talked about in
6
7
   the prior slide that I have to log in and say that I'm
8
   me, right?
9
        Α.
               Yes, sir.
10
        Q..
               And that's also typical?
               Yes, sir.
11
        Α.
12
               All right. Let's get to the result part,
        Q.
13
   the last part, the very next question and answer in the
   transcript. "Finally, did you determine whether the
14
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
   a VPN." That's the same as we saw in the last two,
18
19
   right?
20
               It's similar to that, yes, sir.
        Α.
21
        Q.
               The same language essentially, right?
22
               Yes, sir.
        Α.
               "And over a public network," that's the same
23
        Q.
24
   as what we have talked about before over the internet?
25
        Α.
               Yes, sir.
```

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"In a way which only clients that are 1 Q. 2 registered can communicate." We've talked about that 3 with authority, right -- authorization? Yes, sir. 4 Α. 5 Okay. Now, with regard to the '135 patent, 0. if the jury were to find that Microsoft's products are 6 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 Yes, sir. Α. Let's talk now about indirect infringement. 11 Ο. 12 MR. POWERS: And, Chris, could you bring up Slide 42, please. 13 14 (By Mr. Powers) So Slide 42 was part of your 0. 15 presentation to the jury yesterday, wasn't it, 16 Dr. Jones? 17 Yes, sir. Α. And here you were attempting to set out what 18 0. 19 you understood to be the requirements for proving 20 inducement infringement? 21 Α. Yes, sir. 22 I take it you weren't trying to say to the Q. 23 jury that this is the law? You understand that's Judge Davis' role? 24 25 Yes, sir, I understand he will give them Α.

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1 directions on that. 2 Q. Okay. Now, on the first issue, the 3 question of the knowledge of the patent, you cited two things, didn't you? One was a Patent Office filing in 4 5 one of Microsoft patents and one was a letter from 6 SAIC? 7 Α. Yes, sir. 8 Q. Let's take the first one first. MR. POWERS: Chris, could you go to Slide 9 10 43. I think it is the very next slide. (By Mr. Powers) This is the document that 11 0. you referred to as providing evidence that Microsoft 12 13 knew about the '135 patent, right? 14 Α. Yes, sir. 15 Now, what I didn't hear in your testimony Q. 16 yesterday was what importance should be attached as to 17 who knew about the '135 patent. You didn't testify about that issue, did you? 18 19 Α. No, sir. 20 And so in your view if any person in all of Q. 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 Α. No, sir. 25 So it has to be a relevant person; would you Q.

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agree with that? 1 I believe it would have to be someone who 2 Α. 3 was, say, in the legal department and/or a technical person, not -- not someone, say, working in an office. 4 5 All right. And so it has to be someone with 0. relevant responsibilities about the products that you're 6 7 talking about here in this case. Is that fair? Or 8 legal responsibilities that relate to those products? 9 Α. I'm not sure about relating to those products, 10 but I think if someone in the legal office were sir; made aware, that would constitute knowledge? 11 12 So if it were a lawyer in Microsoft's Q. 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 No, sir, and I don't believe that's what Α. happened here. 18 19 0. 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.

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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 somebody who knows there's going to be infringement, it 4 5 has to be somebody that's responsible for the right issues, right? 6 7 Sir, I believe if someone were notified Α. 8 under these circumstances, they would understand that 9 this was important to Microsoft. 10 That's an assumption of yours; you don't 0. 11 actually know it? 12 Α. Well, it's my belief, sir. 13 Okay. But it's not based on any knowledge Q. 14 you have, is that fair, in terms of what happened 15 actually inside Microsoft or what happens inside large companies like Microsoft? You just don't know? 16 17 I -- I don't know what happened to this Α. letter other than I would assume the patent inventors 18 19 would have been notified. 20 All right. Let's -- well, let's stop there. Q . 21 You would assume the inventors on the patent -- well, 22 let's be specific so we have good context here. 23 Α. Yes. 24 Exhibit PX-401 is the exhibit that you're Ο. 25 talking about on Slide 43, right?

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Yes, sir. 1 Α. 2 Q. And that is a Microsoft patent application 3 that was going through the Patent Office at that time? Yes, sir. 4 Α. 5 And if we go to your Slide 44. Let's get Q. 6 your position. 7 MR. POWERS: Can you blow it up a little 8 bit bigger. 9 0. (By Mr. Powers) This is the part you relied, 10 on Dr. Jones? Yes, sir. 11 Α. 12 And this is the part when the Examiner was Q. looking at --13 14 MR. POWERS: Thanks, Chris, that's much 15 better. (By Mr. Powers) In looking at one of 16 Q. 17 Microsoft's patent's -- patent applications, they said: Wait a minute, that might not be patentable because of 18 19 Mr. Munger's patent disclosure, right? 20 I believe they said it wasn't. Α. 21 Q. Right. At this point. 22 Yes, sir. Α. 23 Okay. And when you said that, you would Q. 24 assume that the inventors on this patent would be told 25 about that fact that the Patent Office had said

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Mr. Munger's application teaches something relevant to 1 2 your invention. You assumed that. 3 I believe that, sir. Α. You don't know that, do you? 4 0. 5 I don't know if they were, sir. Α. You don't know what standard practice inside 6 Q. 7 large corporations is either. 8 Not -- not at Microsoft, no, sir. Α. 9 0. Okay. Now, the inventors on this patent at 10 issue in PX401 are not anybody involved in anything with any of the products in this case, are they, as far as 11 you know? 12 13 As far as I know, sir. Α. The names on this patent application have 14 0. 15 never come up in this case as far as you know? 16 Α. I don't know, sir. 17 In all the information you read, you can't Q. recall ever seeing these names; isn't that fair? 18 19 Α. I don't recall, sir. 20 All right. Q . 21 MR. POWERS: Now, let's bring up actual PX401. 22 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.

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(By Mr. Powers) Let's look at who it's 1 Q. 2 addressed to, please, Dr. Jones. 3 Α. Yes, sir. This was not sent to Microsoft at all, was it? 4 0. 5 It's sent to a law firm. Α. No, sir. So based on the evidence you supplied to the 6 Q. 7 jury, no one at Microsoft, not even a lawyer, saw this 8 document, just based on the document you showed us. 9 Α. I have no -- this is what it says, sir. 10 0. And it says what I said it says, doesn't it? Yes, sir. 11 Α. 12 Okay. And you'll agree with me that when Q. 13 we're talking about inducement infringement, it's knowledge that what Microsoft is doing could be an 14 15 infringement that's relevant, true? Yes, sir. They have to have formed that 16 Α. 17 knowledge. And infringement is defined by the claims you 18 Ο. 19 earlier testified, not the specification, right? 20 Α. Yes, sir. 21 You were very, very clear about that in your Q. 22 direct testimony, that the claims define infringement; the specification doesn't do that at all, right? 23 24 Α. That's correct, sir. Now, in -- let's go back to your Slide 44, 25 Q.

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please. 1 2 The portions that you've called out are only 3 discussing the specification, not the claims, right? I believe they mention the entire patent, sir. 4 Α. 5 Well, these are the only two parts of the 0. entire exhibit where Munger is mentioned, right? 6 7 I don't recall. I just --Α. 8 Well, let's bring up -- I'm sorry. I didn't Q. 9 mean to cut you off. 10 I just focused on these two. Α. 11 0. 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 cited the ones that were there; isn't that fair? 14 15 No, sir. I would have just picked these out Α. 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?

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I believe so, yes, sir. 1 Α. 2 And if you look at the second portion, the Q. 3 only part that was actually called out was a portion of the specification, true? 4 5 Α. Yes, sir. And -- and it's the particular lines in the 6 Q. 7 specification at Column 1, Lines 41 to 50. 8 Α. I'm sorry. 45 to --9 0. 60. I'm sorry. You're right. 10 Now, that doesn't refer to the claims at all, does it? 11 12 Α. No, sir. 13 So -- and, in fact, typically, you're somewhat Q. familiar with how patent prosecution works in the Patent 14 15 Office, right? You testified about that on direct examination. 16 17 Yes, sir. Α. When a reference is being used against a 18 0. 19 patent application, typically, what's being referred to 20 is the teaching of the specification, isn't it? 21 Α. Yes, sir. The teaching and the specification are often referred to. 22 23 And typically, not the claims, true? Q. 24 More often than not, yes, sir. Α. 25 Q. All right. And that's true in the case of

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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.

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Munger's '135 patent. 1 2 Α. Ultimately, yes, sir. 3 All right. Now, that -- that was the first 0. bit of evidence that you put up before the jury on 4 5 knowledge, true? 6 Α. Yes, sir. 7 The second was in Slide 45. Let's look at Ο. 8 that. This was a letter that SAIC sent to Microsoft in 9 May of 2006, correct? 10 Yes, sir. Α. And the portion that you showed the jury just 11 0. 12 says that -- that the '135 patent would be of interest 13 and valuable to Microsoft. It doesn't say that Microsoft infringed it, did it? 14 15 I don't believe it says that, sir. Α. 16 So this is, as you read it, just an invitation Q. 17 to license, not a statement that Microsoft should look at this and decide if it infringes. 18 19 I -- yes, sir. Α. 20 All right. Now --Q . 21 MR. POWERS: Chris, let's bring up the 22 actual exhibit, PX120. 23 (By Mr. Powers) Now, the middle portion of Q. 24 that, that small paragraph in the middle, you read that portion when you were preparing for your testimony, 25

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1 right? 2 Α. I -- I -- I believe I've read this, yes, sir. 3 But this is not part of what you showed the 0. jury on -- on the slide in your presentation. 4 5 No, sir, it's not. Α. Okay. Now, part of that same letter that you 6 Q. 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? Yes, I do. 11 Α. 12 Now, you understand that RFC -- well, let's Q. 13 talk about what an RFC is for a minute. An RFC is a form of internet standard coming 14 15 out of the IETF, right? 16 Α. Yes. Some of them are standard; some of them 17 are other documents, yes, sir. And the IETF is something called the Internet 18 0. 19 Engineering Task Force? 20 Α. Yes, sir. 21 0. And that's a collection of leading academics 22 and business people and technologists and government people all trying to make the internet work better. 23 24 Α. Yes, sir. And they have a standard-setting process where 25 Q.

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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?

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1
        Α.
             No, sir.
                    So it's irrelevant to you that the
2
             Okay.
        Q.
3
   statement in the letter that you relied on is wrong?
             Yes, sir. It's not relevant.
 4
        Α.
5
             And that the CEO of VirnetX, the Plaintiff in
        0.
   this case, admitted in his deposition that it's wrong.
6
 7
             That's not relevant to my analysis, sir.
        Α.
8
             Did you read that testimony from Mr. Larsen?
        Q.
9
        Α.
             I -- I don't recall if I saw that or not, sir.
10
             Well, let's show it to you and see if it helps
        Q.
11
  your recollection.
12
                  MR. POWERS: Chris, could we bring up
   from his July 21 deposition, at Page 286, Line 25,
13
   through 287, Line 4? This is Kendall Larsen, the CEO
14
   and chairman of VirnetX.
15
16
        Q.
             (By Mr. Powers) Question: Is it your belief
17
   that any product that has general functions and benefits
   of what's described in RFC 3263 -- let's stop there for
18
19
   a minute.
20
             That's the same RFC that's in the letter you
   relied on, right?
21
22
        Α.
             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
```

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sir.

Α.

Q.

0.

Α.

Q.

122 comes under the VirnetX patents? Answer: No. Do you remember reading that testimony from Kendall Larsen, the CEO of VirnetX? I still don't recall one way or the other, Okay. Well, let's try another excerpt and see if you recall that. MR. POWERS: Chris, could we bring up, from the same transcript, Page 306, Lines 11 to 23. (By Mr. Powers) Question: It's your belief, and was in the summer of 2006, that Microsoft was not actually practicing RFC 3263. That's the same RFC, isn't it, Dr. Jones? Yes, sir. All right. Question: Right? Answer from Mr. Larsen: Yes. Question: And when SAIC gave notice to Microsoft that Microsoft was potentially infringing the VirnetX intellectual property, Microsoft was told that if it were practicing RFC 3263, it was potentially infringing, right? Answer: It was a misstatement. Yes, I do remember that. And it was a notice from Pam Bumann, and

25 it was a general indicator that they were practicing

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3263 and if they were, and Microsoft said we're not. 1 2 Do you recall that testimony from Mr. Larsen, 3 CEO of VirnetX? I still don't recall seeing that one way or 4 Α. 5 the other, sir. Okay. Now, for you to know whether a product 6 Q.. 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 Α. 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. THE WITNESS: Thank you. 16 17 MR. POWERS: Does Your Honor wish a copy? THE COURT: No. That's all right. 18 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

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124
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been sitting there very attentively.
 1
 2
                   So let's take an early lunch, and we'll
   plan to start back at 1:00 o'clock. So we'll be in
 3
   recess until 1:00 o'clock.
 4
 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
                                *
11
12
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21
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1	
2	CERTIFICATION
3	
4	I HEREBY CERTIFY that the foregoing is a
5	true and correct transcript from the stenographic notes
6	of the proceedings in the above-entitled matter to the
7	best of my ability.
8	
9	
10	
11	/s/
12 Official Court Reporter	
13	
14	
15	
16	/s/
17 Deputy Official Court Reporter	Deputy Official Court Reporter State of Texas No.: 731
18	Expiration Date: 12/31/10
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EXHIBIT F6

IN THE UNITED STATES DISTRICT COURT 1 FOR THE EASTERN DISTRICT OF TEXAS 2 TYLER DIVISION 3 VIRNETX Civil Docket No. 6:07 - CV - 80\* 4 VS. \* Tyler, Texas 5 March 10, 2010 \* 6 MICROSOFT CORPORATION 1:00 P.M. 7 TRANSCRIPT OF JURY TRIAL 8 BEFORE THE HONORABLE JUDGE LEONARD DAVIS UNITED STATES DISTRICT JUDGE 9 10 11 APPEARANCES: 12 FOR THE PLAINTIFFS: MR. DOUGLAS CAWLEY MR. BRADLEY CALDWELL 13 MR. JASON D. CASSADY MR. LUKE MCLEROY McKool-Smith 14 300 Crescent Court 15 Suite 1500 Dallas, TX 75201 16 MR. ROBERT M. PARKER 17 Parker, Bunt & Ainsworth 100 East Ferguson 18 Suite 1114 Tyler, TX 75702 19 20 APPEARANCES CONTINUED ON NEXT PAGE: 21 22 COURT REPORTERS: MS. SUSAN SIMMONS, CSR Ms. Judith Werlinger, CSR 23 Official Court Reporters 100 East Houston, Suite 125 24 Marshall, TX 75670 903/935-3868 25 (Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

roduced on CAT system.)

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MR. POWERS: Thank you, Your Honor. 1 2 MARK JONES, Ph.D., PLAINTIFF'S WITNESS, PREVIOUSLY SWORN 3 CROSS-EXAMINATION (CONTINUED) BY MR. POWERS: 4 5 Good afternoon, Dr. Jones. 0. Good evening. 6 Α. 7 Before the lunch break, we were talking about Ο. 8 your opinions regarding indirect infringement, 9 particularly inducement infringement, and I wanted to 10 get us back to where we were. MR. POWERS: So, Chris, if you could put 11 up Slide 45 from Dr. Jones' presentation, we'll get back 12 13 to where we were. (By Mr. Powers) You recall, Dr. Jones, that 14 Ο. 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 infringement? 18 19 Α. Yes, sir. 20 Now, this is the letter that SAIC sent to Q. 21 Microsoft in May of 2006, correct? 22 Α. Yes, sir. 23 And this is the one that made the allegation Q. 24 that the RFC 3263 would be -- if that's being used, that 25 basically means you're infringing.

Do you recall that? 1 2 Something along those lines, yes, sir. Α. 3 And this is the one where Kendall Larsen, the 0. CEO of VirnetX, had said that that was a misstatement. 4 5 Do you recall that? 6 Α. Yes, sir. 7 And your testimony was that the fact that that Ο. 8 was a misstatement in the letter on which you're 9 relying, it didn't bother you. 10 Do you recall that? It had no bearing on my opinion, sir. 11 Α. Right. 12 Okay. And when we broke, I was asking you Q. 13 that wouldn't you personally expect that if somebody was making an allegation like that, that anybody who uses 14 RFC 3263 is infringing, that you would normally expect 15 to see something like a claim chart that proved that. 16 17 Do you recall that question? I don't think that was the question I 18 Α. 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. Would you expect that someone making an 23 24 allegation that practicing of RFC 3263 would infringe 25 the '135 patent as was made in this letter?

This May of 2006 letter, you would normally 1 2 expect that such an allegation would have claim charts 3 to back it up, wouldn't you? If it were in a legal case, yes, sir. 4 Α. 5 All right. And you personally haven't made an Q. assessment of whether that statement is true, i.e., 6 7 whether -- meaning whether practicing 3263 really does 8 infringe. 9 You personally haven't done that? 10 Α. I have -- I have not looked to see if there are ways you could practice 3263 with or without 11 12 infringing. I've not done a detailed analysis. 13 All right. Now, Microsoft answered this Q. letter, didn't they? 14 15 I believe so, yes, sir. Α. 16 And, in fact, one of the things Microsoft Q. 17 said, when it answered, is they disagreed with the statements in the letter, true? 18 19 Α. I'd have to look at it again, sir. I don't 20 recall. 21 0. Could you look at DX3015? 22 MR. POWERS: And, Chris, could you bring 23 it up, please? 24 (By Mr. Powers) Do you recall in your Ο. 25 preparation, Dr. Jones, looking at this letter?

It wasn't one used in your opening position to the jury, 1 was it? 2 3 Α. I -- I believe I might have looked at it. I'm -- I don't remember looking at it in 4 5 detail, though, sir. Do you recall that there were two letters that 6 Q. 7 Microsoft sent back to SAIC about in this back-and-forth 8 chain? 9 Α. I -- I remember seeing that in testimony, sir. 10 All right. But you personally didn't study Q. those two, or did you? 11 12 I might have seen them, but I didn't study Α. 13 them in detail, no, sir. All right. So let's look at DX3015. 14 0. 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? I see where they say they disagree. 18 Α. Yes, sir. 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 Α. Yes, sir. 24 And finally, Microsoft asked for exactly what 0. 25 you would expect to see about a legal case allegation,

claim charts, right? 1 2 Α. Yes, I see that they -- they suggested sending 3 claim charts, yes, sir. 4 Let's just make sure everybody knows what 0. 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 Α. Yes, sir. Okay. And that's what you would normally 11 Ο. 12 expect to see in a lawsuit about infringement, and 13 that's what exactly what Microsoft was asking for, 14 right? 15 Yes, sir. Α. Are you aware that Kendall Larsen admitted 16 0. that no such claim charts were ever sent? 17 18 I'm not aware of that, sir. Α. Have you ever seen any evidence that any claim 19 Q. 20 charts or any information backing up SAIC's allegations were ever sent to Microsoft in response to their 21 22 request? 23 The claim charts, just with respect to the Α. 24 RFC, sir? 25 Q. Or any claim.

Α. Well --1 2 Q. Before the lawsuit was filed. 3 Okay. Yes, sir. I'm not aware of any claim Α. charts before the lawsuit. 4 5 All right. Or, in fact, you're not aware of Q. SAIC or VirnetX sending Microsoft any information 6 7 backing up any claims of infringement before the 8 lawsuit. 9 That's fair, isn't it? I -- yes, sir. 10 Α. And you're aware, aren't you, that SAIC and 11 0. VirnetX did not meet with Microsoft before the lawsuit? 12 You're aware of that? 13 I haven't -- the testimony I heard today --14 Α. 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. That's fair, isn't it? 18 19 Yes, sir. Α. 20 Okay. Now, let's go back to your opinion. Q. That's Slide 42. 21 22 MR. POWERS: Let's put that up, please, 23 Chris. 24 (By Mr. Powers) Now, let's focus on the very 0. 25 last requirement that you talked about, which is not

only did someone at Microsoft have to know the patent, 1 but they had to know that their users would be 2 3 infringing that patent. That's essentially what you're saying? 4 5 They knew or should have known. Α. Yes, sir. Knew or should have known that our customers, 6 Q. 7 Microsoft's customers, would be infringing, right? 8 Α. That the instruction would result in them 9 infringing, yes, sir. 10 Now, as to the '135 patent, which was what Q. we're talking about here, you've admitted that 11 Microsoft's customers do not literally infringe that 12 13 patent, because there's no website? 14 Α. That's correct, sir. 15 So if Microsoft just looked at that patent and Q. 16 said, well, our customers can't possibly infringe it, 17 because it requires a website, and we all know this isn't a website, that would be true, in your mind? 18 19 If they were looking at it only literal --Α. 20 literal infringement, that's correct, sir. 21 Q. All right. And that's a requirement in two out of the three limitations of Claim 1 of the '135 22 23 patent? 24 Α. Yes, sir. 25 And three out of four of the limitations of Q.

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Claim 10? 1 2 Α. Yes, sir. 3 And in order for someone at Microsoft to have 0. known or should have known that their customers would be 4 5 infringing, they would have to have looked at the claims 6 of the '135 patent and studied them, right? 7 Yes, sir. Α. 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? No, sir, I don't. 11 Α. 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, right? 17 18 Yes, sir. Α. 19 Q. But not the '180 patent? 20 Α. That's correct. 21 Q. All right. 22 MR. POWERS: So, let's -- Chris, if you would, please, put up Slide 47 from Dr. Jones' 23 24 presentation. 25 (By Mr. Powers) Now, this was the page that Q.

you presented to the jury to show your opinion as to why 1 2 you felt that Microsoft was contributing to infringement 3 by others. Yes, sir. 4 Α. 5 Now, one requirement -- we've already talked 0. about knowledge. I won't do that again. 6 7 One requirement is that there has to be no 8 substantial non-infringing uses of what Microsoft sells, 9 right? 10 Yes, sir. Α. Now, there are, you will agree, non-infringing 11 0. 12 uses. You just argue whether they're substantial. 13 We're at least in disagreement there? I'd have to look at what was said for non- --14 Α. 15 for what was stated to be a non-infringing use, sir. 16 Ο. 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 Α. Not specifically, sir. 22 Q. Fair enough. 23 Α. Sorry. 24 We'll go through it in detail then. 0. 25 Α. Okay.

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Q. All right. Do you recall a discussion about 1 2 high-security mode? 3 Α. Yes, sir. That's one mode in which the actual parts of 4 0. 5 Microsoft's products that you're talking about as infringing can be used? 6 7 Α. 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? Α. Yes, sir. 11 12 Q. Okay. And Claim 10 of the '135 patent 13 requires that that DNS proxy server gets a request from a client; true? 14 15 Would you like to have it up in front of you? 16 Α. No, sir. I -- I can -- I can recollect it. 17 Q. Okay. It -- it -- well, Claim 10 is a system claim, 18 Α. 19 so it requires that it be capable of such a thing. 20 And Claim 1 requires the same thing as part of Q. the method? 21 22 Claim 1 actually is a method. Claim 10, you Α. 23 have to take those steps. 24 Ο. 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. (By Mr. Powers) The first requirement of Claim 4 0. 5 10 is a DNS proxy server that receives a request from the client to look up an IP address. 6 7 Do you see that? 8 Α. Yes, sir. 9 Q. And the DNS proxy server returns the IP 10 address that was requested; true? 11 Yes, sir. Α. 12 Q. That's what the claim requires? 13 Yes, sir. Α. And in your opinion, when you provided your 14 Q. opinion to the jury of infringement, what you're calling 15 16 the DNS proxy server in this claim is the OC server, 17 true? No, sir. 18 Α. 19 You're calling the OC APIs, actually, on -- as Q. 20 part of Windows? 21 Α. The RTC interfaces, sir. 22 The interfaces that you say are part of Q. 23 Windows, right? 24 Α. Yes, sir. 25 Okay. And in high-security mode, that Q.

particular limitation is not satisfied, right? 1 The DNS -- those RTC interfaces do not return the IP 2 3 address? Maybe if I can clarify a little bit. 4 Α. 5 What you're asking is -- is for the rest of that, if it is determined that access to a non-secured 6 7 website has been requested? 8 Q. Precisely. 9 Α. Okay. 10 Q.. So let's take an example where I'm just going to Google.com. You'll agree that's not a secure website 11 or address? 12 13 Not that I know of, sir. Α. Okay. And so if I'm asking for that, what 14 0. 15 you're calling the DNS proxy server, those RTC interfaces, those don't return that IP address for 16 17 Google.com, right? In high-security mode, they will not return 18 Α. 19 that, sir. 20 So in high-security mode, if it ran -- the Q. 21 products that you're accusing of being used in high-security mode, it would not infringe Claim 10? 22 23 It would infringe Claim 10, sir. Α. 24 Even though it does -- even though it returns? 0. 25 It -- Claim 10 is a system claim, so it has Α.

the capability that if the software is still there, 1 you've still assembled the system. 2 3 Well, what I thought the claim requires that 0. where it's not a secure website, it returns the IP 4 5 address. The software still has that capability. 6 Α. 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 Yes, sir. Α. 13 And that -- and the claim requires that in --Q. for a non-secure website, it still returns the IP 14 15 address? Yes, sir, it --16 Α. 17 Q. Okay. 18 -- it does. Α. 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 I -- I -- by substantially, you mean how many Α. people are doing it, sir? 23 24 Ο. Sure. 25 I -- I do understand that some -- some users Α.

are doing that. Yes, sir, I do. 1 2 Ο. You don't know about its usage enough to say 3 whether it's substantial or insubstantial; is that fair? You know it's used? 4 5 I -- I do know it's used, yes, sir. Α. And you don't know enough to know whether or 6 Q. 7 not its use is important to those who use it to make it 8 substantial either, do you? 9 Α. I believe high-security mode is important to those who use it, sir. 10 And so it's substantial for them? 11 Ο. It's substantial. I just don't agree that 12 Α. 13 it's non-infringing. All right. So let's go to Claim 10. 14 0. We've 15 still got it on the screen. The last requirement --16 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 Α. Yes, sir. 22 Now, as I heard your testimony yesterday, you Q. were saying that a gatekeeper computer can be just 23 24 software, not an actual computer, right? 25 Α. Yes, sir.

And you were relying -- as I listened to 1 Q. your -- your reasons for that, you said it's consistent 2 3 with the Court's construction of DNS proxy server. Do you recall that? 4 5 I -- I said it was consistent with that, yes, Α. 6 sir. 7 All right. So the definition of being a DNS Q. 8 proxy server was that a proxy server could be either a 9 computer or a program, right? 10 Α. Yes, sir. And so the Court's construction of proxy 11 Ο. 12 server is what distinguished between computers and 13 programs -- or computers and software? 14 Α. Yes, sir. 15 And here the term that we're talking about is Q. 16 gatekeeper computer? 17 Α. Yes, sir. The Court's never given a construction that 18 0. 19 says a computer can be just software, has it? 20 Α. The Court hasn't construed that term at all, 21 sir. 22 And, in fact, you know computer to be Q. 23 hardware, right? 24 Α. Not necessarily, sir. 25 Normal use of a computer isn't a piece of Q.

hardware that's setting on a --1 That's certainly one of the normal uses, yes, 2 Α. 3 sir. All right. Now, let's turn back to the '180 4 Q. 5 patent for a moment. And let's put up your Slide 7. This is your page showing what you contended 6 7 was infringing for the '180 patent, true? 8 Α. Yes, sir. 9 Ο. Let's take XP first. That's the one on the 10 left. The reason that you contended that XP 11 12 infringes is that it has in it what you called the 13 PeerNet APIs or interfaces; is that fair? 14 Α. Yes, sir. 15 Now, in XP, there's actually no application Q. 16 that uses those interfaces at all, is there? That -- that comes with -- that it comes 17 Α. with -- installed with that space? 18 19 Q. Exactly. 20 No, sir, there's not. Α. 21 So if I -- for every copy of XP that's shipped Q. 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? Yes, sir. 4 Α. 5 And that's supplied by Microsoft? 0. Yes, sir. 6 Α. 7 Now -- and Meeting Space is the only Ο. 8 application that you testified about in your testimony 9 to the jury? 10 Yes, it is. Α. All right. Now, you testified at length in 11 Q. your direct examination about a technology called PNRP. 12 13 Do you remember that? 14 Α. Yes, sir. 15 As I heard your testimony, you were saying Q. that P -- that when PNRP is used to form the connection 16 17 that that infringes the '180 patent. 18 Is that fair? 19 Α. Yes, sir. 20 There are other ways to form a connection Q. 21 using Windows Meeting Space and Vista, other than PNRP, right? 22 23 You mean to get -- to get the initial address, Α. 24 sir? 25 Absolutely. Q..

Yes, sir. 1 Α. And you have not given us an opinion that 2 Q. 3 those infringe, true? Yes, I have. 4 Α. 5 And they don't infringe, do they? 0. I said the use with those with graph 6 Α. 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 Dr. Jones' Slide 56. I think that will help. 12 13 (By Mr. Powers) This was the page that you Q. used to talk about how Windows Meeting Space could form 14 15 a connection and create a group meeting, true? Yes, sir. 16 Α. 17 All right. And we've got our familiar remote Q. user sitting at home celebrating a birthday with our 18 students diligently working away in the library? 19 20 Α. 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 library to send them an invitation that has the IP 24 address in it, right? 25

Yes, sir. 1 Α. And you understand that's a common way? 2 Q. 3 Yes, sir. Α. All right. And it's that way of making the 4 Q. 5 connection, assuming that there's no other changes, that -- let's call the person in the library Bob, and 6 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. That's a typical way, right? 12 13 Yes, sir. Α. With that formation of the connection, with no 14 0. 15 other information yet, nothing else has happened, 16 there's no infringement, right? That's correct sir. 17 Α. All right. And if the entire meeting 18 0. 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 No. Graph maintenance still may take place to Α.

add additional connections, sir. 1 2 Q. And it may not. 3 Α. And it -- if it's fast enough, it won't. You're right, sir. 4 5 All right. Now, a second way to form that Q. connection, other than this -- what we call the 6 7 invitation form, is a way called Meetings Near Me. 8 You're aware of that, aren't you? 9 Α. Yes, sir. 10 And Meetings Near Me is a way for Bill, over Q. there remotely celebrating the birthday, to look for a 11 meeting near him, right? 12 13 Α. Yes, sir. And if a connection is formed using Meetings 14 0. 15 Near Me, without anybody leaving or shutting their laptops or any that have, no disconnections, none of 16 that, that formation of the connection is not 17 18 infringing? 19 Α. Yes, sir. All right. A third way of forming that 20 Q. 21 connection is People Near Me. That's a technology built 22 into the product, right? 23 Α. Yes, sir. 24 And with all the same assumptions of no 0. 25 laptops closing, no people leaving in a huff,

connections formed using People Near Me, this third way, 1 2 also no infringement? 3 Α. Yes, sir. Okay. Now, the only way that there's 4 0. 5 infringement even under your theory is if PNRP is actually used to make the connection, right? 6 7 In the initial connection; that's all we're 8 talking about. We'll get to later events later. 9 Α. 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 product? 14 15 No, sir, I don't. Α. 16 Okay. Now, you testified about what you Q. 17 called graft maintenance. Is that -- that was the term 18 you used? 19 Α. Yes, sir. 20 And your testimony was that in graph Q. 21 maintenance, PNRP would be used, right? 22 Α. Yes, sir. 23 That's not a means of forming the initial Q. 24 connection, is it? 25 Α. No, sir, not -- well, there are situations

that it could be, but, generally, no. 1 2 Q. Generally no. Okay. 3 All right. So let's -- let's switch gears for a minute to a different subject. There's another claim 4 5 term called a secure computer network address. Do you recall that term? 6 7 Yes, sir. Α. 8 Q. That's in all of the term claims of the '180 9 patent that are accused, right? 10 Α. Yes, sir. 11 So if that limitation is not found in the Ο. Windows products that you just used, there's no 12 13 infringement, right? 14 Α. Right. 15 And similarly, if VPN is not found, there's no Q. 16 infringement? 17 Α. Yes, sir. 18 Only one? It only takes one? 0. 19 Α. Yes, sir. All right. Now, with respect to secure 20 Q. 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 Α. Yes.

Q. And the S stood for secure, right? 1 2 Α. Yes, sir. 3 A normal e-mail address would be your name at 0. blank.com only, right? 4 5 Yes, sir. Α. And the point in the patent that you were 6 Q. 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 Α. I believe that was an example of a secure 11 domain name, yes, sir. Okay. Now, the -- let's go back to your Slide 12 Q. 13 56, which is our friends in the library and Bill celebrating the birthday. 14 15 So as I understand your testimony, the secure address is the address of Bill's computer setting over 16 at the UT -- UT-Tyler library. 17 18 Α. Yes, sir. 19 All right. And that address is an IP address, Q. as we've previously discussed? 20 21 Yes, sir. Α. 22 And if Bill stays in his little cubicle in the Q. 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 Α. Yes, sir. 3 And that IP address is one of those four 0. numbers separated by dots that we've looked at before? 4 5 That's one example, yes. Α. Typically, yeah. 6 Q. 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 Generally not, sir. No, sir. Α. In order to access Bill's computer, 11 Ο. 12 ultimately, that e-mail will arrive using Bob's IP 13 address. That's how it gets to his computer, right? Well, the e-mail wouldn't typically be sent 14 Α. 15 directly to his computer from Bill, sir. 16 Ο. Of course not. But Bill ultimately receives 17 the computer via a path -- the e-mail via a path that uses his IP address? 18 19 Typically, he would contact a server for that, Α. 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 Α. Yes, sir. 25 So we'll call his IP address X, so we don't Q.

have to use all -- all of the digits. 1 Fair enough? 2 3 Okay. Α. So at -- at 7:00 o'clock, Bob is in the 4 0. 5 library getting an e-mail from the server, and his e-mail address is X at that time. 6 7 Yes, sir. Α. 8 Q. At that time, X is not a secure address, is 9 it? 10 It doesn't need authorization for access, which is the Court's construction, isn't it? 11 It -- it does meet the Court's construction. 12 Α. 13 I'm not sure what you're saying as the access in it at this point. 14 15 Well, it's -- let me clear. That's a fair Q. 16 point. 17 Α. Okay. So Bob over there in the computer -- in the 18 0. 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 waiting for the other people to get there. 23 24 At that point, his IP address is not a secure 25 address, is it? That's not requiring authority for

1 access?

A. It does -- there are -- to access it through
3 grouping would require authority -- would require
4 authorization for access, sir.

Q. I'm not talking about groups. I'm just talking about what he's doing at 7:00 o'clock at night, waiting for the others to arrive. He's surfing the web; he's going to Google; he's going to Amazon; he's playing 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 a13 secure computer network address, sir.

Q. So at that point, even though he's not doing any grouping, his address, because it's capable of grouping, your testimony is, it's secure?

17 A. If his computer is ready to participate in18 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.

A. Okay. If -- if it's not enabled, then I would agree; it's not a secure computer network address, sir.

All right. And that's -- his address is X. 1 Q. Now, at 8:00 o'clock, he brings up the grouping program, 2 3 and he's ready to start. Yes, sir. 4 Α. 5 At that point, his address is still X? Q. 6 Α. Yes, sir. 7 But now it's secure, under your opinion? Ο. 8 Yes, sir. Α. 9 0. Same address not secure at 7:00 o'clock; secure at 8:00 o'clock? 10 Yes, sir. 11 Α. 12 Q. And he could be communicating during his 13 grouping session with e-mail servers and Amazon.com; he could be doing all of that at the same time? 14 15 Yes, sir. Α. Exactly what he was doing with an unsecure 16 0. address at 7:00? 17 Yes, sir. 18 Α. 19 But your testimony is that it's still a secure Q. 20 address now? 21 Α. Yes, sir. 22 All right. Now, I'd like to go back to the Q. 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.

Q. (By Mr. Powers) Can you see that? 1 2 Α. No. 3 Would it be better if I tilted it a little 0. bit? 4 5 That will be fine, sir. Α. No. MR. POWERS: Can the jury see that? 6 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. Ι want to try to make that clearer. 11 12 So let's put first as to the '135, instead of 13 your check marks, let's ask the question, whether there's literal infringement. 14 And as to '135, Claim 1, you would agree with 15 me as to this second limitation, the answer would be no? 16 17 Α. Yes, sir. 18 And as to this third limitation, the answer 0. 19 would also be no? 20 Α. Yes, sir. Now, in addition as to Claim 1 of '135, if VPN 21 0. 22 limitation is not met, then the claim's not met 23 literally or under the Doctrine of Equivalents, true? 24 Α. Yes, sir. 25 Q. So --

1 MR. POWERS: I won't mark on the board; I 2 promise you. 3 0. (By Mr. Powers) So that would be a no under 4 literal or DoE? 5 Α. Yes, sir. That's true with respect to the first part of 6 Q.. 7 the claim and the last part of the claim, right? 8 Α. Yes, sir. 9 Now, let's go to Claim 10 of the '135 patent. 0. 10 And instead of the check marks, we'll do the same thing. Instead of the check marks that you gave to the question 11 of whether there's literal infringement, the answer 12 13 would be no on all three of the last three limitations? 14 Α. Yes, sir. 15 And in addition to that, whether it's literal Q. 16 or Doctrine of Equivalents, if the answer on virtual 17 private network is no, there's no infringement anyway? Yes, sir. 18 Α. 19 That applies to the top part and also the last Q. 20 two limitations as well? 21 Α. Yes, sir. 22 Now, those are the only two independent claims Q. of the '135 patent, right? 23 24 I didn't catch the last part, sir. Α. 25 Q. I'm sorry.

The two independent claims of the '135 patent? 1 2 Α. Yes. Those are the only two. 3 And so those noes would apply to the dependent 0. claim of the '135? 4 5 Α. Yes, sir. All right. So now let's switch to the '180 6 Q. 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 '180, right? 11 12 That's correct, sir. Α. 13 Okay. We will mark out literal. Q. And with respect to the '180 patent, we have 14 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 Α. Yes, sir. 19 Q. I will just write S-A; is that okay? Secure 20 address? 21 Α. Okay. Yes, sir. 22 It's too hard to write in that little spot. Q. 23 Α. Yes, sir. 24 And that's true in various parts of the claim, 0. 25 isn't it?

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Yes, sir. 1 Α. And in addition, there's a requirement in the 2 Q. 3 '180 patent of all the claims for VPN? Yes, sir. 4 Α. 5 And that's true down here (indicates)? Ο. Yes, sir. 6 Α. 7 And if that's not present, then there's no Ο. 8 infringement of any of these claims either? 9 Α. That's correct, sir. 10 Q.. And that would be true -- I don't want to take the time, but of all the claims of the '180 patent? 11 12 Α. 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 Professor Jones, did you hear Mr. Powers give Q. 24 an example of how he uses his laptop to connect in a 25 virtual private network back to his office in San

Francisco? 1 2 Α. Yes, sir. 3 0. Now, if we took Mr. Powers' laptop and we connected it to the internet --4 5 Α. Yes, sir. -- and we used the virtual private network 6 Q. 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 Α. Yes, sir. Would his laptop have an IP address on it? 11 0. Yes, sir, it would. 12 Α. 13 Okay. Would that IP address be assigned, Q. basically, when he connects to the internet? 14 15 Yes, sir. Α. Now, if we were to intercept the 16 Ο. 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 Α. 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 We would see the IP address for his computer? Q. 24 Α. Yes, sir. 25 And is there any dispute in this case that Q.

that would be VPN that his firm uses or that our firm 1 2 uses? 3 In a typical VPN, no, sir. There's no dispute Α. about that. 4 5 Now, Professor Jones, are there schemes -- I Ο. use schemes; it's probably a little techie word here --6 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 Yes, there are. There are schemes like IP Α. 11 hopping, for example. 12 Q. And you introduced that to us in the -- in your direct testimony, correct? 13 Yes, sir, I did. 14 Α. 15 Now, in order to prove infringement, do you Q. 16 have to prove that Microsoft's products use IP hopping in order to mask the public internet address of those 17 messages? 18 19 Α. 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 the board. 22 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

communicating in the VPN? 1 No, sir, there's not. 2 Α. 3 0. Now, we've referred to Judge Davis' definitions. 4 5 Yes, sir. Α. Have you reviewed those? 6 Q. 7 Yes, sir, I have. Α. 8 Q. How many times? 9 Α. It's got to be scores at this point. 10 Q.. And how many times in reviewing those claim constructions have you found a claim construction that 11 says you need to use IP hopping in order to hide the 12 13 public internet address? Sir, that's not in that construction. 14 Α. 15 Okay. Q. 16 MR. CALDWELL: Now, Mr. Moreno, do you have Plaintiff's Exhibit 1 you can pull up for us? 17 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 (By Mr. Caldwell) Okay. Now --Q.

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, Mr. Moreno? 4 5 That's Claim 1. Let's pause there for a 6 second. 7 (By Mr. Caldwell) Professor Jones, is that the Ο. 8 claim that we have right here on the board? 9 Α. Yes. 10 Okay. So I think as long as the jury trusts Ο. us on that and the typing was good, we can actually drop 11 that bubble. 12 13 MR. CALDWELL: And now make Claim 6 as big as 14 you possibly can. 15 (By Mr. Caldwell) Okay. Now, Professor Jones, Q. 16 can you read for us what we see here in Claim 6? 17 Α. Yes, sir. The method of Claim 1, wherein Step 3 18 19 comprises the step of establishing the VPN by creating an IP address hopping scheme between the client computer 20 21 and the target computer. 22 Is this the scheme you were talking about that Q. 23 would hide the external public address of the communication? 24 25 Α. 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? That means practicing Claim 1, as well as 4 Α. 5 doing this additional thing, of IP address hopping. So is IP address hopping required by Claim 1? 6 Q. 7 No, sir, it's not. Α. 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 Α. Yes, sir. 13 Is there any requirement in Claim 1 about IP Q. hopping? 14 15 No, sir, there is not. Α. 16 Ο. And have you alleged infringement of Claim 6? 17 No, sir, I haven't. Α. Now, are there claims just like this in the 18 Ο. 19 '180 patent? 20 Α. 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 address in order to create a VPN? 24 25 Α. Yes. I did understand what he was saying,

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sir. 1 2 Q. Is there a name for that concept? 3 Α. IP within IP, or tunneling is another word for 4 that, sir. 5 Is IP tunneling a requirement of the patents? Q. No, sir, it's not. 6 Α. 7 Is it a requirement of Claim 1? Ο. 8 Α. No, it's not. 9 0. Claim 10? 10 Α. No, sir. Claim 12? 11 Ο. 12 Α. No, sir. 13 If we move to the '180 patent, Claims 1, 4, Q. 15, 17, 20, 31, 33, 35? 14 15 Α. Very good. 16 No, sir. It's not a requirement of those either. 17 18 Now, in the case of the SIP 0. Okay. 19 communications in Office Communicator and Office -- I'm 20 going to start that one over, because that wasn't going anywhere good. 21 22 In the case of SIP communications in Office 23 Communicator and Office Communications Server, what kind of address is the inner address in the communications? 24 25 That's a SIP address, sir. Α.

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 on the open internet? 4 5 You can't see those inside the VPN on the open Α. 6 internet, sir. 7 Now, did you demonstrate that to us yesterday? Ο. 8 Yes, sir. I did show that. Α. And what tool did you use to use that? 9 0. 10 Α. Wireshark. Do you believe those communications are 11 Ο. 12 anonymous? 13 Yes, sir, I do. Α. Do they protect the identity -- do they 14 Q. protect an identity for the people communicating in that 15 16 VPN? 17 Yes, sir. They protect the identities. Α. 18 Now, let's talk about the peer-to-peer 0. 19 communications. 20 Is it your understanding the PeerNet interfaces can create virtual private networks? 21 22 Α. Yes, sir. 23 And that is in the -- what function was it? Q. 24 That's when in grouping, sir. Α. 25 Now, in grouping, when folks are participating Q.

in a group --1 2 MR. CALDWELL: Actually, I'm going to 3 pull up one of the PowerPoints, if we could. I want to PowerPoint with the UT-Tyler 4 library on it. 5 (By Mr. Caldwell) Okay. Is this one of the 6 Q. 7 slides you showed us, Professor Jones? 8 Α. 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 identified as the virtual private network? 11 12 Α. Yes, sir. 13 All right. If -- if this person right here Q. (indicates) sends a message into the group --14 15 Yes, sir, I'm with you. Α. 16 0. -- and our trusty hacker pops up right here 17 (indicates), is our trusty hacker going to have a clue who sends that message? 18 19 Α. No, sir. They won't be able to determine 20 that. 21 Q. And why is that? 22 Well, as that message is -- is sent around the Α. group, the hacker can't determine which computer that 23 24 originated from. 25 Q. Thank you.

Professor Jones, I -- I also recall, while 1 2 we're on this topic of anonymity, Microsoft's Attorney 3 generally presenting that some sort of surprise that you would see an IP address on a communication on the 4 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 Α. No, sir. You have to see the IP address when 10 things are going over the internet for IP packets. Were you here when Dr. Short gave his 11 Ο. 12 presentation? 13 Α. Yes, sir. And very early on in that presentation, I 14 Ο. 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 whole bunch of computers. 18 19 Α. Yes, sir. 20 The computers that make up all those links in Q. 21 the internet, what were those called again? 22 Well, he called those routers, sir. Α. 23 0. And how does a router work, sir? 24 Well, it examines the IP address to determine Α. 25 where to send that packet. So it uses the IP address so

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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 those routers could see? 4 5 Well, if the routers have no ability to read Α. the address, they wouldn't know where to send it, sir. 6 7 And so in your opinion, Dr. Jones, does the Ο. 8 fact that you can see an outer identity, an outer 9 identifier like that IP address -- does that negate 10 anonymity or infringement? No, sir, it doesn't. 11 Α. 12 Q. Now, Mr. Powers also showed you more of those 13 documents that suggest Office Microsoft Communicator doesn't require a virtual private network. 14 15 Yes, sir, I remember that. Α. This probably goes without saying, but 16 Q. 17 whenever Microsoft wrote those documents, did they have the Court's claim construction? 18 19 Α. I believe in the document that I saw, the 2007 20 document, they did, sir. 21 Q. Well --22 No, actually --Α. 23 I think it was a line of communication Q. 24 servers. 25 Yes, sir. Actually, I don't believe they did Α.

have it. 1 2 Q. Okay. Well, what I want to know is, when your 3 Office Communications Server and you use it in the secure mode you identified, is it your opinion that that 4 5 use provides a virtual private network? Yes, sir. That's the opinion I explained, 6 Α. 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 Communications Server? 11 MR. POWERS: Objection, Your Honor. 12 He's 13 calling for speculation about why Microsoft would put something in its materials. 14 15 THE COURT: Restate your question. (By Mr. Caldwell) Professor Jones, when you 16 Q. 17 read a statement -- with your technical background and you read a statement in Microsoft's product literature 18 19 indicating this product doesn't need a virtual private 20 network, what does that tell you? 21 Α. Sir, that tells me that within the context of 22 that document, that Microsoft is telling us we don't need an additional VPN. In other words, I don't need to 23 24 set up my own VPN and use that software, because Office 25 Communications -- those products will provide that

functionality, provide that VPN for me. 1 And in your opinion, do those -- Office 2 Q. 3 Communications Server and Offense Communicator products, do they provide data security and anonymity for the 4 5 folks using the product to communicate? Yes, sir, as I explained yesterday. 6 Α. 7 Can you move briefly to the issue of website Ο. 8 and Doctrine of Equivalents? 9 Α. Yes, sir. 10 Now, during the first day of trial, were you Q. here when Judge Davis read instructions to the jury? 11 Yes, sir, I was. 12 Α. 13 Did you hear when Judge Davis said there were Q. two ways you can infringe? 14 15 Yes, sir. Α. 16 Ο. And what were those two ways? 17 You can infringe literally or under the Α. Doctrine of Equivalents. 18 19 Q. Can you read this little attachment Mr. Powers 20 made for the board? 21 Yes, sir, I can. Α. 22 You see it says VPN and no and no. Q. 23 What's the title? 24 Literal Infringement, sir. Α. 25 Will you remind the jury whether or not you Q.

even asserted literal infringement of Claim 1 of the 1 2 '135 patent? 3 No, sir, I didn't. I said that claim -- that Α. claim was infringed under the Doctrine of Equivalents, 4 5 sir. That's the second way Judge Davis said a 6 Q. 7 patent can be infringed. 8 Α. Yes, sir. 9 Ο. What about Claim 10? Did you assert literal 10 infringement of Claim 10? 11 Α. No. I asserted that Claim 10 was infringed 12 under the Doctrine of Equivalents, sir. 13 And now, in the questioning on Q. cross-examination, there was a time when you indicated 14 that you would like to explain some of your answers 15 16 about why you believe the functions of Office Communications Server and Office Communicator are 17 equivalent to a website? 18 19 Α. 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,

Live Communications Server, the products you identified, 1 2 are equivalent to a website? 3 Yes, sir. And you're talking about just Α. outside of -- just the general reasons, or are you 4 5 talking about the specific function-way-result test, 6 sir? 7 Just why you believe it's an equivalent. Ο. 8 Well, I believe it's an equivalent because I Α. 9 applied that function-way-result test to show that there is -- are insubstantial difference between what's going 10 on in this -- in this Office Communications Server 11 within these claims and what's going on in a website in 12 these claims. 13 And it was my opinion that they -- that both 14 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. Now, did Mr. Powers' questions, the questions 18 0. 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 No, sir, they didn't. Α. 25 MR. CALDWELL: Can we pull up Plaintiff's

Exhibit 401 for a second? 1 2 Okay. Now, can we flip several pages 3 into this? I think it's probably about Page 10, Mr. Moreno. I'm sorry I didn't give you warning as to 4 5 which page I was going to. That's it. (By Mr. Caldwell) Now, what we have -- can you 6 Q. 7 see this reasonably well on your screen? 8 Α. Yes, sir, I can. 9 0. Now, I remember you showed us a couple of 10 portions of this -- of this document in the direct testimony, correct? 11 12 Α. Yes, sir. 13 And do you remember Mr. Powers asking you a Q. 14 question saying there were two places in there where it 15 mentions the Munger patent and no more? Do you remember that? 16 17 Α. Yes, sir. Said those are the only two places where this 18 0. 19 document mentions the Munger patent, did he not? 20 Α. I remember something along those lines, sir. 21 Ο. And I believe he blew out a couple of big excerpts from this document and kind of moved them 22 23 towards the middle of the screen so we could read them? 24 Yes, sir, or that might have been my -- from Α. 25 my presentation. I don't recall, sir.

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Q. Okay. 1 MR. CALDWELL: Well, let's look at the 2 3 very first line up here, Mr. Moreno. (By Mr. Caldwell) That's one you showed us in 4 0. 5 your direct testimony, right? Yes, sir, it is. 6 Α. 7 Okay. That the -- the patent -- the -- the Ο. 8 claims Microsoft wanted were rejected as unpatentable in 9 view of a Gunningberg prior art and the Munger prior 10 art, correct? A. Yes, sir. 11 12 MR. CALDWELL: Can we drop that now, 13 Mr. Moreno? 14 (By Mr. Caldwell) Now, what do we see right Q. 15 here? 16 Now, there was something that Gunningberg, 17 that prior art didn't have, but what does the second sentence say? 18 19 It says: However, Munger teaches instructions Α. 20 executed at an application layer in accordance with an 21 OSI model. See Column 4, Lines 1 through 15. 22 And that's this Munger sitting right here with Q. the red tie, correct? 23 24 A. Yes, sir, it is. 25 MR. CALDWELL: Can we drop that bubble?

(By Mr. Caldwell) Now, what is -- what do we 1 Q. see right here, Mr. Moreno (sic)? What does the first 2 3 sentence say there? It says: It would be obvious for one of 4 Α. 5 ordinary skill in the art at the time of the invention to modify Gunningberg in view of executing the 6 7 instruction and application layer in accordance with an 8 OSI model as in Munger. 9 0. And that's our -- still our same Munger, still 10 the same '135 patent, is it not? Yes, sir. 11 Α. 12 MR. CALDWELL: Can we drop that bubble, 13 Mr. Moreno? (By Mr. Caldwell) And now what do you see 14 Ο. 15 right here? Was this the other portion you showed us in 16 your direct testimony? 17 The top two lines are, yes, sir. Α. There's citation after citation to Mr. Munger 18 0. 19 in here, is there not? 20 Α. 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 (By Mr. Caldwell) Now, I want you to -- what Ο. is this page right here? What is this for, Dr. Jones? 25

Well, when the Patent Office is communicating 1 Α. 2 with the applicants, it indicates what reference -- the 3 Patent Office indicates what references were cited. MR. CALDWELL: Can you open that bubble 4 5 up for us there? (By Mr. Caldwell) What's the one patent that 6 Q. 7 they cited in this list of references cited? 8 Sir, they cited the '135 patent by Mr. Munger Α. and Dr. Short and the other inventors. 9 10 Q. Do you recall Mr. Powers asked you a question: Now -- but who does this document have to go to? 11 Would it be okay if it goes to Microsoft's Shanghai office? 12 13 Do you recall that? I do recall that question, sir. 14 Α. 15 MR. CALDWELL: Can we go to the first 16 page? 17 Oh, I'm sorry. I keep tricking you Can we go to the next page? 18 there. 19 (By Mr. Caldwell) All right. Now, we see that Q. it goes to a law firm. Whose lawyers are those? 20 21 Α. Those are lawyers representing Microsoft in 22 prosecuting this patent, sir, is my understanding. 23 Patent lawyers? Q. 24 Α. Yes, sir. 25 MR. CALDWELL: Can we look at Plaintiff's

Exhibit 120 for a second? 1 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 probably blocking you with my foam board and pointing at 6 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 Jones? 10 Yes, sir. 11 Α. 12 On the left side, it says: Mr. Anoop Gupta, 13 the corporate vice president of Unified Communications Group at Microsoft. 14 15 Does that -- oh, I'm sorry. I didn't mean to Q. interrupt you. 16 17 But Mr. Anoop Gupta, the corporate vice president of Unified Communications Group was the 18 19 original addressee of this letter, correct? 20 Α. Yes, sir. 21 0. 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 Well, that's the group that would have Α.

responsibility for things like Office Communication 1 2 Server, sir. 3 0. Was this letter sent to unrelated groups of folks in the Shanghai office? 4 5 It doesn't appear so, sir. Α. Okay. And then when it left Mr. Gupta's 6 Q. 7 possession, where did it go first? I think we want to 8 look over here on the far right. 9 Α. That's -- it says Bradford L. Smith in the 10 Microsoft Legal Department. Okay. And it looks like the next day, 11 Ο. 12 Mr. Smith forwarded it to somebody else. Who's that? 13 That's Mr. Marshall Phelps, sir. Α. Any idea who Marshall Phelps is? 14 0. 15 He's in the Microsoft Legal Department, and Α. 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 (By Mr. Dawson) Now, Mr. Powers focused on 0. 25 this first sentence there that said: We believe the

claims of this patent are broad -- quite broad and would 1 2 cover this RFC. 3 Are we in this Court right now talking about an RFC and opening up an RFC and comparing an RFC 3263 4 5 to these claims? No, sir, we're not. 6 Α. 7 Q. Okay. 8 MR. CALDWELL: Well, can we drop that 9 part of it then, Mr. Moreno? 10 (By Mr. Caldwell) What did the owner of the Q. '135 patent tell Microsoft in this paragraph? 11 The owner was telling Microsoft that they 12 Α. believe that Microsoft would have an interest in the 13 '135 patent for its Live Communication Server 2005 14 product with Service Pack 1 and with its Microsoft 15 16 Office Communicator 2005 product. 17 In fact, even in the first sentence, it says: Q. We would like to contact you in the next week or so to 18 19 discuss the possibility of offering Microsoft a license, 20 correct? 21 Α. Yes, sir. 22 And I remember Mr. Powers following up with Q. you about, oh, gee, were there claim charts? Are you 23 familiar with claim charts? 24 25 Α. Yes, sir, I am.

Have you prepared claim charts in this case? 1 Q. 2 Yes, sir, I have. Α. 3 About how many pages of claim charts would you 0. quess you've prepared in this case? 4 5 Hundreds and hundreds, sir. I don't know if Α. 6 it exceeds a thousand yet or not, but hundreds. 7 I can assure that it's -- I remember one Ο. 8 that's 576 to it. So how many hours and hours have you 9 spent doing that? 10 Oh, hundreds of hours, sir. Α. Okay. And in order to do that, in order to 11 0. 12 provide the claim charts that were in your expert 13 report, did you look at Microsoft confidential 14 documents? 15 Α. Yes, sir. 16 0. And how did you get those documents? 17 After the lawsuit was filed, the orders are Α. put in place that would allow me to see those documents, 18 19 sir. 20 I mean, even you, Professor Jones, who has Q . 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 Not the kind of claim charts I would prepare, Α.

sir, no, sir. 1 2 Q. But setting aside claim charts, let's get back 3 to the actual issue on that document. Will you please remind us for what purpose you 4 5 showed the jury that document? I relied upon that document to show that 6 Α. 7 Microsoft had knowledge of the '135 patent, sir. 8 Q. It was received by Mr. Gupta, correct? 9 Α. Yes, sir. 10 Q.. Forwarded to at least two people in the Litigation Department -- or the Legal Department? 11 12 Α. Yes, sir. 13 Any doubt in your mind Microsoft knew of that Q. 14 patent? 15 No, sir. Α. We talked a little bit -- well, let me grab 16 0. 17 one. 18 You were asked about Claim 10, which is a 19 system claim, fair? 20 Α. Yes, sir. 21 Is high-security mode of the Office Q. 22 Communicator Product non-infringing with respect to this 23 claim? 24 No, sir, it's not. This is a system claim, Α. 25 and the Microsoft Office Communicator product -- or

sorry -- the RTC interfaces still have those 1 2 capabilities in -- whether it's configured by the user 3 in high-security mode or not. So is high-security mode an option that just 4 0. 5 allows different flexibility in how you might use it? Yes, sir. 6 Α. 7 Is that sort of flexibility in the product Ο. 8 significant or important? 9 Α. It is useful to have that flexibility, but it 10 doesn't make it non-infringing, sir. Now let's talk about the '180 patent. 11 Ο. Mr. Powers asked you some questions about the '180 12 13 patent, and one of the questions he asked you was he said, let's talk about Windows XP. 14 15 Do you remember that? Yes, sir. 16 Α. 17 And for Windows XP, he said, hey, does Windows Q. XP come with Windows Meeting Space? 18 19 Α. Yes, sir, or something along those lines, sir. 20 And what's the answer to that question? Q. 21 Well, it -- Windows XP doesn't come with Α. 22 Windows Meeting Space, sir. 23 Do you need Windows Meeting Space to infringe Q. 24 that claim right there? 25 No, sir. That's a computer-readable storage Α.

medium claim. That means if you have those instructions 1 2 on a computer -- I'm sorry -- on a computer-readable 3 storage medium and those instructions being what's represented up there, then you infringe. 4 5 And that happens with -- when you have them in 6 the PeerNet interfaces, sir. 7 Are those computer-readable instructions in Ο. 8 this box (indicates)? 9 Α. Yes, sir. That's XP, right? 10 Q.. Yes, sir. 11 Α. 12 Q. Are those computer-readable instructions in this box (indicates)? 13 14 Α. Yes, sir. 15 Plaintiff's 947, that's XP, isn't it? Q. 16 Α. Yes. 17 The previous one was Plaintiff's 830. Q. 18 Now we can jump to Vista. 19 Plaintiff's Exhibit 829, are those 20 computer-readable instructions in this box (indicates)? 21 Α. Yes, sir. 22 It just so happens that this box also comes Q. 23 with Windows Meeting Space? 24 Yes, sir, it does. Α. 25 So does Microsoft Windows XP Service Pack 2, Q.

straight out of the box -- still in the box, infringe 1 that claim right there? 2 3 Yes, sir, it does. Α. Now, do you recall a discussion about Windows 4 0. 5 Meeting Space and having a meeting at the library? Yes, sir, I do. 6 Α. 7 MR. CALDWELL: Will you put that slide 8 back up, Mr. Moreno? 9 Ο. (By Mr. Caldwell) So I tried to take pretty 10 good notes on this, and I know I didn't get it verbatim, but there was some questions like, oh, gee if this 11 12 person, Bob, invites Bill to the meeting, Bob never 13 closes his laptop, so Bob's always there. Yes, sir, I remember that. 14 Α. 15 And the invitation sends you the proper Q. 16 address, so you don't need to find the address to make 17 your first connection. 18 Do you recall that? 19 Α. Yes, sir. 20 There was a question, I think, put to you Q. 21 like, well, gee, would that still infringe? Would it 22 still use PNRP, the peer name resolution protocol? 23 Α. Yes, sir, I recall that. 24 What's the answer to that question? 0. 25 Well, sir, it would still infringe. Α. Because

graph maintenance would be used, it would infringe 1 But it would infringe Claim 17 and Claim 33 2 Claim 1. 3 anyway. Okay. And I thought one of your answers was, 4 Ο. 5 well, if you assume the meeting is short enough, you may not have this graph maintenance. 6 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 Yes, sir, that's correct. Α. Now, let's assume we're having our meeting. 11 Ο. 12 And what was it they were writing, a term paper? 13 I believe that was my example, yes, sir. Α. How quickly do these students have to finish 14 Ο. 15 their term paper to avoid without graph maintenance 16 taking place? 17 Well, based on Microsoft's documents, it's my Α. understanding that the graph maintenance takes place 18 19 approximately every three minutes, sir. 20 Is that a fairly quick term paper? Q. 21 Yes, sir. And I'm trying to recall whether it Α. 22 was three or five minutes, but it's something in that 23 range. 24 Now, Mr. Powers also asked you, said, hey, you Ο. 25 don't use graph maintenance. That's not something you

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do to form the initial connection. 1 Do you recall that? 2 3 Yes, sir, I do. Α. Is there any requirement in any claim of the 4 0. 5 '180 patent that you are using the secure domain name service to form the initial connection and only the 6 7 initial connection? 8 Α. 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. Okay. And near the end of your 11 Ο. 12 cross-examination, you were a asked about secure domain 13 names. You were asked in particular, I believe, about secure domain names in the context of the PeerNet 14 15 interfaces? Yes, sir, I recall that. 16 Α. Why do you believe a group member's address is 17 Q. a secure computer network address? 18 19 Α. 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

that connection to present a password or a group 1 2 membership certificate. 3 Ο. And if they can't? Then they won't be allowed to join the group, 4 Α. 5 sir. 6 So did Mr. Powers' questions in the entire Q. 7 cross-exam cast any doubt on your opinions in this 8 matter? 9 Α. No, sir, they didn't. 10 Q.. Will you look at the jury and tell them what you've concluded? 11 12 I've concluded that Microsoft infringes the Α. 13 '135 patent and the '180 patents. 14 Ο. Thank you. 15 MR. CALDWELL: Pass the witness. 16 THE COURT: Recross? 17 MR. POWERS: Thank you, Your Honor. 18 RECROSS-EXAMINATION 19 BY MR. POWERS: 20 Dr. Jones, I'd like to begin on the subject of Q . anonymity --21 22 Α. Yes, sir. 23 -- which was the beginning part of the last Q. 24 redirect examination. 25 Yes, sir. Α.

1 Now, let's start with first principles. Q. 2 You do agree that anonymity is required under the 3 Court's construction. Yes, sir. 4 Α. 5 Okay. And you agreed with me during Q. cross-examination that anonymity includes anonymity as 6 7 to the person and the machine. 8 Do you recall that? 9 Α. Yes, sir. 10 All right. And you recall that the SIP Q. address that is obscured relates to the person? 11 12 Α. Yes, sir. 13 But the IP address in the products that you're Q. accusing of infringement, that relates to the machine. 14 15 Yes, sir. Α. And that's not obscured. It's visible to the 16 0. 17 eavesdropper, right? 18 On the -- in the discussion we were having, Α. 19 yes, sir. 20 All right. Now, there was questions from Q. 21 VirnetX's counsel about IP hopping and tunnels. 22 Do you recall that line of questioning, 23 generally? 24 Α. Yes, I do, sir. 25 Those are just two types of -- two different Q.

ways of hiding that IP address corresponding to a 1 2 standard machine, aren't they? 3 Α. I believe IP address hopping is tunneling in many configurations, would not hide the outer IP address 4 5 sir. And in some configurations, it would? 6 Q. 7 Yes, sir, it's possible. Α. 8 Okay. So there are ways that -- there are Q. 9 different ways where you can hide that IP address 10 corresponding to the machine? Yes, sir, I believe there are. 11 Α. 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? I -- I'm -- I'm not sure what Microsoft is 16 Α. 17 arguing with respect to that, sir. I don't believe I've heard that yet. 18 19 All right. Now, you were asked a question as Q. 20 to whether an IP address is needed to send information from one router to another on the internet. 21 22 Do you recall that line of questions? 23 Yes, sir, I do. Α. 24 Now, you need an IP address for that routing, 0. 25 correct?

Yes, sir, typically. 1 Α. 2 Q. But the IP address that you're sending doesn't 3 necessarily have to be the IP address corresponding to RL Fabrikam's machine in the example that you gave us, 4 5 correct? That's right, yes, sir. 6 Α. 7 So you could achieve anonymity by hiding that Ο. 8 address in different ways. 9 Α. Yes, sir, you could. 10 Q.. But Microsoft does not. 11 There are ways that that address is Α. Yes. hidden after that initial link, sir. 12 13 Ο. But Microsoft does not hide it to that eavesdropper, because you showed us it was visible. 14 15 Α. On that link, sir, that's correct. 16 MR. POWERS: No further questions, Your Honor. 17 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

our next witness, may we approach? 1 THE COURT: Yes, you may. 2 3 (Discussion at the bench off the record.) THE COURT: All right. Ladies of the 4 5 Jury, I have a matter I need to take up at this time with the attorneys. So it's a little early, but I think 6 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 want to deal with these in? 17 MR. CASSADY: Yes, Your Honor. 18 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 1000, 1004, 1006, -7, -8, -9, 1011, -12, -13, 1015, 4 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. MR. CASSADY: Yes, Your Honor. 11 12 THE COURT: And what are Defendant's 13 objections? 14 May it please the Court. MR. SAYLES: 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.

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THE COURT: Okay. Response? 1 2 MR. CASSADY: Your Honor, these go 3 directly to the revenue related to this case. Mr. Reed has done a Georgia-Pacific analysis that requires him to 4 5 look at the profit share -- profit, market share, and revenues of the accused products. 6 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 Mr. Sayles -- I'm sorry that that kind of works that 11 12 way, Mr. Sayles and overall sales -- I apologize -- even 13 if it includes overall sales, those overall sales are directly related to --14 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 to convoyed sales. I may have my number wrong, but I 18 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 that their motion in limine, their motion to strike 22 23 failed on this very issue. 24 THE COURT: Okay. All right. Objection 25 to those exhibits is overruled.

Okay. What's next? Are these licenses 1 2 that are next? 3 MR. CASSADY: Your Honor, I believe Mr. Sayles has some specific objections to the next four 4 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. The -- Exhibit 602 is a license agreement 14 15 that we submit is irrelevant. It's a noncomparable license. And this is one of the licenses that we 16 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 Okay. Response? THE COURT:

MR. CASSADY: Your Honor, just like with 1 2 the motion in limine and the motion to strike on these 3 licenses, whether or not the licenses are comparable is not the only evidence as to whether or not they come in 4 5 the case. I believe Mr. Cawley argued during 6 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 matter is, they're relevant to a Georgia-Pacific 10 11 analysis. 12 I would actually submit to the Court that 13 had we not used these licenses and they had some tidbit in them that the defense liked, they would bring it up 14 15 and say, Mr. Reed, why didn't you consider these 16 licenses? 17 But -- and I think it's evidenced by the fact that Dr. Ugone is going to rely on 30 lump sum 18 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, again these were subject to the motion in limine. 23 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

that Microsoft has licensed patents on the reasonable 1 2 royalty basis. 3 And as Your Honor may know, Microsoft's normal arguments in these cases is, they always agree to 4 5 a lump sum no matter what, and these go directly against that statement by Microsoft that they don't pay running 6 7 royalties. 8 MR. SAYLES: May it please the Court, 9 could I add to that? 10 THE COURT: Yes. MR. SAYLES: Your Honor, on that last 11 12 point that they offered 602 -- and this happens to also 13 apply to 666, which is an the MPEG agreement, they say that they're offering that to show that Microsoft 14 15 sometimes accepts a running royalty. Microsoft has never denied that it 16 17 sometimes accepts a running royalty, but has asserted that it has a preference for a lump sum. 18 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, that doesn't mean that the rate shown in those two 22 agreements should be permitted. 23 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, and MPEG is a well-known technology involved --4 5 involving the transmission of images. And so we submit that even on that last 6 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 We're going to show the per-unit dollar amount MPEG. that goes to those licenses, again, simply to evidence 14 15 that they do pay running royalties. But Mr. Reed --16 17 THE COURT: Does that solve your problem with regard to --18 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 --

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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 that they did take running royalties. 4 5 MR. CASSADY: And, Your Honor, just so we're clear, I can't refer to overall payments they've 6 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 fixed, and the correct document is there. 18 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

PNRP-related technology. I don't know how much more 1 2 comparable you get than --3 THE COURT: All right. Objection is overruled. 4 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. MR. SAYLES: And while I'm at the bench, 11 12 may I also give 653, which is also a specific objection that I'll be getting to in just a moment? 13 With respect to Exhibit 646, Your Honor, 14 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 are between 1.5 percent to 2 percent per patent. 18 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

referring to so-called standard patent licensing rates. 1 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 available for cross-examination. 4 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. What's next? 11 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. And it's not offered to prove the truth of the matter 21 22 asserted. 23 What's next? 24 MR. CASSADY: Your Honor, I believe it's 25 the next group.

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THE COURT: Be the summaries? 1 The summaries of financial 2 MR. CASSADY: 3 data. 4 THE COURT: All right. And what's the 5 objection to their expert using summaries? 6 Judge, the objection to the MR. SAYLES: 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 what is shown there, the claim --11 12 THE COURT: All right. My ruling -- my ruling on the summary will be the same as the financial 13 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 more licenses? 18 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, which has not been allowed by the Court yet, so we would 23 24 ask the Court for a ruling with regard to the 25 admissibility of those objections -- of those exhibits.

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1 THE COURT: All right. And what is your 2 objection? 3 MR. SAYLES: The objection is that they are noncomparable licenses; that the technology is not 4 5 shown to be related to the technology in suit; and that they are irrelevant. 6 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 comes in or whenever you'd like to. 12 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 the DTPN objections that VirnetX had made to certain 18 19 exhibits, about the DTPN prior art, and those witnesses are coming tomorrow, so we need to resolve that issue, 20 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.

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THE COURT: -- that you filed? 1 2 Was VirnetX going to file a response to 3 that or --4 MR. McLEROY: Your Honor, we can, if you 5 We have not got around to it yet. would like. 6 THE COURT: Oh. I -- when we get to the 7 end of the day, I'll just hear some argument on that. Ι 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. All right. 11 12 MR. CASSADY: Your Honor, can -- I apologize. Can I have two seconds? 13 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 the stand, discuss the documents that are in his slides, 18 and then tomorrow morning give you a full list of what's 19 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

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record. 1 MR. SAYLES: That's fine. 2 3 MR. CASSADY: Thank you, Your Honor. THE COURT: Okay. All right. Very good. 4 5 Okay. What else? 6 MR. SAYLES: One other thing, Your Honor. 7 I want to be very careful about making the objections. I can understand Your Honor's rulings, and I respect the 8 9 Court's rulings. I would like to renew our Daubert 10 objections to Dr. Reed's testimony, which was Motion 11 256. The essential ground of that is Mr. Reed's 12 13 methodology does not show a sound economic connection between the claimed invention and the broad proffered 14 15 royalty base. And we've discussed that in connection 16 with these exhibits. Your Honor has ruled. But to the 17 extent that I should do so, I would ask the Court to 18 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.)

COURT SECURITY OFFICER: All rise. 1 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 Could you please introduce yourself to the 0. 19 jury. 20 Α. 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 Α. Yes, I am. 24 0. Do you have kids? 25 Α. I have three kids, yes.

Q. And how old are they? 1 Well, they're all in their 20s, and the oldest 2 Α. 3 is 26. So they're all grown up and out of the house? 4 0. 5 Yes, they are. Α. Okay. Now, Mr. Reed, can you please tell the 6 Q. 7 jury why you're here today. 8 Well, I'm here to testify about reasonable Α. 9 royalties, and specifically, the reasonable royalties 10 that Microsoft should play to VirnetX for the infringement of the '135 patent and the '180 patent. 11 12 Q. Okay. Now, we're going to get to your opinion 13 on that, but first let's talk about your educational background. 14 15 Where did you go to college? 16 Α. Went to college at the University of 17 California Irvine where I got a bachelor's degree in economics, and also I double majored in geography as 18 19 well. 20 Okay. Did you graduate with honors? Q. 21 Yes, I did. Α. 22 Did you receive any other degrees? Q. Well, yes, I went to graduate school, and I 23 Α. 24 got a master's degree in economics at UCLA. 25 Q. Okay. And you say a master's degree?

Α. Yes. 1 2 Did you get any other education after that? Q. 3 Well, I was in the Ph.D. program, and I got a Α. master's degree in the process of that. 4 5 Okay. Did you complete your coursework in the Q. Ph.D. program? 6 7 All the coursework, except for the Α. 8 dissertation. I'm what's sometimes called ABD or all 9 but dissertation. You said all but dissertation? 10 0. 11 Α. Yes. 12 Q. Okay. And so I assume that means you didn't 13 complete your dissertation? 14 That's correct. Α. 15 And why didn't you complete your dissertation? Q. 16 Α. 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 So that -- that's the -- well, let me ask it Q . 21 differently. That's the work you do today, correct? That's correct. 22 Α. 23 Okay. Well, what job or where did you begin Q. 24 that career? 25 Back then, I worked for a company called Α.

National Economic Research Associates. 1 2 Q. And do you still work there today? 3 I worked there about four and a half Α. No. years, and then I went to work for a couple of other 4 5 companies, and then six months ago, I co-founded the company I'm currently in. 6 7 Okay. And what company is that? Ο. 8 Α. It's Competition Economics. 9 0. And what does Competition Economics do? 10 Α. Well, the firm does economic consulting and research, and we focus on antitrust issues, and in my 11 case, I focus on intellectual property issues, which 12 13 include patent valuation and patent damages, like the case we're working in -- we're here about today. 14 15 Okay. And what's your position at Competition Q. Economics? 16 I'm one of the co-founders and director, and 17 Α. I'm in charge of the Los Angeles office. 18 19 Q. Okay. So I know we know you have a Los 20 Angeles office. How many other offices do you have? 21 We have another office in California and then Α. an office in Austin. 22 23 Austin, Texas? Q. 24 Α. Yes. 25 Well, how did you end up with an office in Q.

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1 Austin, Texas?

A. One of our co-founders is a professor of
3 economics at the University of Texas, and he heads that
4 office.

Q. So am I correct to assume you've spent your entire career doing economic analysis like what we're about to do in this case?

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.

Q. Now, Mr. Reed, have you consulted for any companies that the jury or myself would be familiar with?

A. I think so. I've done work in a variety of
high-tech areas, but in the computer area, I've worked
for Dell computer and for Hewlett -- I'm sorry, not
Hewlett-Packard, but Packard Bell.

And the software area, I've worked for a variety of companies, including Novell and Palm. Q. Have you -- have you published articles related to the economic analysis that we're about to show the jury?

Yes, I have. 1 Α. 2 Okay. Have you been certified by courts, like Q. 3 this one, in the past as an expert in economic analysis? Yes, I have. 4 Α. 5 Okay. Now, I know we discussed this a little Q. bit, but could you please tell the jury what it is you 6 7 were asked to do today. 8 Well, I was asked to calculate the amount of Α. 9 reasonable royalties, and in particular, I was asked to 10 evaluate the amount of damages that would be adequate to compensate VirnetX and no less than a reasonable 11 12 royalty. 13 Now, Mr. Reed, you said no less than a Q. reasonable royalty. Where does that language come from? 14 15 It comes from the patent statute, as I Α. understand it. 16 17 Okay. And that's the patent statute issued by Q. the United States Congress? 18 19 Α. Yes. 20 Okay. Did you use any court-approved Q . 21 messages -- or sorry -- methods for calculating the 22 reasonable royalty you referenced? 23 Α. Yes, I did. 24 Okay. We'll discuss your analysis in detail 0. 25 in a moment, but what was the summation or the

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conclusion of your analysis? 1 2 Α. Well, I have a chart that shows the summary 3 analysis, and if I can get that chart. I think you have control, Mr. Reed. 4 0. 5 Oh, I do? I just -- so this shows the Α. summary -- and I'll get into more detail later, but what 6 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 \$200 -- 242 million. 11 12 Q. Okay. And, Mr. Reed, let me ask you another 13 question about this slide. At the bottom left, you have two numbers, PX406 and PX417. What are those? 14 15 Well, those are exhibits that show the Α. underlying calculations from -- from, essentially, tabs 16 17 or exhibits from my report. 18 Okay. And do those tabs or exhibits rely on 0. 19 specific types of data? 20 Α. 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 Okay. Now, Mr. Reed, can you explain to the 0. 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
	addressing the importance of the VirnetX technology and
23	
23 24	the importance of the VirnetX technology to Microsoft.

column, you have listed sworn testimony of Microsoft 1 2 employees. What is that referring to? 3 Well, that refers to the depositions. Α. Ιn trial, so far, we've heard some about the depositions 4 5 that were taken in this case, and that material is available to someone like me to read what individuals, 6 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. So that's the kind of information that I was 12 13 able to evaluate and approximately 25 to 30 depositions of Microsoft individuals. 14 15 And are those all of the depositions you Q. 16 reviewed or just the ones from Microsoft? 17 Α. Those -- those are just the Microsoft. 18 0. Okay. 19 Α. There are additional depositions that are 20 identified on this list as well. 21 0. Now, Mr. Reed, on the third column, we have 22 SAIC documents. Now, the jury has heard a little bit about SAIC, but I'm curious why those are important to 23 24 your analysis. 25 Well, SAIC was the owner of this technology Α.

back in 2003. And 2003 is an important time period that 1 I've analyzed. 2 3 Okay. Now, Mr. Reed, what products are we 0. here to talk about? 4 5 We're here to talk about the products that Α. Dr. Jones addressed, and here's a list of them. 6 7 Thank you. 8 Q. No problem. 9 Α. So it's the -- the products that are accused 10 under the '135 patent and '180 patent, and they're the same products that you've been hearing about for the 11 12 last many hours. 13 The last many hours from Dr. Jones? Q. 14 Α. Exactly, yes. 15 Okay. Now, I want to focus on your analysis Q. 16 that you conducted in this case. 17 How did you go about determining, the term you used, reasonable royalty? 18 19 Well, as I mentioned a moment ago, I used a Α. 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,

where do these factors come from? 1 2 Α. Well, it's listed at the top. That's a court 3 case, a very well-known court case for patent damages, in particular, reasonable royalty analysis. And the 4 5 case was called Georgia-Pacific Corp versus the United States Plywood Corp. 6 7 Now, Mr. Reed, was that a case like the one Ο. 8 we're sitting in today? 9 Α. Yes. It's from several decades ago, but it 10 was a patent infringement case much like this one. Okay. Now, Mr. Reed, what is a 11 Ο. 12 Georgia-Pacific analysis? 13 Well, it's the analysis of a variety of Α. economic and financial and licensing issues, and it also 14 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 happy about that, but what is a hypothetical 23 24 negotiation? 25 Well, a hypothetical negotiation is what --Α.

what it sounds like or seems like. It's not an actual 1 2 negotiation that would lead to a license agreement, 3 because in a case such as this, there was not an actual negotiation between the parties, and there was never a 4 license agreement that was entered into. 5 So the hypothetical negotiation is where we 6 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. And I actually have a slide that just 11 12 illustrates the concept. 13 Does this illustrate what a hypothetical 0. negotiation would look like in this case? 14 15 Yes, it does, I believe. Α. 16 Ο. Okay. And I see at the top, you say early 2003. What is that in reference to? 17 Well, early 2003 would be the date of this 18 Α. 19 hypothetical negotiation, which would be just before the infringement of the '135 patent. You might recall the 20 21 '135 patent issued at the very end of year 2002. 22 Well, would this negotiation be for one patent Q. or for two patents? 23 24 Well, I believe it would be for two patents. Α. 25 It would include the '180 patent, even though that

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patent didn't issue until March of 2007, several years 1 2 later. 3 Okay. Why would we include a patent that 0. hadn't issued yet in the negotiation in early 2003? 4 5 Well, I think for two reasons. Α. One is it helped simplify the analysis, but 6 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 Ο. And is that common in a real-world negotiation? 12 There are different -- different 13 Α. Yes. negotiations or different licenses are dealt with in 14 15 different ways, but certainly, that's one way in which patents that might issue in the future would be taken 16 into account. 17 And the fact that you've included the '180 18 0. 19 patent in this hypothetical negotiation in early 2003, who does that favor: Microsoft or VirnetX? 20 21 Α. Well, based on my analysis, I believe it's 22 favors Microsoft, because I did a separate analysis of a reasonable royalty for the '180 patent, assuming that 23 24 there would be a negotiation later in time, and that 25 gave rise to a larger reasonable royalty amount for the

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'180 patent. 1 2 Ο. And when would that hypothetical negotiation 3 have occurred? That would have been right around March of 4 Α. 5 2007 when the '180 patent issued. Okay. And how much more would the '180 have 6 Q. 7 been worth in 2007? In the analysis I did, I believe it would --8 Α. for the '180 patent, it would have increased the amount 9 10 of reasonable royalties through December 2009 by about \$50 million. 11 12 Q. Okay. So we know we have the hypothetical 13 negotiation, and we have these two guys sitting here at the table. We've got Microsoft on one side and VirnetX 14 15 and SAIC on the other side. 16 What are you trying to show the jury here with this picture? 17 Well, it sets the stage for this -- this first 18 Α. 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 Now, Mr. Reed, are there any other assumptions Q.

made in the hypothetical negotiation? 1 2 Α. Yes, there are, and I've listed some of them 3 here. Okay. And why are these assumptions 4 0. 5 important, Mr. Reed? Well, they're important because they put in 6 Α. 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. And one of the important assumptions -- it's 11 the first one that's listed here -- that VirnetX and 12 13 Microsoft would agree that the patents are valid, infringed, and enforceable. 14 15 Okay. Well, why is that important, Mr. Reed? Q. 16 Α. Well, it's important because it's 17 distinguished somewhat from happens often in real life negotiations that lead to license agreements. 18 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.

And that's a different situation than this 1 hypothetical negotiation, because here both parties 2 3 understand that the patents are valid, and the patents are infringed, and they have to come to an agreement. 4 5 Q. Okay. Well, Mr. Reed, were you here during opening statements? 6 7 Α. 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? Do you remember that? 11 Yes, I do. 12 Α. 13 Okay. So how does that fall into the Q. hypothetical negotiation in this case? 14 15 Well, that reflects what's sometimes the Α. 16 position of a licensee in a real negotiation, and that kind of information is used to argue for paying a lower 17 18 amount. 19 But here, those types of arguments couldn't be 20 The patents are understood to be valid and made. 21 infringed. And an amount of a reasonable royalty -- or I should say damages adequate to compensate VirnetX at 22 23 no less than a reasonable royalty is necessary. 24 Okay. Well, let's move on to your second 0. 25 bullet point. VirnetX and Microsoft understand the need

1 to reach an agreement.

2

What does that mean?

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?

A. Well, I think he would return back to the
table and continue to negotiate, and that would happen
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?

A. That's -- that's correct. I think that's the right way to frame this issue.

Q. Okay. And then finally, Mr. Reed, you've got relevant future facts would be known in 2003?

23 What does that mean?

A. Well, it's related to something that's calledthe book of wisdom.

Now, in this analysis of the Georgia-Pacific 1 2 Factors and the use of the hypothetical negotiation, 3 we're allowed to consider information that may have occurred after 2003, information that would occur 4 5 through 2009, for example. What are some examples of what might have 6 Q. 7 occurred after 2003 that the parties at the hypothetical 8 negotiation would be aware of? 9 Α. One example I mentioned a moment ago is the 10 issuing of the '180 patent in March of 2007. And another example would be the knowledge 11 12 that the technology was used in certain Microsoft 13 products, the accused Microsoft products, for the time period beginning in 2003 through December 2009, and, in 14 fact, also the extent of the sales revenues associated 15 16 with those products. 17 Okay. Now, you said the extent of the sales. Q. What is the extent of the sales of just the Vista and XP 18 products in this case? 19 20 Well, if I go back to the first chart, I can Α. 21 show that -- this is a calculation I did associated with 22 U.S. activity, and that reflects 48 billion in revenue for the time period through December of 2009. 23 And then there's also additional revenue 24 25 associated with the LCS/OCS Office Communications Server

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products, and there's 69.1 million associated with those 1 2 products. 3 0. Okay. Thank you, Mr. Reed. Now, the next question I have for you is, you 4 5 mentioned -- well, you've mentioned the hypothetical negotiation, but the word royalty has come up more than 6 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 Α. Sure. A royalty can be of a -- different 10 forms. There can be a lump sum payment. There can be a running royalty. And here I wanted to illustrate a 11 12 common reasonable royalty structure by using something 13 that's common here in Texas, which is royalties associated with oil and gas. 14 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

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1 total royalties collected, which, ultimately, we can 2 think about as the running royalties or the reasonable 3 royalties.

Q. Okay. Now, Mr. Reed, how does -- in your analogy here of the oil and gas revenues, how does a royalty rate get calculated?

7 Well, the royalty rate goes back to the Α. 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 appropriate reasonable royalty rate and a royalty base 11 12 to ultimately determine these reasonable royalties. 13 And how does your oil and gas analogy here Q.

14 equate to this case?

A. Well, the royalty base would be the revenues associated with the Microsoft APIs. The royalty rate would be the analysis to determine what is a royalty rate that would go with those revenues to generate a preasonable royalty.

And so, ultimately, the combination of the royalty base associated with the Microsoft revenues and the royalty rate associated with the Georgia-Pacific analysis can give rise to a reasonable royalty or a running royalty.

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Q. I think you hinted at it, but I want to go

ahead and ask the question. How do we calculate a 1 royalty rate in this case? 2 3 Well, it goes back to those Georgia-Pacific Α. Factors. So it's the -- essentially, the first 13 4 5 Georgia-Pacific Factors in the context of the 15th factor, which is the hypothetical negotiation. 6 7 Okay. Now, Mr. Reed, do we need to go through Ο. 8 all 15 Georgia-Pacific Factors? 9 Α. Well, I did in my reports and in my analysis, 10 but for the purposes here, I've summarized them into three groups. 11 12 Q. Okay. And do these groups that you're identifying, do they take into account all 15 factors? 13 14 Α. Well, they take into account the first 13, I 15 believe. Those are the economic and licensing and financial factors. 16 17 The 14th factor deals with expert testimony or expert opinions, probably a better way of stating it. 18 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 willing licensor and a willing licensee. 23 24 Okay. And, Mr. Reed, just so the record is 0. 25 clear, did you take all 15 factors into account in your

1 analysis? Yes, I did. 2 Α. 3 0. Okay. Now, let's start at the beginning, the first group. 4 5 What is the first group? Well, the first group are the factors that 6 Α. 7 address licensing and the royalty rates that come from a 8 variety of sources that would be available from my 9 research. 10 0. Okay. And why is this group important? Well, it's important because, among other 11 Α. 12 things, it can give information, such as a potential 13 benchmark or comparable royalty rate, to take into account to come up with that royalty rate that gets 14 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 Well, this is the way I grouped them for Α. 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 relative contributions of both the VirnetX technology 24 25 and the many contributions of Microsoft.

And why would that factor be in both Group 1 1 Q. and Group 3? 2 3 Well, I think that factor is reflected in Α. royalty rates in the real world, generally, the issue of 4 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. Okay. Now, Mr. Reed, are we going to discuss 11 0. 12 Factor 13 in detail now or in Group 3? 13 It's -- it's going to be covered near the end Α. 14 of my -- of my analysis. It's an important factor that 15 will be covered at that point. 16 0. Now, Mr. Reed, you mentioned this group was 17 important because it gave -- I believe you said benchmarks; is that -- is that correct? 18 19 Α. Yes. 20 What are benchmarks? Q . 21 Α. 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

certain percentage, and they might think, well, my land 1 2 is better for drilling oil, and I should get a better 3 rate than that. I think I'm going to produce more efficiently here or allow their producers to produce 4 5 more efficiently. So that benchmark rate can be information that 6 7 could be assessed to help determine a royalty rate. 8 Okay. And did you find benchmark licenses in Q. 9 this case? 10 Well, I found a variety of information, and Α. yes, I found some information that I could consider to 11 12 help guide my analysis. 13 Okay. And what benchmark licenses did you Q. determine or find in this case? 14 15 Well, I started with agreements from SAIC, and Α. 16 they're listed on this next chart. These are agreements 17 that we've heard about that SAIC has entered into with SafeNet and VirnetX. 18 19 Now, Mr. Reed, why are these agreements Q. 20 relevant in this case? 21 Well, there's -- there's differences that need Α. 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?

A. That's correct. I believe it was Monday.
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 differences11 that I -- that I note and address.

12 Q. Okay. Well, how can it still be relevant 13 then?

A. Well, it's relevant because it still provides
guidance as to what two parties were considering were a
reasonable amount for the use of the VirnetX technology.

Q. Okay. And so what royalty rates were applied 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.

Q. Go ahead. 1 One is the -- these SAIC license agreements to 2 Α. 3 SafeNet and VirnetX included exclusivity aspects, whereas the hypothetical negotiation leading to a 4 5 license with Microsoft would be a non-exclusive license. That's a Georgia-Pacific Factor I'll address a little 6 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 access to Mr. Munger and Dr. Short and some of the 11 12 inventors, whereas, again, the hypothetical license with 13 Microsoft would only cover rights to the patents, the '180 and the '135 patents. 14 15 Okay. Now, are there any other differences Q. 16 you'd like to talk about? 17 Well, it gets back to the one you identified Α. up there. There's a difference in the products as well. 18 19 Okay. Now, Mr. Reed, what are the differences Q. 20 in the products? 21 Well, the SAIC agreement -- agreements with Α. 22 SafeNet and VirnetX had in mind a security software product, a product that would be priced at somewhere 23 24 around \$13.50 to \$27, whereas the license with Microsoft 25 would apply to products like Windows XP and Windows

Vista that range in price, depending on the version,
 from \$50 to above a hundred dollars, and then would also
 apply to the OCS/LCS products, Office Communications
 Server, and those products also have a different price
 structure.

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 and13 the other differences into account?

A. I considered the royalty that would be -would have been generated by these 20 percent and 15 percent royalty rates applied to the software security product. And that's an amount of approximately 2 to \$5 per user.

And then I considered that to the price for some of the -- of the base Windows XP and Windows Vista products, and those have prices in the 50 to \$80 range. And so if I make the adjustment, the royalty rates fall in a range of 2.5 percent to 10 percent, and that's an adjustment. That's necessary for one of these several differences that I've noted here.

Okay. Now, Mr. Reed, before we get to that 1 Q. 2 rate you've got, how did you go about determining what 3 the expected royalty per user would be when we all know that no product was ever sold under the SafeNet 4 5 agreement? That's right. There wasn't actual information 6 Α. 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 \$27. And it depends on how many years the products 11 would be used. 12 13 And so is that how you arrived at the 2 to \$5 Q. you have on the slide here, is multiplied the percentage 14 15 above times the price of the product you believed would be sold? 16 17 That's correct, yes. Α. Did you do anything else to confirm 18 Okay. 0. 19 that SafeNet and SAIC were on the right track with 20 regards to the price of their security product? 21 Well, I certainly looked at that issue and had Α.

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.

Okay. Now, Mr. Reed, we'll go ahead and skip 1 Q. 2 down now to 2.5 percent to 10 percent. So you say that 3 takes into account the price difference of the products, correct? 4 5 Α. Correct. Okay. So are we done? Do we just take this 6 Q. 7 2.5 percent to 10 percent and multiply that times the 8 Windows products? 9 Α. No, we're not done. There are other 10 differences that I took into account, and there are the other Georgia-Pacific Factors as well. So I continue 11 12 the analysis. 13 Okay. And, Mr. Reed, I want to ask you kind Q. of a -- just a basic question so that the jury 14 understands for the rest of the slides. 15 16 At the bottom left, you've got PX134, PX647, 17 and PX648. If the jury wants to see any of these documents related to your calculations or to the 18 19 agreements, can they ask for those documents by those 20 numbers? 21 Α. I understand so, yes. 22 Okay. Now, Mr. Reed, did you find any other Q. benchmarks that are relevant to this case? 23 24 Yes, I did. And the next category relates to Α. a Microsoft licensing program. 25

Q. Okay. And what Microsoft licensing program 1 2 did you find relevant? 3 Well, it's called the Work Group Server Α. Protocol program or WSPP. And I found information 4 5 relating to rates -- royalty rates that Microsoft charge other companies under this program to have an important 6 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 Well, it relates to patents -- Microsoft Α. patents relating to communication protocols that are 11 licensed to other companies. 12 13 And in particular, it -- the overall program covers different technology areas. And some of the 14 15 technology areas are authentication and network communications, and some relate to PNRP. 16 And so those are some of the different 17 technology areas, what Microsoft calls scenarios that I 18 19 was able to explore the royalty rate for them. 20 Okay. And why else are the WSPP licenses Q. 21 relevant to your analysis? 22 There's a variety of reasons why they're Α. 23 relevant. 24 One is they're non-exclusive license 25 agreements. And what I mean by that is, it's offered to

a variety of different companies. It's not exclusive 1 like, for example, VirnetX's license agreement is with 2 3 SAIC. Another -- another difference is -- or another 4 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? Yes, I did. I considered information that was 14 Α. 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 royal -- these royalty rates. 18

19And also I was aware of information that20Microsoft believed that they were reasonable rates as21well.

Q. Excuse me. Now, in this slide, you have two ranges here, and I think you already said it, but -- you described them as patent-only rates, correct? A. Correct.

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2 Okay. And you've already told the jury Q. 3 they're important because that's what we have here in this case, is a patent-only license, correct? 4 5 Α. Correct. Okay. Now, what's the first range, .46 to 6 Q.. 7 3.87 percent? 8 Α. 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. But in some cases, the number of patents that were 11 covered would be in the range of 10 or 12 patents in 12 13 some of these particular scenarios. But I was able to explore as a subset of these 14 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 percent, and that's the group I focused on. 18 19 Okay. And I'm going to sound like a broken Q. 20 record, but are we just going to take this .46 to 1.82 21 percent and multiply that by the Windows products? 22 Again, it's part of the consideration of Α. No. my analysis of the Georgia-Pacific Factors, but there 23 24 are other factors to analyze, so I continued with the analysis. 25

Okay. Now, Mr. Reed, one more question about 1 Q. 2 these. 3 How did you determine that these were -- or You know what? I think you've already answered 4 wait. 5 this. You said these were related to the PRNP patents, 6 correct? 7 Well, the PRNP patents certainly are included Α. 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 communications, which are similar to the types of 11 12 technologies that -- that we're talking about in this 13 case. Okay. And how else did you go about 14 0. 15 determining if these were relevant to this case? 16 Α. Well, I -- I identified the P -- there were 17 two PNRP patents. That's peer name resolution protocol. And I identified those to Professor Jones, and he 18 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 Well, it could be, yes. Α. Okay. Now, besides these benchmark licenses, 23 Q. 24 did you take into account any other information in your 25 first group?

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Yes, I did. 1 Α. 2 Okay. And what other information did you take Q. 3 into account? I also took into account what's sometimes 4 Α. 5 called Georgia-Pacific Factor 4, which deals with the expectations and the policies regarding patent licensing 6 7 of the owner of the patents. 8 And why is that important to your analysis, Q. 9 Mr. Reed? 10 Well, I think it gives it context for that Α. hypothetical negotiation. What would be the position of 11 12 SAIC or VirnetX when they were sitting at the table to 13 negotiate a reasonable royalty? What would they have in mind? 14 15 Okay. And what did you generally find SAIC Q. 16 and VirnetX's expectations to be? 17 Well, I think, first, the expectations would Α. be that there would be a running royalty rate. And both 18 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 Mr. Munger the position and approach of SAIC back in 23 24 2003 when Mr. Munger was there, and Mr. Munger told me 25 that SAIC's approach would be to pursue a running

royalty, a percentage royalty. 1 2 Q. Now, Mr. Reed, where else did you determine --3 well, actually, what rate did you determine was the interest or needed by VirnetX or SAIC? 4 There were different rates discussed in 5 Α. different SAIC and VirnetX documents, but overall, the 6 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 It came from a variety of SAIC and VirnetX Α. documents. 12 13 Okay. And I just want to put up an example. Q. MR. CASSADY: PX653, please, Mr. Moreno. 14 15 And can you please turn to Page 17? 16 Is this -- oh, thank you. 17 Would you highlight the whole top portion where it says standard rate and incentivized rate, 18 19 please, the whole -- yeah. Yes. Thank you. 20 (By Mr. Cassady) Is this an example of one of Q. 21 the documents you were referring to? Yes. This is a VirnetX document. It's the 22 Α. most recent of the various examples that I -- that I 23 24 explored. This one is from 2009. 25 And so we have -- I see some large rates, 10 Q..

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to 25 percent, 5 to 10 percent. Why aren't we applying 1 2 those rates? 3 Well, those relate to the entire portfolio of Α. VirnetX patents, and here we're focusing on the '135 and 4 the '180. 5 Okay. So these two here, the 2 to 5 percent 6 Q . 7 and 1 to 2 percent, are those the more relevant? 8 Well, certainly, they would be more relevant, Α. 9 and in fact, I focused more on the incentivized rate, 10 the 1 to 2 percent per patent range. And by incentivized rate, that meant, if 11 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 There were three or four others, and Α. No. there was also some information from SAIC regarding its 18 research on security patent royalty rates. 19 20 Okay. And are a few examples located at Q . 21 PX646, PX690, and PX691? 22 A. I believe those are the PXs and I identified, 23 yes. 24 Okay. Now, again, back to my broken record, Ο. 25 do we just take this 1 to 2 or to 2 to 5 percent rates

that you found that VirnetX and SAIC believed to be 1 2 relevant and just apply it to the Microsoft Windows 3 revenue? That reflects the position of VirnetX, 4 Α. No. but not -- VirnetX didn't enter into any license 5 agreements specifying those rates. So, again, I 6 7 continue the analysis. 8 Q. Now, did you determine that any other licenses 9 were relevant in your analysis? 10 Yes, I did. There were additional license Α. agreements that Microsoft has entered into where it 11 12 licensed its patented technology to other companies. 13 And I considered a range of the different programs that Microsoft has entered into, and the royalties that 14 15 Microsoft receives for those programs. 16 Ο. And which licenses did you discover in that 17 group? Well, I've listed them. There's several. 18 Α. 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. You'll note that that included patents and other 24 25 intellectual property, but it had royalty rates of 1 to

5 percent. But these are the examples of other programs 1 2 and other royalty rates I considered. 3 Okay. And how did these license agreements 0. apply to your analysis? 4 5 Well, I also took into account this Α. information. It relates to Georgia-Pacific Factor 12, 6 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 licenses, which dealt with exchange server and Vista. 11 And then also the Microsoft ActiveSync license with --12 13 where Microsoft entered into an agreement with Google and Mr. Shank from Microsoft viewed Google as more of a 14 15 SEALED BY ORDER OF THE COURT 16 rate for a particular Google product, and that's also 17 something I took into account. Now, Mr. Reed, could you go ahead and 18 0. Okav. 19 take another example off this list to discuss with the 20 jury in more detail? 21 Α. I'm sorry. I couldn't hear the last part. 22 Could you pick another example here to Q. describe in detail for the jury? 23 24 Well, the Interoperability license, as I Α. 25 mentioned briefly, but one of the things I would note

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is, there's a document where Microsoft stated that the 1 2 patent licenses for patents on open protocols will also 3 be made available at low royalty rates. And the -- the base rate for these programs is 4 5 a 1 percent royalty rate, but Microsoft has minimum per-unit royalties that go into effect. And so 6 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 1.8 to 4.2 percent when you take the minimums into 11 account. 12 13 Okay. Now, Mr. Reed, did you take any other Q. 14 license agreements into account in your analysis? 15 Yes. I also considered license agreements Α. 16 where Microsoft takes a license from other companies' 17 patented technology. Okay. And what agreements are those? 18 0. 19 Α. 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 I considered deposition testimony where Microsoft said 23 24 they prefer paying lump sum amounts. 25 Q. Okay. Well, I don't know that we've used that

phrase before. What is a lump sum? 1 It would be an example where one payment would 2 Α. 3 be made, usually upfront, and it might be -- in the case of these agreements, a hundred thousand dollars paid, 4 5 and then Microsoft would have rights to the patented technology for the lives of the patent. 6 7 So you're saying, that hundred thousand Ο. 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 is all they paid? 11 12 Α. That's correct, yes. 13 Okay. And why is that relevant to your Q. 14 analysis? 15 Well, it's certainly something I considered, Α. 16 but, in my opinion, this structure would not be 17 acceptable to VirnetX or to SAIC. Q. Okay. And just so we get back to the top of 18 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 Royalties? 22 It's actually three, because this last one is 23 Α. a newer version of the second one. 24 25 But these are examples where Microsoft does

pay running royalties for important technology. 1 And why is that important to your analysis? 2 Q. 3 Because it's -- it's a reflection that goes in Α. against, if you will, the position that Microsoft 4 5 prefers paying lump-sum royalties. There are occasions where Microsoft does pay running royalties. 6 7 And, Mr. Reed, I notice that you don't Okay. Ο. 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? No, I don't believe so. 11 Α. 12 Q. And why do you say that? 13 Well, the MPEG license agreement covers a Α. portfolio of patents from a variety of companies. 14 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 in a different technology area. It deals with visual 18 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 18 patents -- it also provides rights to the trademarks. 25

Now, Mr. Reed, are we finished with your Group 1 Q. 2 1 part of your analysis? 3 Α. Yes, we are. 4 0. Okay. So we can now move on to the second 5 group? 6 Α. Yes. 7 Okay. And generally, what does the second Ο. 8 group cover? 9 Α. The second group covers information relating 10 to the structure or the scope of the license agreements. And we also included the commercial relationship in this 11 12 category. And by that, I mean the competitive 13 relationship between the parties, SAIC and VirnetX and 14 Microsoft. 15 Okay. So we'll just start at the top. Q. 16 Factor No. 3 says: Scope of license that would be --17 would have been negotiated. 18 What is that? 19 Well, there's different aspects of this scope. Α. 20 One aspect is, it's a non-exclusive license. I 21 mentioned that before. 22 So Microsoft would have rights to use the patents, but so would VirnetX and so would other 23 24 companies that VirnetX might choose to license the 25 technology to.

So that's one aspect. 1 2 Q. Okay. What other aspects are there? 3 Another aspect would be the coverage, whether Α. it's worldwide or relating to U.S. activity. And this 4 5 license agreement would be related to U.S. activity, not worldwide activity. 6 7 Okay. And why would it only apply to the Ο. 8 United States activity? Because the '180 and the '135 patents are U.S. 9 Α. 10 patents, and they cover the right to make, use, import, sell, or offer to sell the technology in the United 11 States. 12 13 Well, Mr. Reed, how do you go about Q. determining what was sold or -- or -- I believe you said 14 what was sold, used, manufactured, or offered for sale 15 16 in the United States. How do you figure that out? 17 Well, I went to the Microsoft information Α. relating to sales data, and I considered the summary 18 19 information that Microsoft provided. And they provided worldwide information, and then they also provided 20 information related to U.S. activity. 21 22 Q. Okay. Now, Mr. Reed, how did Microsoft determine their United States revenues? 23 24 The way Microsoft did it was, they did it by Α. 25 credited sales area. So it included shipments to the

United States, but it also included all the products 1 2 associated with OEMs that are located or headquartered 3 in the United States. And by OEM, I mean a PC manufacturer such as 4 5 Dell in Austin or Hewlett-Packard in California. Okay. Well, I guess maybe I'm 6 Q. 7 misunderstanding. How can -- well, I'll ask a different 8 one. Can't Dell sell a computer or make a computer 9 10 in France and sell it in England, and it will never touch the United States? 11 12 Well, it's more common for Dell to manufacture Α. 13 in Taiwan or China, but it's possible that Dell could 14 manufacture in Taiwan and then ship the product to 15 France. Okay. Well, why then do those sales count 16 0. 17 under United States activity? Well, from one standpoint, it's -- those 18 Α. particular products -- well, let me put it this way: 19 Dell is a U.S. manufacturer, and the way that Microsoft 20 21 recorded that information or that sale, they credited it 22 to the United States to give the United States sales team or sales organization -- organization of Microsoft 23 a credit for that sale. 24 25 Okay. So one term would be an offer to sell Q.

in the United States, correct? 1 2 Α. That's correct, yes. 3 Okay. Now, what else -- or why else did you 0. believe that method was reasonable? 4 5 Well, it's also the way that Microsoft Α. recorded the information. So I, obviously, took that 6 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 Α. Well, the other aspect is, there are certain manufacturers of PCs or OEMs that are located overseas, 12 13 and Microsoft records those particular shipments of Windows and XPs -- Windows XP and Windows Vista as 14 15 outside the United States, even though companies like 16 Toshiba or Acer or Sony might ship products to the United States with Windows. 17 Q. Okay. Well, didn't Microsoft have another way 18 19 to break it down? 20 Yes, they did. And I considered the Α. 21 deposition testimony of a Microsoft employee, 22 Mr. Jhawar, who was asked the specific question: Are there other ways to try to break down the U.S. revenues 23 24 so that you would not include the U.S. OEMs, all of the 25 revenue in the United States?

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And I summarized what Mr. Jhawar said. 1 When 2 asked the question, are there other ways to do this, he 3 said: We don't have a reasonable basis for estimating breakouts of that. 4 5 And what does that tell you, Mr. Reed? 0. Well, that Microsoft didn't believe there was 6 Α. 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 calculation? 12 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 Okay. And then I think we're done with Factor Q. 3, correct? 18 19 No. I believe there's one -- oh, with Factor Α. 20 3, that's correct, yes. 21 Q. Yeah. Sorry. Not Group 2, but Factor 3. 22 Yes. I'm sorry. Α. 23 Q. Jigsaw puzzle here. 24 So with regards to Group 5 -- or actually, got 25 me messed up now -- Factor 5, commercial relationship

2 that mean? 3 Α. Well, that deals with the competitive relationship between VirnetX and SAIC and Microsoft, and 4 5 as we heard, Micro -- VirnetX has not yet introduced its Gabriel technology, so as of now, at least from the past 6 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 accused, Windows XP and Windows Vista to the vast 11 12 majority of customers in the United States is an 13 important competitive consideration that VirnetX would take into account in the negotiation. 14 15 Okay. And what about Factor 7, remaining life Q. 16 of patent? What is that referring to? 17 That refers to the patent life, and the Α. VirnetX patents at issue here, the '135 patent and the 18 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

between patent-holder and accused infringer, what does

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for VirnetX to enter into. Microsoft is a very large 1 The license agreement entered into with 2 player. 3 Microsoft would be taken into account by all the other activities that VirnetX would do in the future. 4 5 Okay. And just so I understand, maybe we give Q. the reverse example. What if you only had two years 6 7 left on the life of the patent? How would that affect 8 the negotiation? 9 Α. Well, one way of thinking about it is, you 10 want to collect as much royalties as you can in that two-year period, so you might be more favorable in the 11 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 Okay. Now, Mr. Reed, are we done with Group 2 Q. 16 of your analysis? 17 Yes, we are. Α. 18 Ο. Okay. Can we go to Group 3 now? 19 Α. Sure. 20 Now, what is Group 3? Q. 21 Α. Group 3 are the Georgia-Pacific Factors that 22 deal with value, profitability, and the extent of use. 23 Okay. And what did you find, through your Q. 24 review of the documents in this case and the depositions 25 with regards to Group 3?

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Well, first, I started with Dr. Jones, 1 Α. actually, and I discussed with Dr. Jones the importance 2 3 of the VirnetX technology and the importance of that technology to Microsoft, in particular with the '135 4 5 patent as it relates to RTC. You might remember RTC APIs, real-time 6 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 I actually have some of those documents that show what 11 12 Microsoft was thinking about these technologies, RTC and 13 peer-to-peer over the time period at issue. 14 Okay. Well, you said you had some examples. Ο. 15 Let's go ahead and see them. 16 What does this show, Mr. Reed? This is a Microsoft document that's 17 Α. copyrighted in 2008, so it's a relatively recent one, 18 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 way e-mail changed the business landscape in the 1990s. 23 24 Okay. Well, I'm not sure I understand, 0. 25 Mr. Reed. What is that saying to us?

Well, unified communications relates to 1 Α. 2 real-time communications, and of course, the '135 patent 3 is accused against that technology. And what it's saying is that from -- I take 4 5 this as 2008 going out to the next 10 years, unified communications is going to develop as a very important 6 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 --Now, Mr. --11 Ο. 12 -- going forward. Α. 13 I apologize. I didn't mean to cut you off. Q. Now, Mr. Reed, do you have any other examples, or is 14 15 this the only document you have? No. I have other examples, and these are a 16 Α. 17 few of many. And what are we seeing here, Mr. Reed? 18 Ο. 19 Α. 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 RTC is one of the top five reasons to buy Windows is: 23 XP. 24 Okay. And why is that important? 0. 25 Again, it reflects Microsoft's view of the Α.

importance of the RTC capabilities that were going to be 1 2 in the platform for Windows. 3 Okay. Now, is that the only document you 0. have? 4 No. I have an additional one. 5 Α. Okay. What is this one telling us, Mr. Reed? 6 Q. 7 This is from a similar time period. It was a Α. 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. Okay. And do you have any other examples? 11 Ο. This is another document from that time 12 Α. Yes. 13 period, and this document generally addressed Microsoft's views of its competition in real-time 14 15 communications with important competitors, IBM and 16 Cisco. 17 And near the end of the document, Microsoft Why we win. And what was stated, among other 18 states: 19 things, but the most prominent statement was: Let the 20 customer securely communicate when, where, and however they desire. 21 22 And I think this statement goes to the -- some of the advantages that Dr. Jones associates with the use 23 24 of the VirnetX technology: Flexibility, secure, ease of 25 connection, that type of information.

Q. Okay. And I'll ask again, do you have any 1 2 more examples of RTC documents? 3 Α. I believe I do. What is this, Mr. Reed? 4 0. 5 This document addresses an issue relating to Α. pricing of the RTC APIS. And what it -- what it 6 7 addresses is that Microsoft considered doing something 8 very unusual. Microsoft considered separately pricing 9 the RTC APIs. 10 And why is that important? Q. Well, Microsoft had never done that, as I 11 Α. 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 here separately from Windows. Did they do that? 18 19 No, they didn't. Ultimately, Microsoft Α. 20 included that as part of -- part of Windows, and Dr. Jones addressed that. 21 22 And the reason that's stated for that, and it's reflected in other documents as well, is that 23 24 Microsoft didn't want to limit the ubiquity of 25 getting -- and what I mean by that is make them

generally available. They wanted to make the RTC APIs 1 2 generally available in the entire platform of the 3 Windows XP and Windows Vista products. Okay. So that's what ubiquity means is 4 0. 5 generally available? Well, widely generally available everywhere, 6 Α. 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? There were other examples, and there was 11 Α. No. 12 also deposition testimony. 13 Okay. Now, what about peer-to-peer? 0. I've done a similar thing with peer-to-peer 14 Α. 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 basically says, when the Windows platform is very large, 18 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 Okay. And why is that important to your Q. 23 analysis, Mr. Reed? 24 Α. Well, it's important, again, stating the 25 emphasis that Microsoft was placing on the peer-to-peer

technologies. 1 2 Q. Okay. And do you have any other examples, Mr. 3 Reed? 4 Yes. Α. 5 And what are those? Ο. 6 These are e-mails, and the first one, Α. 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 documents say a back-of-box application, and that became 11 12 a key application of the Windows Vista product. 13 Ο. You said back-of-box. What does that mean? Well, earlier we saw the box that had the 14 Α. 15 Vista -- what Microsoft meant by back-of-box is the application was noted on the back of the box that we 16 would see in the store. 17 18 Okay. And that's PX829? Ο. 19 Α. I can't see it. 20 You can't see it. I apologize. That's PX829 Q. we talked about earlier. 21 22 Now, Mr. Reed, I'm looking at the back of the box, and I don't see anything about peer-to-peer on the 23 24 back. 25 Well, this is relating to Windows Meeting Α.

Space. Professor Jones addressed Windows Meeting Space 1 2 as being an application on the -- using the peer-to-peer 3 technologies and accused associated with the '180 patent. 4 5 Okay. So on the back here where it says: Ο. Collaborate and share documents with Windows Meeting 6 7 Space, that's what you're referring to? 8 Α. Yes, it is. 9 Okay. And why is it important that Microsoft 0. 10 put it on the box? Well, it notes that Microsoft believed that 11 Α. 12 that was going to be a very interesting feature for its 13 customers. Okay. Now, we've talked about the first 14 0. 15 document. What about the second one here? 16 Α. Well, this one is -- is just stating that 17 peer-to-peer would be a game changer for application development. 18 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 Α. It means that it's going to change the way 25 developers work with APIs and with technologies for

developing programs that would run on Windows Vista. 1 2 Q. Okay. Do you have any other examples of 3 peer-to-peer documents, Mr. Reed? Α. Yes. 4 5 And what are these showing us? Ο. These documents both address the competition 6 Α. 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. Okay. And I see in the second document -- I'm 11 Ο. 12 going to skip ahead a little bit -- it says: SUN 13 Microsystems is training gunfire on one of its oldest enemies, Microsoft. 14 15 What does that mean? That just means that the two parties were 16 Α. 17 competing with one another, and in my review of these documents, it suggests Microsoft was very concerned 18 19 about enhancing this peer-to-peer technologies to -- and 20 making them widely available. 21 Ο. Okay. And were there any other examples, 22 specifically PX698 and 699 that related to the SUN 23 competition? 24 Α. Oh, yes, there were. There were a lot of 25 discussions, and I also had public information about the

SUN product that was attempting to compete with 1 2 Microsoft. 3 0. Okay. Now, Mr. Reed, I think you referred to Meeting Space, and we talked about it on the box. 4 What 5 about Meeting Space is important? Well, here's a document that's addressing 6 Α. 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? Again, the Marketing Department at Microsoft 11 Α. 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 0. Okay. And is that the Meeting Space that 17 Mr. Jones referred to as being used in the '180 patent? 18 Α. Correct. 19 Ο. 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 Α. I can't recall if Mr. Powers was talking about 25 that, but it also would relate to the law library

example or the Tyler library example where the 1 collaboration was going on. 2 3 0. Okay. And then what else about Meeting Space did you find out? 4 5 Well, there's one other document relating Α. This was an advertisement by Dell 6 to Meeting Space. 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 Space as a reason why corporations should consider using 11 Vista and upgrading to Vista. 12 13 And why is that important? Q. Again, it talks about a major customer of 14 Α. 15 Microsoft, Dell, and Dell's views about the Meeting 16 Space product. 17 Okay. So we have talked about peer-to-peer, Q. we have talked about the RTC and the UCC products. 18 What 19 else is important to Group 2 -- Group 3, I apologize? 20 Also, profitability is important. So I Α. 21 considered information on Microsoft's profitability. 22 How profitable is Microsoft? Q. 23 Α. Very profitable, but I have a chart that 24 summarizes two of the particular divisions or groups at 25 Microsoft.

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1 Q. And before we get into this, why is 2 profitability important to your Georgia-Pacific 3 analysis?

Generally, profitability is important to 4 Α. 5 but, in particular, here my discussions with consider; Dr. Jones address the importance of Microsoft enhancing 6 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, Microsoft keeps developers interested; and it helps what 11 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 profit margins, correct 16 17 Α. Correct, yes. You have got gross margin and contribution 18 Ο. 19 margin. What are those? 20 Well, gross margin is the profit after Α. 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.

And basically that's the profit before an allocation 1 2 goes to corporate overhead. 3 And I would note that these particular margins here are for the division that deals 4 5 with Windows XP and Windows Vista products. 6 Q. Okay. Now, Mr. Reed, are those high profit 7 margins? 8 Α. Yes, they are the highest contribution 9 profit margins I have ever seen. 10 Ever seen in your 25 years in the Q. 11 business? 12 Α. Yes. 13 Okay. What about the UC or Unified Q. Communications products? 14 15 Unified Communications products include the Α. 16 LCS/OCS, Office-Communication-Server-type products. 17 They also have high margins. There's a difference between these 51 to 58 percent contribution profit 18 19 margins, and the margins up here show exactly how high the Windows XP and Vista platform profit margins are. 20 21 Q. Okay. Now, we talked about profitability, 22 we have talked about the importance of the 23 What else is important to Group 3? features. I also considered the market share of 24 Α. 25 Microsoft.

Q. Okay. And how is the market share of 1 Microsoft relevant? 2 3 Α. Well, it's relevant in a couple of different ways. One is back to this issue of the ecosystem. 4 Whv 5 Microsoft is -- it's important to Microsoft to enhance its platforms with interesting and important future APIs 6 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 its reflects on VirnetX and SAIC's concerns when they 11 12 were licensing their patented technology. Because 13 Microsoft has such a large portion of the overall activities with respect to these types of operating 14 15 systems that go in personal computers, it would be important for VirnetX to take into account how widely 16 17 spread its technology could be. 18 Well, Mr. Reed are these high market Ο. 19 shares? 20 Α. Yes. They're -- they are very high market 21 shares, that's correct. 22 Okay. Again, are these the highest you have Q. 23 ever seen? 24 Well, I think there could be some cases at Α. 25 least for a short time period where a company might be a

pure monopolist, lift but these -- this is not an 1 2 example of that, but these are very high market 3 shares. Now, Mr. Reed, my question is if the profit 4 0. 5 margins are so high and the market share is so high, what does it matter if Microsoft just leaves a feature 6 7 out of it? 8 Well, based on my conversation with Α. 9 Professor Jones, it's important for Microsoft to enhance 10 its features to -- to add these additional future technologies to make sure that it can compete with all 11 12 the other different companies, Apple, Linux. You saw 13 the example of SUN. So by enhancing with these advanced technologies, Microsoft is able to help maintain its 14 15 market share. Okay. And, well, again, I'm not sure I 16 Ο. 17 understand. If they have such high profit margins and such a high market share, what does it matter if they 18 19 just lose a couple of points here and there? 20 Well, I did an analysis in my report Α. 21 addressing the impact of Apple gaining just a few 22 percentage points. It's actually less than two percentage points in the 2007-2009 time period. 23 And 24 because of the large contribution profit margin, the 25 impact of that gain in market share had a reduction in

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the contribution margin, profit margin for Microsoft 1 2 over the three years by about \$656 million. So it has a 3 huge impact on Microsoft's overall performance. Okay. Now, Mr. Reed, have we summarized all 4 Q. 5 the important factors related to Group 3? We have, with the exception of Factor 13 6 Α. 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 Well, yes. Based on this analysis and the Α. 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 products and a 3 percent royalty rate with respect to 14 the OCS Office Communicator and LCS products. 15 Okay. So do we just apply that rate to the 16 0. 17 Microsoft Windows products? No, no, I believe there were various 18 Α. 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 a reasonable royalty to the value of this invention as 23 24 it relates to the accused products in line with Factor 25 13 and the George-Pacific factors?

Well, it's reflected in the next chart that 1 Α. 2 summarizes the various things that I did. 3 And what are we showing here, Mr. Reed? 0. Well, for the Windows platform, that is, 4 Α. Windows XP and Windows Vista relating to both the '135 5 patent and the '180 patent, I started with that 1 6 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 different versions of -- of the Windows XP and Windows 11 12 Vista products that I think we saw earlier with the 13 boxes. There's a home version and there's a professional or a business version. 14 15 The professional version has a higher price because Microsoft adds additional functions and 16 17 technology that would be useful to businesses. And I wanted to be sure not to include an additional 18 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 associated with the professional versions. 23 24 Okay. And what about the third bullet, the 0. 10 percent quantity discount, what is that? 25

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I took into account -- one way of thinking 1 Α. 2 about it is the contribution of Microsoft because they 3 are a very successful company with lots of features and functionality, and they have a very large level of 4 5 sales. And I took into account the programs that Microsoft had where it granted quantity discounts to 6 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 under that program, to all of the Microsoft sales at 11 issue. 12 13 And, finally, you have got this Q. Okay. phase-in 1 percent rate. What is that referring to? 14 15 That refers to the fact that I don't start Α. with a 1 percent royalty rate per patent. I recognize 16 17 that there's a lot of other functionality in these products and that these particular APIs were developing 18

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.

Also, the real-time communications technologies were developing; and even though they came out in 2003, instant messaging for corporations, for example, wasn't expected to become important until 2008. And we saw

that document a moment ago talking about the 2008 1 2 document looking at Unified Communications over the next 3 decade. So clearly this technology is developing. So I started with a royalty rate of 0.33 4 5 percent per patent. Then I increased that in fiscal year 2008 to 0.66 percent. Then it wouldn't be until 6 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 Α. 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 is included in the Microsoft Office Suite. And most of 14 us probably know what that is. Office Suite includes 15 Word, Excel, sometimes other applications as well. 16 Ιn 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 included in the OCS products where I calculated the 21 22 royalty. That's all you included in the royalty base, 23 Q. 24 correct? 25 That's right, yes. Α.

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1 Q. That's what you multiplied 3 percent 2 times?

3 A. Correct.

Q. Let me ask you about the 3 percent. How come or why is that larger than the 1 percent for the Windows products?

7 Well, there are a couple of reasons that I Α. 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 VPN required. In fact, I talked to Dr. Jones about this 11 12 before my report probably about a year ago and I said 13 what does Microsoft mean by no VPN required and how does it relate to the technology? He said that's what 14 15 provides -- the technology at issue here is what provides Microsoft the ability to say that. Because he 16 17 said they're not using a standard or traditional VPN, they're using technology associated with the patented 18 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.

Q. Okay. Did you take anything else into account in that rate?

25 A. Yes, I took into account other information

as well, including the -- we've heard about Magenic. 1 2 Magenic was a company that VirnetX had hired in 2006, 3 maybe even hired in 2005 but some of the work was going on in 2006. Magenic was helping VirnetX develop a 4 5 product that would work with LCS to provide additional security. And so this was a potential product for 6 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. So this reflects to the competitor 11 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 And that's that Magenic discussions that we Q. 16 had throughout the trial. I think people referred to it as the modification of OCS 2005; is that correct? 17 Yes, my understanding is it wasn't a 18 Α. 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.

Q. And they stopped doing that once they realized that Microsoft had already included the functionality?

Α. Yes. 1 Okay. Now, I want to talk about Windows 2 Q. 3 How did these apportionments affect the result aqain. results of your analysis? 4 5 Well, I have two slides that show that. Α. Ι can go through them pretty quickly. The first one deals 6 7 with the royalty base. So you can see I start with 48 8 billion in revenue associated with the U.S. activity and Windows XP and Windows Vista. 9 Then I adjust the price 10 to reduce the price to the home versions to take out the additional revenue in the professional and business 11 versions. That reduced the revenue to \$33 billion. 12 13 What did you do next? Q. Then also I applied the 10 percent quantity 14 Α. discount, and that reduced the amount to 30 billion. 15 Okay. So do we just take the 1 percent or 16 Q. 17 the 0.66 percent you calculated and multiply it times 18 that? 19 Α. 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 fiscal year 2008, it goes to 0.66 percent. 24 25 Okay. So are we done with our Q.

Georgia-Pacific analysis, Mr. Reed? 1 Yes, we are. 2 Α. 3 0. Okay. And what is the result of your analysis? 4 5 Well, the result is the summary that we have Α. already seen and we are back to. The calculation of 6 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. Okay. I want to break it down a little bit. 11 Ο. For the '135 patent with regards to the Windows XP and 12 13 Vista programs, how large is the reasonable royalty? Well, the reasonable royalties for the '135 14 Α. 15 patent are a hundred -- sorry, that's not working. \$140.1 million. 16 17 Okay. And how much of that is Q. Vista, and how much of that is XP? 18 19 Α. It's little bit more than 50 percent for 20 Vista. 21 0. Okay. Now, the second step there, you have 22 got another number underneath that, is that related to 23 the '180 patent? 24 Α. Correct. 25 How much is the reasonable royalty for the Q.

'180 patent on the Windows XP and Vista products? 1 2 Α. It's 83.6 million. And the reason it's smaller is because the '180 patent doesn't issue until 3 March 2007, and this calculation of reasonable royalties 4 5 for the '180 does not begin until March 2007 after the '180 patent issued. 6 7 Okay. And just so we're clear, Mr. Reed, we Ο. 8 never applied that 1 percent rate that you found, 9 correct? 10 Α. That's correct. That wouldn't occur until fiscal year 2012. 11 12 Q. Again, that's after this case is over, 13 correct? That's correct. 14 Α. 15 And the jury is not being asked to grant Q. 16 those damages here, correct? 17 Α. Correct. Okay. Now, the '135 patent on LCS/OCS, how 18 0. 19 much did you determine was a reasonable royalty? 20 Α. Taking the 621 million royalty base times 21 the 3 percent royalty rate, it is 18.6 million. 22 Now, Mr. Reed, a couple more questions. Q. What was the result or what would the result be had you 23 24 not apportioned the damages the way we just discussed? 25 Well, if I applied the 1 percent rate for Α.

the entire time period per patent and started for the 1 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 the professional and business versions, the total would 4 be \$704 million. 5 Okay. Now, Mr. Reed, are you asking the 6 Q.. 7 jury to give \$704 million? 8 No, I'm not. My analysis of a reasonable Α. 9 royalty is the \$240 million number through December 2009 10 that I have been addressing throughout my testimony 11 today. 12 And why are you not asking for the \$704 Q. million? 13 Because I don't believe that appropriately 14 Α. 15 takes into account these various apportionment issues and other adjustments that I think are consistent with 16 17 the Georgia-Pacific analysis. Now, Mr. Reed, do you understand that 18 0. 19 Microsoft is contending that a lump sum payment would have been made in this case? 20 21 Α. Yes, I do. 22 And have you done a calculation of what Q. 23 a lump sum payment would have been under your 24 analysis? 25 I have, yes. It depends on a variety of Α.

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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 million as a net present value as of the end of 2009. 11 12 Q. And, Mr. Reed, why is that number so much 13 larger than the 242 million we just discussed? Because it includes the past amounts through 14 Α. December 2009, the 242 million; plus it includes 15 16 discounted amounts for the period January 2010 through 17 April of 2020. And that's a long time period for additional future potential royalties. 18 19 Mr. Reed, are you asking the jury to give Q. \$942 million dollars in this case? 20 21 Α. In part because of the uncertainty No. 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.

So, I think the running royalty approach 1 2 through December 2009 makes sense, and that's what I 3 suggest is a reasonable royalty. Just one last question, and it is going to 4 0. 5 be a little repetitive, what is the result of your analysis in this case as -- as it relates to a 6 7 reasonable royalty? 8 Well, my Georgia-Pacific analysis and my Α. 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 Court. 17 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 Hello, Mr. Sayles. Α. 23 Q. You are no stranger to the courtroom, are you, sir? 24 25 Well, I certainly have testified across the Α.

country in patent infringement matters, that's true. 1 2 But this is my tenth time in a patent case in U.S. 3 District Court. And you understand that when you testify 4 0. 5 that you must face cross-examination to examine your opinions. You know that, don't you? 6 7 Absolutely, that's correct. Α. 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? I appreciate that, Mr. Sayles. 11 Α. 12 Q. But you understand that when you come to 13 court and express opinions, they're subject to challenge? 14 15 I understand that, yes. Α. 16 0. Can I rely on your deposition testimony that 17 you gave in this case? 18 I understand that you can, yes. Α. 19 Can I rely on the reports that you have Q. 20 written in this case? 21 Α. Yes, sir. 22 Mr. Reed, isn't it true that over the last Q. 14 years you have either appeared in court, written 23 24 reports, or given depositions across the country? 25 Yes. Α.

You have given depositions, testified in 1 Q. court or written reports in lawsuits in Texas, 2 3 California, Wisconsin, Pennsylvania, New Jersey, Delaware, Washington, Colorado, New York, Massachusetts, 4 5 Virginia, Minnesota, Florida, Oregon, Illinois, Maine, Oklahoma, and New Mexico at least, haven't you? 6 7 I haven't provided testimony in all those Α. 8 states. 9 0. I said you have written a report, appeared 10 in court, or given a deposition in a lawsuit in those states at least, haven't you, sir? 11 12 Yes, I have. Α. 13 You know that I have your resume, right? Q. 14 Α. I would expect you to, yes. 15 And in your resume you commonly and you are Q. 16 required to provide information about prior testimonies 17 that you've given; isn't that so? Yes. 18 Α. 19 And would it be fair to say that a 0. 20 substantial part -- portion of your consulting work is done with lawyers related to lawsuits? 21 22 Α. Yes. And a substantial part of your living is 23 Q. 24 made from fees that you earn in consulting with lawyers 25 in reports, depositions, and trial testimony. Is that

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true, sir? 1 2 Α. Yes. 3 You do not have specific licensing 0. experience in the area that is involved in this case, do 4 5 By licensing experience, I mean experience in the you? 6 industry? 7 Α. 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? I disagree with that. 11 Α. 12 Q. Would you look at Page 29 and 30 of your? 13 deposition, please? Do you have it up 14 there? 15 I'm not sure. Α. 16 Q. I can get you a copy. 17 Α. 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 areas involving many technologies other than the 24 25 software industry; isn't that so?

I don't think that's so. I have provided 1 Α. reports and analysis relating to the software 2 3 industry. 4 You have given testimony, depositions and Q. 5 reports in many other technologies, too, haven't you? 6 Yes, I do quite a bit of work in the high Α. 7 technology area. 8 Q. Other than computer software; isn't that 9 so? 10 Α. Yes, computer hardware and other high-tech technologies as well. 11 12 You have been involved in lawsuits that Q. involve medical balloon catheters? 13 14 Α. Yes. 15 Plasma TVs? Q. 16 Α. Yes. 17 Contact lenses? Q. 18 Α. Correct. 19 Q. Learning aids? 20 Α. Yes. 21 Q. Mini-mag flashlights? That's correct. 22 Α. 23 Canine heartworm diagnostics? Q. 24 Α. Yes, but that wasn't a patent case. 25 Math course materials? Q.

1	Α.	Yes.
2	Q.	Grape growing and raisin production?
3	Α.	Yes.
4	Q.	Pet identification and recovery?
5	Α.	Yes.
6	Q.	Water filtration?
7	Α.	Yes.
8	Q.	Poultry processing and marketing?
9	Α.	That was also that was an antitrust case,
10	but, yes.	
11	Q.	Okay. The list is longer, isn't it?
12	Α.	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	Α.	Correct.
18	Q.	Now, a lump sum royalty is a common form of
19	royalty in patent licensing, isn't it?	
20	Α.	Yes.
21	Q.	There are two competing methods primarily
22	there are a	few others but those are the two primary
23	methods; r	unning royalty versus a lump sum. Isn't that
24	right?	
25	Α.	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, there's really no guarantee of any payment in the future 4 5 because the party that signs up on the license doesn't have to pay you if they don't use your technology. 6 7 Isn't that so? 8 Yes, that's true. Α. 9 Ο. So with a running royalty there's that 10 uncertainty that you will receive money going into the 11 future? That's correct. 12 Α. 13 It depends on changes in technology or the Q. decision of the party that has the license; isn't that 14 15 right? 16 Α. Yes. 17 And common sense tells you that if you tie Q. the payment that you receive to usage, that the more a 18 19 feature is used, the more money you will receive. 20 That's common sense, isn't it? 21 Α. Yes. 22 And it's also common sense that the less a Q. 23 feature is used for which you have a license, the less 24 you should receive. Does that make sense? 25 It depends on how you measure use. Α.

And if you have a running royalty, and let's Q. 1 2 say in this case VirnetX or any party has a running 3 royalty, there is an administrative cost to just simply keeping up with that. Is that recognized and known? 4 5 Α. That is recognized, yes. Isn't it true that non-exclusive licenses 6 Q.. 7 typically command a lower rate than exclusive 8 licenses? 9 Α. Yes, that is something I took into 10 account. 11 Isn't it true that in this case had there Ο. been a negotiation, it would have been a non-exclusive 12 license? 13 14 Α. Yes. 15 And in the real world, isn't it true that Q. negotiation is a two-way street? 16 17 Α. Absolutely. And here you have come down on the side of a 18 Ο. 19 running royalty based on what Mr. Munger told you would 20 be VirnetX's preference. Is that right? 21 Α. It's more than Mr. Munger. But, yes, Mr. 22 Munger did tell me that. 23 And that's certainly a large part of the Q. 24 basis for you coming down on the side of a running 25 royalty; isn't it?

It's a part of it, but there were a lot of 1 Α. 2 documents and materials I considered. 3 0. I want to look at one of your slides for just a moment. Let's look at Slide 6 that you put up 4 5 for the jury in your direct examination. In your slide you say that going this way 6 7 would be patented technology. Do you see where that's 8 in your slide? 9 Α. I assume you're moving that way 10 (indicating)? I'm sorry. You're exactly right. I'm above 11 Ο. your head. I'm going from VirnetX to the Microsoft 12 side? 13 Correct. 14 Α. 15 And actually the truth is that there was no Q. 16 technology that was available in 2003 that had been 17 developed by VirnetX. You know that, don't you? 18 Well, I know that they were -- they were Α. 19 developing and working on it. But there wasn't a 20 product. 21 When we say patent rights we're not -- in Ο. 22 the hypothetical negotiation that we're talking about here, there's no technology that's going across the 23 table; it's the right to develop that technology. Isn't 24 25 that so?

I think that's fair, yes. 1 Α. 2 Q. And that means that if Microsoft had 3 negotiated and entered into a license agreement, Microsoft would have had to have spent the money to 4 5 develop it, whatever rights were in those patents. Isn't that right? 6 7 They wouldn't be developing the rights, they Α. 8 would be developing the technology. 9 0. The technology. Because the technology 10 didn't cross at the table like your slide indicates; isn't that so? 11 12 Right. It's the rights to the -- to use the Α. 13 patented technology. Now, one of the things that you told the 14 Ο. 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 Yes, that's my understanding. Α. 19 But the parties also at a hypothetical Q. 20 negotiation have knowledge of what the facts are at the time, don't they? 21 22 Α. Yes. And in 2003, you know that VirnetX -- SAIC 23 Q. at the time -- we're talking about SAIC, right in 24 25 2003?

Correct, and the VirnetX team is the way to 1 Α. 2 think about it. 3 0. Okay. But SAIC was the company that would be at the table, right? 4 5 Correct, and I would conclude the VirnetX Α. 6 team as part of that. 7 You know that in 2003 at the time of the Ο. 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? I'm not comfortable saying struck out. 11 Α. Had failed to sell the government on their 12 Q. idea? 13 I am aware of the testimony over the last 14 Α. 15 several days in that regard. 16 0. And you heard that, right? 17 I did, yes. Α. At the bargaining table, the parties would 18 0. 19 have known that SAIC had struck out with venture 20 capitalists who are really investors. That would have been known at that table, wouldn't it? 21 22 Α. Yes. 23 And at that table it would have been known 0. 24 that SAIC had struck out with private businesses that 25 they had tried to sell on this technology. Isn't that

right? 1 2 Α. Yes. 3 0. And the parties at that table would have known that the various governmental agencies that have 4 been talked about here -- and I won't take the time to 5 name them -- had passed on this technology. Isn't that 6 7 so? They would have known that? 8 Α. 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 accused is not Windows XP and Windows Vista as a whole. 11 You know that, don't you? 12 13 Α. Yes. You know that there are literally thousands 14 0. 15 of features to Windows XP. You're aware of that, aren't 16 you? 17 I am, yes. Α. 18 And there are literally thousands of Ο. 19 features of Windows Vista, you are aware of that too, 20 aren't you? 21 Α. Absolutely. 22 And you're aware that these patents address Q. 23 specific features, aren't you? 24 Α. Yes. 25 You're aware that what these patents address Q.

is a small part of the thousands of features in Windows 1 2 XP, aren't you? 3 A small part of the number, but there's more Α. to it than that. 4 5 All right. Well, have you done an economic Q. analysis of the other features that are attractive and 6 7 useful to people who might use Windows XP? 8 Yes, that is something that I did. Α. 9 0. You realize that there are many features, in 10 fact, hundreds if not thousands, of both Vista and XP that are not accused of infringing these patents, don't 11 12 you? 13 Did you say hundreds or thousands? Α. Yes, I did say that. 14 0. 15 I just want to make sure it wasn't hundreds Α. of thousands. 16 17 Yes, I do understand that hundreds or thousands. 18 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 Α. Yes. 25 Tell me -- tell me a few? Q.

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Well, there would be print commands, file 1 Α. 2 commands. There would be a variety of different 3 functionalities that we would be aware of even in our everyday use. There would be a large number of APIs, 4 5 and I address that in my report based on my input from Dr. Jones. 6 7 Did you analyze the economic value to the Ο. 8 overall Windows Vista and XP system of say Photo 9 Gallery just to pick one; did you do that? 10 Not that API -- not specific APIs, no. Α. 11 0. Did you analyze the economic component, 12 aspect, or contribution of shadow copy, a feature of Windows XP and Vista? 13 Not individually, no? 14 Α. 15 Do you even know what it is? Q. I'm not sure I know exactly what that is. 16 Α. 17 Did you analyze the economic contribution in Q. Windows XP and Windows Vista of the Welcome Center? 18 19 Not specifically, no. Α. 20 Did you analyze and consider the economic Ο. contribution to Windows XP and Windows Vista of the 21 feature called Windows calendar? 22 23 Α. Not individually, no. 24 Now, I could go on with a long list, but I 0. 25 want to go and ask you the question that I intended to

1 ask you before.

With respect to these hundreds or potentially 2 3 thousands of non-infringing features, have you tried to do an economic analysis of their value to the XP or 4 5 Vista product? Have you done that? 6 Α. I approached it almost the reverse way to 7 that. 8 I'm going to come to that in a few minutes. Q. 9 But I'm asking you now: Did you take the individualized 10 features and analyze them from an economic standpoint to see what their contribution was to the attractiveness of 11 12 Windows XP and Windows Vista to persons who might use 13 it? I focused on the specific APIs associated 14 Α. 15 with the VirnetX technology, and so it's the reverse side of that. 16 17 So the answer is, with respect to the Q. hundreds, if not thousands, of non-accused 18 19 functionalities, you did not do an economic analysis of 20 them individually? Not individually, except for the two APIs 21 Α. that we have been discussing here. 22 Now, one of the things that you said you did 23 Q. 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

to the higher-end versions, correct, the more expensive 1 2 ones? 3 Well, in particular the professional and Α. business versions, that's right. 4 5 And the reason you did that is those business Ο. versions had individual features that contributed to the 6 7 value of the XP and Vista product. Isn't that right? 8 Not exactly. Α. 9 0. Partly? 10 Well, it is not so much individual features, Α. but all of the additional features that I could isolate 11 when I compared it to the home versions of the Windows 12 products. 13 But you did not consider the higher cost of 14 0. 15 the -- the more advanced versions of XP and Vista because they contained additional features. Isn't that 16 17 right? 18 I am confused by the question. I did Α. 19 consider the additional features in the professional versions, and that's why I didn't use the higher 20 21 price. 22 Right. Because those additional features in Q. the professional versions are additional features that 23 24 make the product attractive that are not accused in this case. Isn't that right? 25

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A. Partly right.

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2 But when you got to the home version, you Q. 3 still had hundreds, if not thousands, of features that you did not account for in an economic sense. 4 Isn't 5 that so? No. I believe I have taken into account 6 Α. 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 include valuations of the technology that is embodied in 14 15 those patents. You've seen that, haven't you? 16 Α. I have, yes. 17 And those valuations ranged below \$18 Q. million in all cases, didn't they? 18 19 Not in all cases, but there certainly were Α. 20 some that were in the range up to 18 million. 21 Ο. There were some that were in the range of 22 2.7 million; isn't that so? You saw that? 23 I have certainly seen numbers like that. Α. Ιt 24 depends on what group of technologies, though. 25 All right. But except for SAIC's own Q..

evaluation of its product with respect to the valuations 1 2 that were put on by venture capitalists, potential 3 customers and others who were approached, those values were all less than \$15 million. Isn't that right? 4 5 Let me be clear about the question, Mr. Α. You're saying except for the studies that were 6 Sayles. 7 done for SAIC? 8 Yes, SAIC putting its own price on its Q. 9 product that it's out there trying to sell to venture 10 capitalists and others. You saw third-party valuations, didn't you? 11 12 Yes, that's why I'm confused. CSMG, the Α. 13 company that did the research on valuation, they were hired by SAIC. They came up with valuations that 14 15 approached \$200 million. That's right. But no one accepted that 16 0. 17 figure; isn't that true? I don't know that that's true. 18 Α. 19 All right. I'll talk to you about some Q. 20 documents in just a moment. 21 But are you telling the ladies of the jury that in early 2003 after SAIC had had the difficulties 22 23 that you've heard in this courtroom with its technology, that Microsoft had offered a lump sum payment of \$5 24 25 million, that SAIC would have gotten up and left the

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table. Is that what you're saying? 1 Yes, I am. 2 Α. 3 If Microsoft had offered a lump sum payment 0. at that time of \$10 million, are you telling the ladies 4 5 of the jury that SAIC would have gotten up and left the 6 table? 7 Absolutely. Α. 8 And are you telling the ladies of the jury Q. 9 that if \$15 million hit the table in the negotiation, 10 that they would have gotten up and left the table, given the history of their failures of efforts to 11 commercialize their product and get others interested in 12 13 it? Without a question. 14 Α. 15 Now, let's talk about this for a minute. Q. 16 That is your opinion; isn't it? 17 Α. I think there's documents that go to that issue, too, but certainly it's part of my opinion. 18 19 Q. Right. But what happens at a hypothetical 20 negotiation is necessarily a matter of opinion; isn't 21 it? 22 In part. Ultimately it becomes the jury's Α. 23 opinion. 24 Right. But your job as an expert witness is 0. 25 to express your opinion after doing your analysis; isn't

1 that right? 2 Α. Yes. And that's what I've done today. 3 And that's what you do when you involve 0. yourself in court proceedings is, you express opinions, 4 don't you? 5 On some occasions, yes. 6 Α. 7 And sometimes your opinions are accepted, Ο. 8 correct? 9 Α. Correct. 10 Sometimes they're rejected; isn't that Q. 11 right? 12 Α. Yes, that's true. 13 And sometimes your opinion is somewhere in Q. the middle; is that true? 14 15 That's been my experience. Α. 16 Q. All right. And while we're on the subject 17 of testifying, in the testifying experience you do have, you have appeared on both sides of the fence, haven't 18 19 you? 20 I'm not sure what you mean by both sides of Α. 21 the fence. 22 What I mean is in this case you're appearing Q. on behalf of the patent holder, the Plaintiff and you're 23 24 expressing an opinion on their behalf, aren't you? 25 I'm expressing an opinion that's associated Α.

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 the other side of the coin; is that right? 4 5 Yes, I have also --Α. The other -- I'm sorry. 6 Q.. 7 I've also worked with the defendants in Α. 8 patent cases. 9 Q. So you've been on the other side of the fence? 10 11 Sometimes I'm on both sides of the fence in Α. 12 any particular case. 13 But you've been on the other side of the Q. fence, haven't you? 14 15 Yes, as you put it. Α. 16 And, in fact, you do understand that in a Q. court of law where there's a jury, there is nothing 17 unusual about a Defendant, in the position of Microsoft, 18 19 talking about damages. You know that, don't you? 20 Α. Yes, I do. 21 0. 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 that so? 24 25 Α. That's true, yes.

And by doing that, it is in no way an Q. 1 2 admission or an acknowledgement that there has, indeed, 3 been infringement; isn't that right? That's correct. 4 Α. 5 And it's in no way and it's not an admission 0. that the patents are valid, is it? 6 7 That's up for the jury's determination. Α. 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? I'm not sure what you mean by no bearing, 11 Α. 12 but --13 Well, let me break it down and ask you a few Q. specific questions. You've told us what you're here to 14 15 testify about; but you're not here to testify about infringement, are you? 16 17 Α. No. That is not your job and not your role, is 18 Ο. 19 it? 20 Α. 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 Correct. Α.

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

risk that technologies change and that companies may 1 2 stop using the technology that once was -- was once 3 prominent that becomes outdated. That's a risk, isn't it? 4 5 Α. Can be, yes, sir. With respect to the patented features that 6 Q. 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 Α. Yes. 11 0. And you have not performed any type of an 12 economic survey --13 MR. SAYLES: Let me strike that and start 14 over. 15 (By Mr. Sayles) You haven't performed a Q. 16 survey of any kind to see who is using the accused 17 features of the '135 patent, have you? Correct, I haven't performed a survey. 18 Α. 19 And you haven't performed a survey to see Q. 20 who may be using the patented features embodied in the 21 '180 patent either, have you? 22 Yes, sir -- I mean, I should be clear. Α. Ι 23 have not. 24 And isn't it true that in your field of 0. 25 economics, that sometimes something that economists do

to determine the extent of a product's use is to do some 1 2 sort of a survey? 3 Α. Yes. In this case you are not expressing any 4 Q. 5 opinion as to any lost profits, are you? Correct. 6 Α. 7 That's not in this case, is it? Ο. 8 Α. Correct. 9 0. You've mentioned the term "APIs." That's 10 application programming interface? That's my understanding --11 Α. 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? That's my understanding, yes. 16 Α. 17 And an API is like a plug in the wall in a Q. way, and that's it is there; but until you plug in the 18 19 lamp or you plug in the appliance, the plug is just 20 there. That's true of an API; isn't it? 21 Yes, but having the plug there can have a Α. lot of value. 22 All right. But in this case in terms of who 23 Q. 24 is plugging in to these APIs in the manner that is 25 accused under the '135 and the '180, you don't really

have any economic data on that, did you? 1 2 Α. No, there are -- there are some data. 3 Well, let me ask you specifically. Do you 0. understand that one of the accused features is this 4 5 thing that's been talked about by Dr. Jones of DNS SRV. Do you remember that? 6 7 On discovery? Α. 8 Q. Yeah. You don't have any knowledge about 9 the extent to which that is used, do you? 10 I have important knowledge in that regard. Α. 11 I do. I'm going to refer you to -- if I can find 12 Q. it -- to your deposition, Page 167, Line 11 through 17. 13 14 MR. SAYLES: May I approach the witness, 15 Your Honor? THE COURT: Yes, you may. 16 17 THE WITNESS: What were the pages again? MR. CASSADY: Mr. Sayles, would you give 18 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 (By Mr. Sayles) Page 167, Line 11 through Q. 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:

And so based upon your research into this, 2 3 you're similarly unable to quantify the number of users of DNS SRV auto discovery feature; is that true? 4 5 Your answer was, I think that is true. It's difficult to quantify that. There certainly is within 6 7 the Office Communications and OCS, but you are asking 8 outside of that. 9 Do you see that? You didn't read the "use" in that sentence. 10 Α. There certainly is use within. And that's what I was 11 12 referring to on the next page of this deposition. 13 All right. You say that you looked at some Q. use of OC/OCS; is that right? That's what -- that's 14 15 what you say? 16 Α. Yes. 17 You did. But even with that, that use that Q. you looked at was some sort of data that you deemed 18 19 unreliable or unusable. Is that right? 20 You may be thinking of different things. Α. Ι 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 Is it correct that you don't have any 0. 25 evidence or information about customers purchasing

Windows XP or Vista because of DNS SRV auto discovery, 1 2 one of the accused features here? 3 I think that -- well, I -- I'm not aware of Α. that specifically, I think that's correct. 4 5 And you don't have any evidence based on all Q. of your investigation, of Microsoft retaining or gaining 6 7 any market share because of its inclusion of any of the 8 accused APIs, do you? Retaining or gaining? 9 Α. Not specifically. 10 You would agree that with respect to both 0. the '135 and the '180 that the accused technology, it is 11 12 fair to say, is not a main driver of sales? 13 I did say that in my report, that's true. Α. 14 0. You stand by that, don't you? 15 Yes. Α. And with respect to PNRP plus grouping, we 16 Q. have heard some discussion about Windows Meeting Space 17 earlier, but with respect to third-party developers 18 making use of the PNRP plus grouping feature, you don't 19 20 know of any third-party developers that have made use of 21 that in Windows XP or Windows Vista, do you? 22 Yes, if you are talking about by virtue of a Α. released product. 23 24 The answer is, yes, you do not have any such 0. 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 that3 clarified question, yes.

Q. And is it correct that you have no evidence and no economic information about any customers who purchased Windows XP or Windows Vista because of the accused features in those products?

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.

Q. But what I want to ask you now is, as a result of your analysis that you've done in this case that you told the ladies of the jury about, have you been able to quantify in any sense how often or what -to what degree PNRP plus grouping combination is used 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?

A. That's my understanding of the law, therewould not be damages.

25 Q. And in doing your analysis, you have to

assume, based on the information you've told us you 1 2 gathered, that every copy of Windows XP and Windows 3 Vista infringe. Isn't that right? Yes. 4 Α. 5 And you would apply a 1 percent royalty Q. under the '135 patent to Windows Vista even though 6 7 Windows Vista doesn't even ship with the accused APIs in 8 it. Is that right? 9 Α. That's the -- that's the phased in. 10 0. Phased in? That's correct, phased in. 11 Α. 12 Mr. Reed, you weren't able to identify any Q. developers -- let me stop there and back up. 13 When we talk about developers, we're talking 14 15 about third-party companies that make applications that they sell that they can then run on something like 16 Microsoft XP or Microsoft Vista. Is that what we're 17 talking about there? 18 19 That's what developers would do, yes. Α. 20 And attraction of developers is important Ο. 21 for a product; is that right? 22 Α. Yes. And even though a home user might never use 23 Q. 24 that API, they might be able to purchase some product 25 that a third party has made that will work on their

computer because the API is there. Is that right? 1 2 Α. Yes. 3 You haven't identified any developers that 0. indicated that they would stop developing applications 4 5 for Windows XP or Windows Vista if the PeerNet APIs were not available, have you? 6 7 I have not, correct. Α. 8 Let's go back to the hypothetical Q. 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 (By Mr. Sayles) Conceptually, I want you to Q. think about the hypothetical negotiation in 2003. 14 The hypothetical negotiation must be between a willing 15 16 licensor and a willing licensee; is that right? 17 Α. Yes. It's like the hypothetical negotiation has 18 0. 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 Α. That's fair, yes. 22 And the parties must reach agreement, Q. 23 right? 24 Α. Yes. 25 And Microsoft's preferences would have as Q.

much weight in the hypothetical negotiation as SAIC's 1 2 preferences; isn't that right? 3 That's certainly something I took into Α. account. 4 5 And at a hypothetical negotiation SAIC Q. wouldn't be able to force a running royalty onto 6 7 Microsoft; they would have to obtain agreement in the 8 hypothetical negotiation? 9 Α. I think that's fair, yes. 10 0. And SAIC's claim to preference that Mr. Munger told you they had for this running royalty would 11 just be one of the factors among many when you sit down 12 13 to negotiate. Is that right? 14 Α. Yes, sir. 15 Isn't it true that in general that when Q. 16 parties are at a negotiation, whether it's real or 17 hypothetical, that if they have the opportunity to design-around the patented features, that less money 18 19 changes hands, either at a running royalty or lump sum? 20 Α. Other things constant, that's true, yes. 21 Ο. 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 Α. Yes.

There's nothing wrong with that? Q. 1 It happens 2 all the time, doesn't it? 3 Α. It's certainly something that would be evaluated in the hypothetical or the actual 4 5 negotiation. Right. And that's something that is 6 Q. 7 accepted. There's nothing wrong with it, is what I'm 8 getting at? 9 Α. There's nothing wrong with it, that's 10 true. 11 Ο. 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, didn't you? 14 15 Α. Yes. 16 0. And in the 20 that you looked at in which 17 Microsoft paid a lump sum royalty, each license involves ten or fewer patents, correct? 18 19 I believe that's true, yes. Α. And here there would be two -- or actually 20 Q. 21 one but another one might be issued in the future. One 22 patent, correct? 23 But it's going to be known the second one Α. 24 issues. 25 So we'll call it two. And in the 20 Q.

Microsoft licenses that are lump sums, you know those 1 2 patents related to software, don't you? 3 I believe that's true. Α. And you know that the time frame of those 4 0. 5 licenses was between 1997 and 2007, don't you? I don't recall the exact dates, but I think 6 Α. 7 that's probably fair. And each license is what we call a bare 8 Q. 9 patent license, is that right, of the 20? 10 I can't answer that question. Α. Okay. You cannot? Well, let's tell the 11 Ο. 12 ladies of the jury what a bare patent license is. There 13 are some licenses where parties who are discussing software deliver a product as well as the rights to use 14 patented technology. Is that true? 15 16 Α. Yes. 17 And there's some agreements where the Q. parties sit down and they deliver directions and knowhow 18 19 and books and manuals. Is that true? 20 Α. 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 confidential that informs me differently. 24 25 Well, you know in this hypothetical Q.

negotiation what Microsoft would be receiving would be 1 2 no software, correct? 3 Α. Correct. No product? 4 0. 5 Α. Correct. No technical documentation? 6 Q.. 7 Α. Correct. 8 Q. No source code that we've heard about, 9 correct? 10 Α. Correct. No computer programs? 11 Ο. 12 Α. Correct. 13 Mr. Reed, I now want to direct your Q. attention on to the subject of valuations that were made 14 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 anticipate cross-examination? 18 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 today, and you have been very good jurors. I've been 4 5 watching you closely, and you've been paying attention taking notes. And I know the Court and both parties 6 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.) THE COURT: All right. Please be seated. 14 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 He's got the hook. THE COURT: 24 Okav. And then who will Plaintiffs have 25 next after that? Do you know yet?

MR. CAWLEY: I believe after that we have 1 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. THE COURT: Okay. Very good. 11 Well, we should have the Plaintiff rested by well before noon or 12 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. THE COURT: And what are -- that will 17 leave basically half a day Thursday, all day Friday. 18 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 We will be in recess until 9:00 o'clock in the right. 24 morning. 25 COURT SECURITY OFFICER: All rise.

1	(Court adjourned.)
2	* * * *
3	
4	
5	CERTIFICATION
6	
7	I HEREBY CERTIFY that the foregoing is a
8	true and correct transcript from the stenographic notes
9	of the proceedings in the above-entitled matter to the
10	best of my ability.
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13	
14	/s/
15	Official Court Reporter State of Texas No.: 267
16	Expiration Date: 12/31/10
17	
18	
19	/s/ JUDITH WERLINGER, CSR Date
20	Deputy Official Court Reporter State of Texas No.: 731
21	Expiration Date: 12/31/10
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EXHIBIT F7

IN THE UNITED STATES DISTRICT COURT 1 FOR THE EASTERN DISTRICT OF TEXAS 2 TYLER DIVISION 3 VIRNETX Civil Docket No. 6:07 - CV - 80\* 4 VS. \* Tyler, Texas 5  $\star$ March 11, 2010 6 MICROSOFT CORPORATION \* 9:00 A.M. 7 TRANSCRIPT OF JURY TRIAL 8 BEFORE THE HONORABLE JUDGE LEONARD DAVIS UNITED STATES DISTRICT JUDGE 9 10 11 APPEARANCES: FOR THE PLAINTIFFS: 12 MR. DOUGLAS CAWLEY MR. BRADLEY CALDWELL 13 MR. JASON D. CASSADY MR. LUKE MCLEROY McKool-Smith 14 300 Crescent Court 15 Suite 1500 Dallas, TX 75201 16 MR. ROBERT M. PARKER 17 Parker, Bunt & Ainsworth 100 East Ferguson 18 Suite 1114 Tyler, TX 75702 19 20 APPEARANCES CONTINUED ON NEXT PAGE: 21 22 COURT REPORTERS: MS. SUSAN SIMMONS, CSR Ms. Judith Werlinger, CSR 23 Official Court Reporters 100 East Houston, Suite 125 24 Marshall, TX 75670 903/935-3868 25 (Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

1 APPEARANCES CONTINUED: 2 FOR THE DEFENDANT: MR. MATTHEW POWERS 3 MR. JARED BOBROW MR. PAUL EHRLICH 4 MR. THOMAS KING MR. ROBERT GERRITY 5 Weil Gotshal & Manges 201 Redwood Shores Parkway 6 5th Floor Redwood City, CA 94065 7 MS. ELIZABETH WEISWASSER 8 MR. TIM DeMASI Weil Gotshal & Manges 9 767 Fifth Avenue New York, NY 10153 10 MR. DANIEL BOOTH 11 Weil Gotshal & Manges 700 Louisiana 12 Suite 1600 Houston, TX 77002 13 MR. RICHARD SAYLES MR. MARK STRACHAN 14 Sayles Werbner 15 1201 Elm Street 4400 Renaissance Tower 16 Dallas, TX 75270 17 MR. ERIC FINDLAY Findlay Craft 18 6760 Old Jacksonville Highway Suite 101 19 Tyler, TX 75703 20 \* \* \* 21 P R O C E E D I N G S 22 COURT SECURITY OFFICER: All rise. 23 (Jury in.) 24 THE COURT: Please be seated. 25 Good morning. Everybody ready to go

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1 again? 2 Very good. 3 All right. You may proceed, Mr. Sayles. MR. SAYLES: May it please the Court. 4 5 BRETT L. REED, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN 6 CROSS-EXAMINATION (CONTINUED) 7 BY MR. SAYLES: Good morning, Mr. Reed. 8 Q. 9 Α. Good morning, Mr. Sayles. 10 Mr. Reed, you understand that Microsoft LCS Q. and OCS is an accused product in this case, don't you? 11 Yes, I do. 12 Α. 13 And you understand that that product is a Q. product that is separate from Windows XP and Windows 14 15 Vista, right? 16 Α. Yes. 17 MR. SAYLES: Let's put up Slide 4 from Mr. Reed's presentation yesterday. 18 19 Q. (By Mr. Sayles) All right. Mr. Reed, this is 20 your slide, and I'm pointing to the group of products, Microsoft LCS/OCS, Office Communicator (OC), OC in 21 Office Bundles, and OCS Microsoft ECAL Suite Bundles. 22 23 Do you see those? 24 Α. Yes. 25 Now, you understand that not only are those Q.

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.

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?

A. Again, not in terms of the separate aspects,
but I considered the functionality associated with the
SRV auto-discovery capability compared to all the other
features.

Q. All right. But in making an economic analysis of the contribution of the accused feature of this group of products, you did not analyze the economic value and the contribution of the non-accused features, did you? A. No, I would disagree with that. In

particular, I could address the Office Communicator and 1 2 the Microsoft Office Bundles, if you would like. 3 What economic analysis did you do of the video 0. conferencing feature? 4 That was one of the features that -- that was 5 Α. included in the overall product, because it includes all 6 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 All right. Now, I won't go through all of Q. these. If I understand you correctly, if I went through 11 12 five, ten, a hundred or even more, you would say you did 13 not analyze them individually; is that right? Yes. I was focusing on this feature compared 14 Α. 15 to the overall product. All right. Yesterday, you showed some slides 16 0. 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 I talked about the issue. I'm not sure of Α. 22 what particular slide you had in mind. All right. Well, let's put up Slide 21 and 23 Q. 24 I'll show you one of those. 25 This is one of your slides?

Α. Yes. 1 2 And do you see the date on that slide? Q. 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 Α. Yes. 7 April 10th, 2001, correct? Ο. 8 Α. Correct. And the accused feature was first released in 9 0. Windows XP in 2003; isn't that so? 10 The testimony I recall was a little uncertain, 11 Α. but my understanding is it wasn't until 2003 that the 12 13 particular feature was -- was implemented and then released into the -- the development packs and 14 15 ultimately in XP 2 for Windows XP. 16 0. All right. My question is very simple, and I want to see if we're there. 17 18 The accused feature that was added to Windows 19 XP was first released in 2003; is that right? 20 I -- I think, yes, it is. But certainly it Α. was not in it in 2001. 21 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

right? 1 2 Α. Yes. 3 And there were hopes for them; is that right? 0. Very much so, yes. 4 Α. 5 Not experience but hopes, right? Q. 6 There was also a customer feedback about Α. 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 Α. Yes. 11 And can we look at the date on the left-hand Ο. side, please? 12 13 That's a date that is prior to the release of the accused feature, correct? 14 15 Α. Yes. Let's look at Slide 23, the why-we-win slide. 16 0. 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 Putting aside the precise time in 2003, I do Α. agree it was before it, yes. 23 Let's look at No. 24. 24 Ο. 25 And I'm going to ask that the date be brought

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1 up. 2 July 9th, 2001. The same situation, isn't it? 3 Α. Yes. All right. Now, yesterday, you were asked 4 Q. 5 some questions about where you got information for the rates you used, and you said that you got it from 6 7 various sources. 8 Do you remember that? 9 Α. Yes. 10 Q.. And I'm going to show you Slide 13 from your 11 presentation. And this is where you were discussing Factor 4 12 13 of the Georgia-Pacific Factors that you explained to the 14 jury, correct? 15 Actually, I don't think this slide was shown. Α. 16 But it is a slide I prepared. 17 Well, do you recall that yesterday in your Q. testimony you discussed Plaintiff's Exhibit 653 that's 18 19 referenced at the foot of this particular slide? 20 Α. Yes. And in doing so, you said that that was a 21 0. 22 document that you looked at that was an example of rates 23 that you explored in your analysis; is that right? I think I was addressing it more from a 24 Α. 25 standpoint of rates that were being evaluated and

considered by SAIC, in this case VirnetX. 1 2 Q. All right. And to -- in order to assess the 3 mental state of SAIC back in 2003 at the time of this hypothetical negotiation would take place? 4 5 No. You can see there's different time Α. periods, and I evaluated all these different documents 6 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 Α. Yes. All right. And as a matter of fact, that page 14 Ο. was in some ways supporting or contributing to your 15 16 opinions that you were explaining to the jury, or you wouldn't have used it as an example; is that right? 17 18 Α. Sure. This is certainly a document that I 19 considered. 20 Ο. All right. Well, let's look at the cover 21 page. As you said, this is a presentation that was done in 2009 by VirnetX, right? 22 23 Α. Yes, sir. 24 The Plaintiff in this case, right? 0. 25 Α. Yes.

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Q. After this lawsuit was filed, right? 1 2 Α. Yes. 3 And it's an investor overview, and it's trying 0. to get investors to invest in VirnetX, right? 4 That's what I took into account. 5 Α. Yes. And, in fact, the document even discusses the 6 Q. 7 fact that this very litigation was pending in the 8 document; is that right? 9 Α. I don't recall that on this document, but I 10 was certainly aware of that being stated in other 11 VirnetX documents. Let's look at Page 16 of this document that 12 Q. 13 you showed the jury yesterday. Right at the top, you can see summary of Microsoft litigation. 14 Do you see that? Do you see it? 15 16 Α. I do, yes. So it is discussed in this document? 17 Q. 18 Yes. Α. 19 Q. So, Mr. Reed, do you think that it's appropriate in supporting your opinion to rely on a 20 document that was written after the lawsuit was filed by 21 22 the company that is the Plaintiff, who is trying to get 23 people to invest in what they're doing? 24 Α. I think it's appropriate to consider it as 25 long as you consider it with the right weight.

All right. Mr. Reed, in this case, it's 1 Q. 2 already been covered to some extent that the government 3 funded the development of the '135 and '180 through the company called In-Q-Tel. 4 5 Do you remember that? 6 Α. Yes, sir. 7 You are familiar with that, aren't you? You Ο. 8 are familiar with the In-Q-Tel contract, aren't you? 9 Α. Yes. 10 0. And the In-Q-Tel contract provided that the government would pay 3.55 million, and among other 11 things, would receive an exclusive license to the 12 13 patented technology. Is that true? 14 15 I -- I don't know if it was exclusive. Α. Ι 16 don't recall that, but I do understand that there were rights that would be received. 17 18 All right. Well, in evaluating license and 0. 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 Α. Absolutely. 23 Because a non-exclusive license, like Q. 24 Microsoft would be getting, usually commands a lower 25 price; is that right?

That is. And that's what I took into account. 1 Α. 2 And there's been some testimony by Mr. Munger Q. 3 that I think you may have heard that he doesn't know one way or the other whether the government actually ended 4 5 up using this technology; is that right? Did you hear that? 6 7 Α. Yes. 8 Let's look at the first page of Exhibit 3122 Q. 9 under the Paragraph 3, under contract type and payment. Right there, it says total cost to buyer of 3,552,870. 10 11 Do you see that? 12 Α. Yes. 13 So that's what the government paid for Q. whatever is contained in this contract; is that right? 14 15 Besides other -- other adjustments, that's Α. certainly what's specified in this paragraph. 16 17 Let's go to Page 20 of this document. Q. And down in Paragraph No. 2 at the bottom of the page, an 18 19 allocation of principal rights, the second sentence, 20 with respect to. 21 MR. SAYLES: Would you highlight that, Chris? 22 (By Mr. Sayles) It says here that with respect 23 Q. 24 to the subject invention in which the seller retains 25 title, the government shall have a non-exclusive,

non-transferable, irrevocable, paid-up license to 1 2 practice or have practiced for and on behalf of the 3 government the subject invention throughout the world solely for government purposes. 4 5 Do you see that? 6 Α. Yes. 7 So whether the government did or did not use Ο. 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? I wouldn't agree with that. 11 Α. That's what it says right there, isn't it? 12 Q. 13 I think the certain facts you mentioned are Α. correct, but it's not really comparable to a 14 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. You heard that, didn't you? 20 21 Α. Yes. 22 And where a long list of venture capitalist Q. 23 investors looked at this technology and passed, you heard that, didn't you? 24 25 Α. Yes.

And if we look at Exhibit 3136 very quickly, 1 Q. this is an SAIC document that goes through -- and I'm 2 3 not going to go through in detail -- but it's page after -- you can look in the notebook up there beside 4 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 I'll qo back. 11 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 Α. Yes. And that the date of September 2000. That's a revision date. 17 Q. Are you -- are you making some significance of 18 19 this date? Are you saying that back earlier, as we heard yesterday from Mr. Munger, that these businesses 20 weren't contacted? 21 22 No, I'm not saying the businesses weren't Α. 23 contacted. No. 24 And venture capitalists? 0. 25 I understand that they were contacted. Α. The

1 date matters, though.

Q. And they passed on the technology. You heard 3 all about that yesterday?

A. Yes, in that early time period, that's right.
Q. And as a matter of fact, you know that SAIC
itself decided to pull the plug on the development of
this technology in 2001, even though they had a patent
application pending with patent claims that would later
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?

A. Yes, but there was a valuation done for SAIC. Q. They were actually convinced that the value of a company that would be formed and would take over this technology would be something more on the order of \$10 million, weren't they?

A. Certainly aware that there were someconsiderations of that value range.

Q. So you mentioned the 200-million-dollar number, but you know the documents show that SAIC was convinced that the range of value was more like 10

million. 1 2 You know that, don't you? 3 I know that there were different ranges Α. discussed at different times. 4 5 Let's look at Exhibit 3128, and let's start Ο. 6 with the cover. 7 This is an In-Q-Tel document in March and 8 April of 2001. Do you see that? 9 Α. Yes. 10 All right. Let's go to Page 12. And in the Q. very bottom paragraph, I want to highlight the portion 11 that says SAIC's going-in position was they wanted a 12 13 hundred to 200 million valuation for their spin-off. Now let me stop right here. Spin-off means 14 15 that you form a new company and put the technology in 16 it. That's what that means, isn't it? 17 Α. Yes. All right. The valuation of their spin-off. 18 0. 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 Α. Yes. 23 Let me show you -- as a matter of fact that --Q. 24 that's an In-Q-Tel document. You've seen SAIC documents 25 where they themselves acknowledge a value in the 9- to

> Microsoft and Apple v. VirnetX, IPR2014-00403 Petitioner Apple Inc. - Ex. 1028, p. 1651

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15-million-dollar range, haven't you? 1 2 Α. Yes. 3 If we look at 3198, you can tell from the 0. cover that this is a document from SAIC's Edward J. 4 5 Hendrick, Vice President, Business Development and Technological Commercialization. 6 7 Do you see that? 8 Α. Yes. 9 0. And if we go to the very last page to the last 10 line in the table there, SAIC itself came up with a value of this technology in 2001 of about \$15 million 11 for the whole kit and caboodle; is that right? 12 13 What was the timeframe again? I'm sorry Mr. Α. 14 Sayles. 15 February of 2001. Q. Yes. I'm aware of this document. 16 Α. 17 In fact, in 2001, in terms of SAIC being Q. successful in getting anyone interested in this 18 19 technology was kind of like sitting in a boat for hours 20 and casting out your lure into the weeds and not getting a strike, wasn't it? 21 22 The testimony is that it was difficult to get Α. 23 investors. I acknowledge that. Q. Did I describe it correctly just now in my 24 25 question?

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I'm not sure about the analogy. How many 1 Α. 2 times would you cast into the weeds? 3 0. All right. Let me show you Exhibit 3197. Let's go to the top. 4 5 Do you recognize these names? Edward 6 Hendrick? 7 Α. Yes. 8 Q. Mr. Gobien or Gobien (pronouncing)? 9 Α. Yes. 10 Q.. You understand these are SAIC personnel? Yes, I do. 11 Α. Here they're discussing, in 2001, all these 12 Q. 13 efforts they've been making to get interest in investment in their technology, and it says, and I'll 14 quote: Feels a little bit like finally getting a strike 15 after hours of sitting in a boat casting into the weeds. 16 17 That was SAIC's description of the situation they found themselves in, isn't it? 18 19 Α. Yes. 20 And down at the bottom, they actually made a Q . 21 call for prayer to save this, didn't they? 22 Let me take you down to the sentence before For those of you who are praying people, now is the 23 Ed: 24 time to invoke whomever you normally invoke. Ed. 25 That's Ed, Senior Vice President of SAIC; is

1 that right? 2 Α. That's my understanding, yes. 3 0. So it's fair to say that as of May 2001, after the patent applications were filed, after SAIC 4 5 supposedly had disclosed its invention, they were down to what this memo says in terms of getting any interest 6 7 in it; is that right? 8 At that time period before the patent issued, Α. 9 yes. 10 Q.. But they had a patent application, and it was 11 filed in 2000. 12 You understand that? 13 Α. Yes. And you understand that if a patent is issued, 14 0. the patent holder has priority at least to the date of 15 16 the filing of the application. You know that much, don't you? 17 Yes. 18 Α. 19 Q. You know who Mr. Kendall Larsen is today, 20 don't you? 21 Α. Yes, I do. He is the Chief Executive Officer and Chairman 22 Q. 23 of the Board of VirnetX, the Plaintiff in this case; is 24 that right? 25 Α. Yes, sir.

And back in 2003, VirnetX as a company had not 1 Q. 2 been formed; isn't that right? 3 Α. Yes. And Mr. Kendall Larsen was approaching SAIC 4 Ο. 5 and was negotiating with SAIC to try to buy the technology at issue; is that right? 6 7 Yes. At that time, associated with other Α. 8 companies, but yes. 9 0. And so Mr. Kendall Larsen, now the President 10 and CEO of VirnetX, back in the 2003 timeframe was horse-trading with SAIC to try to get this technology, 11 right? 12 13 Α. Yes. Right? 14 0. 15 I'm not sure what you mean by horse-trading, Α. 16 but yes. 17 Okay. Bargaining, negotiating, exchanging, Q. I'll-take/will-you-give-type of information? 18 19 Α. Yes, sir. 20 Ο. 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.

(By Mr. Sayles) You've seen that, haven't you? 1 Q. I believe so, yes. 2 Α. 3 Now, under your theory and your opinions, the 0. hypothetical negotiation that would take place would 4 5 have been when? Right about this time period. 6 Α. 7 Okay. And so we have Mr. Larsen discussing in Ο. 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? Α. 11 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? Α. Yes. 18 19 And you have seen the table that's on Page 3 Q. 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?

Yes, I have. 1 Α. 2 Q. And when all the columns are added up, 3 accounting for who gets what in terms of the stock, there is a valuation of a hundred percent of the 4 5 ownership at 15,384,614, right? 6 Α. Yes. 7 For the whole technology, correct? A company Ο. that would own it in effect? 8 9 Α. Yes. 10 But you're saying right about this time, SAIC Ο. would have gone to the bargaining table and wouldn't 11 have left without a running royalty that would yield 12 \$240 million. 13 Is that your testimony, sir? 14 15 That's correct. Yield that royalty over the Α. 16 time period through 2009. I want to talk briefly about the protocol or 17 Q. license as they're called that you discussed in your 18 19 direct examination. 20 Do you remember the MCPP license revenue and 21 licenses so forth? 22 Α. Yes. 23 Let's go to Exhibit 3182. Q. 24 And you recognize this as a table that was 25 provided and developed in this litigation that

summarizes who the companies are, what is licensed, and 1 2 what the net royalties paid are. And you're familiar 3 with that, aren't you? I am, yes. 4 Α. 5 And for the MCPP that you referred to in your Ο. analysis, the total amount paid to Microsoft under all 6 7 these licenses is set forth right there; is that right? 8 6.679 million, correct? 9 Α. Yes, after the credits. But that's the total 10 to date. Well, if you're entitled to a credit, you get 11 Ο. 12 a credit, don't you? 13 Α. Yes. Okay. Let's turn the page to WSPP license 14 Q. 15 revenue. You mentioned WSPP in your analysis, didn't 16 you? 17 I did, yes. Α. And the total amount from all of the WSPP 18 0. 19 licenses that Microsoft has received as of the date of 20 this document is \$120,000; is that right? 21 Α. So far, that's correct. 22 Let's look at the exchange server of 2007 Q. 23 licenses. 24 You mentioned that, too, didn't you, in your 25 analysis?

Α. Yes, I did. 1 2 But this is an old table. There's been an 3 update. The old table -- the old table says a 4 0. Okav. 5 hundred thousand. Do you remember what the update is? 6 7 The update has additional royalties now Α. Yes. 8 being paid by this company, NitroDesk, but it's still 9 very early in the program. And NitroDesk has started paying royalties above the prepaid royalties. 10 And you mentioned the LCS revenue licenses as 11 Ο. 12 some of -- something that Microsoft licensed, and you 13 referred to it and pointed to it in your analysis, didn't you? 14 15 Α. Yes. And isn't it true that the total paid under 16 Ο. 17 all of those license, as of the date of this table, was 18 \$610,000? 19 Α. Yes. 20 And, in fact, you know that these licenses are Q. 21 not bare patent licenses, but this involves the transfer of instructions and manuals and know-how. 22 23 You know that, don't you? 24 Yes. That's something I took into account. Α. 25 I want to -- you had a slide that you entitled Q.

1 key licenses. Do you remember that? 2 3 I'll call it up here in just a moment. I think there's two slides with that title, Α. 4 5 but, yes, I do recall that. My system has failed me. Bear with me just a 6 Q. 7 second here. 8 Α. Yes, sir. 9 Q. Well, one of the key licenses was the SafeNet 10 license; is that right? 11 Α. Yes. 12 Q. And let me ask you -- tell us exactly, in 13 total, how much money has been paid to SAIC under the SafeNet license that you consider one of the key 14 15 licenses? 16 Α. Zero has been paid on that license. 17 Q. Zero? 18 Yes. Α. 19 Q. And that's because SafeNet has the right to 20 terminate that license and did so; is that right? 21 That's correct. Α. 22 And the contract provided that they had the Q. 23 right to evaluate the viability of the technology first and then decide what to do, didn't they? 24 25 Α. Yes.

And so that rate of 20 percent that you put up 1 Q. 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? I don't believe it's meaningless, no. 4 Α. 5 Well, they could have agreed to any number, Q. and since SafeNet exercised its rights to bail out, it 6 7 really didn't yield any money; isn't that true? 8 Well, it didn't yield any money, but I don't Α. 9 agree to that number. 10 There was one other SAIC license that you Ο. mentioned, and that was the SAIC VirnetX license; is 11 that right? 12 13 Α. Yes. Let me see if I have this straight. 14 First of Ο. 15 all, how much has been paid under the SAIC/VirnetX 16 license agreement? 17 I believe I testified yesterday that nothing Α. under the 15-percent royalty rate has been paid. 18 19 Ο. There's a rate of 15 percent but zero has been 20 paid, right? 21 To date, that's correct. Α. 22 And you're calling a key agreement an Q. agreement -- let me see if I've got this straight --23 24 that is between VirnetX on the one hand and SAIC who, under the contracts, has a right to see -- receive some 25

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of the proceeds in this litigation, right? 1 2 Α. Yes. 3 Ο. Just one more line of questions I want to ask you. 4 5 Yesterday, you mentioned some products that you looked at that were something, I think you referred 6 7 to, as proxy products? 8 Α. Proxy products? 9 Q. Did you look at some products that Gif Munger 10 told you were in some way comparable to the patented technology in order to assess the value to be placed on 11 12 it? 13 Are you referring to the information from Α. Dr. Jones relating to some security VPN products to --14 15 for me to compare the pricing that would exist for the security products? 16 17 Q. That's right. 18 Can you state the name of those three 19 products? Well, I will have to refer to my report to 20 Α. 21 know them, but they are relatively small products. 22 Can you name -- by name the correct name of Q. 23 one of them? 24 Not without referring to my report right now. Α. 25 Have -- have you owned one, two, or three of Q.

those products that you refer to? 1 2 Α. No. 3 0. Have you analyzed the capabilities of those products beyond what Dr. Jones told you was similar to 4 5 the accused technology? 6 Α. No. 7 Do you know if there were any extra features Ο. 8 in any of those three products over and above the 9 accused features? Do you know? 10 I -- I expect that there is, yes. And that's Α. consistent with what I understand from Dr. Jones. 11 All right. And have you done an economic 12 Q. 13 analysis of what the value or the contribution of those features that don't relate to the patented features 14 15 might be in the price of those products? Have you done 16 that? 17 I want to be clear we're talking about --Α. we're talking about the three products that were used to 18 19 verify the pricing that SAIC and VirnetX had in mind for security products, right? 20 21 That's right. Q. 22 For my purposes, that wasn't necessary. Α. No. 23 MR. SAYLES: I'll pass the witness. THE COURT: 24 25 THE COURT: All right. Cross --

1 redirect? 2 MR. CASSADY: Your Honor, may I confer 3 with my colleagues real quick? THE COURT: 4 Yes. 5 (Pause.) MR. CASSADY: May it please the Court. 6 7 REDIRECT EXAMINATION 8 BY MR. CASSADY: 9 0. Mr. Reed, Mr. Sayles asked you a lot of 10 questions yesterday and today about various documents related to valuations and marketing perspectives. 11 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. What is -- what is the but? 14 15 Well, the but is that many of these documents Α. 16 occurred early in the time period before the '135 patent 17 issued in late 2002 and certainly before the '180 patent issued in March of 2007. 18 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 Mr. Reed, I apologize for interrupting. Q.

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1 Is a patent that has actually issued more 2 valuable than one that is still just an application? 3 Α. Yes. Unequivocally yes, correct? 4 0. 5 Α. Yes. 6 Okay. Now, Mr. Reed, Mr. Sayles asked you a Q. 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 Α. Yes. 11 In fact, he pulled up PX -- or sorry -- I Ο. think it's DX3136. 12 13 Do you remember this? 3136? 14 Α. 15 I don't believe it's in your binder, Mr. Reed. Q. It's on the screen. 16 17 This was a list of parties that SAIC had communicated with regarding the technology, correct? 18 19 Α. Yes. 20 Now, were you here for Mr. Munger's testimony Q. 21 on Monday morning? 22 I was, yes. Α. 23 Did Mr. Munger identify a party to which -- or Q. VirnetX is currently negotiating a license with? 24 25 Yes, he did. Α.

Q. What party was that? 1 VeriSign. 2 Α. 3 Is VeriSign listed as a party in this document 0. to which SAIC was negotiating with? 4 5 And I'll direct you to Page 4. Yes, it is. 6 Α. 7 So VeriSign -- it's the same VeriSign that Ο. 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 Α. I'm not sure -- can you ask the question 13 again? This VeriSign here is the same VeriSign 14 Q . Okay. that Mr. Munger is negotiating with for a license? 15 Absolutely, yes. 16 Α. 17 And this is the same document that Mr. Sayles Q. tried to show you to say that the technology wasn't 18 19 valuable? 20 Α. 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?

I used the Georgia-Pacific Factor Analysis 1 Α. 2 from the case we mentioned, this famous case where 3 patent damages and reasonable royalty analysis -- the Georgia-Pacific case. 4 5 Now, Mr. Reed, is that just some case that you Ο. picked out of the house? 6 7 It's a case from about 30-some-odd years Α. No. 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 people like me who do damage analysis or reasonable 11 royalty analysis. 12 13 And in every case you've been in, yourself and 0. the other experts on the other side, use the 14 15 Georgia-Pacific Analysis? 16 Α. Yes. 17 In fact, the expert in this case that Q. Mr. Sayles will likely call later, he used the 18 19 Georgia-Pacific Analysis, didn't he? That's correct. 20 Α. 21 0. Now, Mr. Sayles also brought up a number, a 22 wide number of technology areas that you had worked in, 23 correct? 24 Α. Yes. 25 Okay. Now, did you ever hold yourself out as Q.

a technical expert in those fields? 1 2 Α. No. I rely on technical experts like 3 Dr. Jones in this particular matter, but they would have expertise on the particular technologies like water 4 5 filtration or even grape-growing. And so what is your expertise in these cases? 6 Q. 7 I bring the expertise of economic analysis, Α. 8 evaluating license arrangements, evaluating royalty 9 rates, evaluating how to treat the royalty base and 10 calculating the amount of reasonable royalties. Now, Mr. Reed, you were also asked about 11 Ο. 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 Α. Yes, I do. 17 But did you hear Dr. Jones' testimony about Q. the PeerNet APIs and whether or not they're included in 18 19 this box? 20 Α. Yes, relating to the '180 patent. 21 Q. And what did Dr. Jones say about Vista in the box with PeerNet APIs? 22 23 That it does infringe. Α. 24 Automatically just by being in the box? 0. 25 Yes. With respect to the '180 patent, that's Α.

exactly right. 1 Okay. Now, Mr. Reed, you were also asked 2 Q. 3 about the use of DNS auto-discovery. Do you remember that? 4 5 Yes. Α. 6 And I distinctly remember you saying I have Q. 7 information of use. 8 Do you remember that? 9 Α. Yes. Okay. What information of use for DNS 10 Q.. auto-discovery do you have? 11 Well, that was information from the deposition 12 Α. 13 testimony of Microsoft's Mr. Mu Han, who testified that Microsoft itself, Hewlett-Packard, and Intel, those 14 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? They are very large companies that are 18 Α. No. 19 experts in this area. 20 Okay. And is the jury going to hear that Q. 21 testimony later today? 22 I understand that that's true, yes. Α. 23 Now, Mr. Reed, you also were asked questions Q. 24 about the In-Q-Tel agreement. 25 Do you remember that?

1 A. Yes.

Q. And you said that the In-Q-Tel agreement was not comparable to a Georgia-Pacific Analysis; is that correct?

A. Correct, yes.

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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 things, would they pay the kind of monies that Microsoft 14 15 would pay here for an actual true patented technology? 16 Α. No. Usually, when a company is investing at 17 that early stage, they're providing funds and they're given certain rights. And in that case, they got 18 19 non-exclusive rights relating to the government use. 20 And finally, Mr. Reed, you were asked about Q. the WSPP licenses. 21 22 Do you remember that? 23 Α. Yes, I do. 24 And you said something about it's little early 0. 25 to tell.

Is that what you said? 1 2 Α. Yes. 3 0. Okay. What did you mean by that? What I mean by that is a lot of the companies 4 Α. 5 that have entered into those license agreements are starting to introduce their software products, and one 6 7 example is the NitroDesk that I mentioned. It has a 8 product that it's beginning to pay royalties on. 9 Ο. And so why would the low dollar amounts on the 10 documents that Mr. Sayles showed you about the licenses not be relevant in this case? 11 Because it's just reflecting an early stage. 12 Α. 13 It would be as if you were looking at the Microsoft payments in 2003 before all the continued sales led to 14 15 additional royalties -- additional royalty amounts. Okay. Thank you, Mr. Reed. 16 Q. MR. CASSADY: No more questions, Your 17 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?

> Microsoft and Apple v. VirnetX, IPR2014-00403 Petitioner Apple Inc. - Ex. 1028, p. 1671

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1 MR. CASSADY: Your Honor, I believe we have video depositions at this point. Would you like me 2 3 to list the five video deponents, or are we going to go one by one? 4 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 the time is around 20 to 30 minutes. 11 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 Khaki, Christian Huitema, Gurdeep Singh-Pall, Henry 18 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 Microsoft's? 3 MR. CASSADY: Your Honor, I will get an 4 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 and address for the record. 12 13 ANSWER: My name is Mohamed Jawad Khaki. My address 901 197th Avenue Southeast, Sammamish 14 15 Washington 98075. 16 QUESTION: What position do you hold at Microsoft? 17 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 or April. I can't remember exactly what time. 23 24 OUESTION: What was the information that 25 was before you when you made the decision to go forward

and develop the PeerNet APIs? 1 2 ANSWER: We -- we saw peer-to-peer 3 applications like Napster and other things like that that were being developed. 4 5 QUESTION: What other applications? ANSWER: For example, Napster, Newtella. 6 7 QUESTION: What was --8 ANSWER: Basically, applications that 9 were sharing information from computer to computer. 10 QUESTION: Sorry. Was the other application that you mentioned Newtella? 11 12 ANSWER: Yes. 13 QUESTION: Were there any other applications that you were aware of at that time? 14 15 ANSWER: I can't remember at this time. QUESTION: So if someone said to you, 16 17 Mr. Khaki, there's this thing called Napster, and it's great, and there's this thing called Newtella, and it's 18 19 great, too, we should provide support so that other developers can build more applications like this using 20 21 Windows, is that what was before you when you made the decision? 22 23 What was before me is the ANSWER: 24 interest of our customers. Because if we really do not 25 have a clean support in the operating system, then there

would be uncoordinated development for these 1 2 applications, which causes many times installation 3 nightmare in our customers' minds, right? So actually, by providing the support as 4 5 soon as we had the support developed, we helped mitigate potential customer issues that could arise, if these 6 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? ANSWER: Yes. 11 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. QUESTION: Was it a big decision to go 16 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.

QUESTION: Is the PeerNet API a 1 subsystem? 2 3 ANSWER: PeerNet API is -- is, you know, a subset of the communications APIs that are in Windows. 4 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 the PeerNet APIs to be adopted? 11 I don't remember what I believed 12 ANSWER: 13 at that time, you know. But we -- I did believe that making PeerNet APIs will help our developers develop 14 15 applications that will deliver a good experience for our 16 customers. 17 Did you think that this would QUESTION: help developers in the short-term or in the long-term? 18 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 This is why we actually make it out the short-term. 24 available sooner so that our customers can benefit. 25 QUESTION: So you saw that the

peer-to-peer application category was taking off, and 1 2 you decided to develop the PeerNet APIs for that 3 category; is that correct? ANSWER: We decided to develop the 4 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 answered -- I believe I've already answered this before, 11 Counsel. 12 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, and we did what we did. 18 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

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alternatives to the PeerNet APIs when you considered 1 that proposal? 2 3 ANSWER: I personally did not consider 4 it. 5 QUESTION: So as far as you were concerned, there were no alternatives to the PeerNet 6 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; is that correct? 14 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 other proposals being made to me for consideration in 18 19 that area. 20 QUESTION: When you were considering 21 whether to develop the PeerNet APIs, did you not take into account whether Microsoft would be the first 22 company to provide a platform for peer-to-peer 23 24 applications? 25 ANSWER: As I explained to you before

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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.

So by having a standard set of APIs to support these emerging applications in the operating systems that they could all use, then it results in a good experience for our customers.

Our customers then could count on applications developed to a common infrastructure, the PeerNet infrastructure, and not -- and do away with the installation nightmares or version incompatibilities, et cetera, et cetera.

So our primary consideration really was to make sure that we have a good support in the operating system that enables third parties to develop applications written to a consistent set of interfaces so they don't create headache for our customers when

they use Windows. 1 2 (End of video clip.) 3 (Video playing.) QUESTION: Can you please state your full 4 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 Microsoft? 10 11 ANSWER: I'm a distinguished engineer at Microsoft, and currently, I'm in charge of a small team 12 13 that investigates new products. 14 QUESTION: What team are you in charge 15 of? ANSWER: It's -- the team is called 16 17 the -- it's a part of what we call the Communication Innovation Center. 18 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

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participating in group communications? 1 2 ANSWER: Yes, that only the authorized 3 members can participate in the group. QUESTION: Why is it important that only 4 5 the authorized members can participate in the group? We are providing a tool to 6 ANSWER: 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 secure peer name that it must be resolved by PNRP rather 11 than DNS? 12 13 Oh, yes. They have a very, very ANSWER: 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 OUESTION: 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.

2QUESTION: When you receive a response3from a request to resolve a secure peer name by PNRP, do4you have a high level of assurance that the response is5genuine?6ANSWER: The answer is yes.7QUESTION: 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?

ANSWER: The peer will be able to contact a member of the group, present the credential as were present in the invitation, present additional credential that are needed to validate the invitation, and if the verification of those credentials is accepted, if the -if the receiving peer can validate those credentials, then the peer will be accepted, but only then.

19QUESTION: Once the peer has joined the20group, will the peer then send a request to the group21member that it contacted in order to join the group for22the current set of records for the group?23ANSWER: Yes. That's what the protocol24does. There is a synchronization protocol at that time

25 to make sure that every member of the group has an

up-to-date copy of the records. 1 2 (End of video clip.) 3 (Video playing.) QUESTION: Can you please state your name 4 5 and address for the record. 6 Yes. My name is Sandeep Kishan ANSWER: 7 Singhal. My address is 731 16th Avenue West in 8 Kirkland, Washington. 9 QUESTION: So what is your position at Microsoft? 10 11 I'm currently director of ANSWER: 12 program management for the Windows Networking Group. 13 QUESTION: And why were the PeerNet APIs developed as part of the Advanced Networking Pack for 14 15 Windows XP? 16 ANSWER: We believed that, at the time, 17 providing new APIs and the functionality that underlies those APIs would create new opportunities to create 18 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

order to use those applications? 1 2 ANSWER: We believe -- the goal was to 3 ensure that -- to provide incremental functionality to the Windows platform so that the developers could use 4 5 PNRP and Grouping in combination with other technologies and functionality that are part of the Windows platform 6 7 in order to drive and encourage the use of Windows by --8 by end users. 9 OUESTION: Who does Microsoft market PNRP and Grouping to? 10 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 to? 17 18 Microsoft does not market ANSWER: 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 PNRP and Grouping? 25

Microsoft makes those APIs 1 ANSWER: 2 available to developers in the operating system 3 through -- by delivery in the operating system, provides sample code and libraries as part of its software 4 5 development kits, provides a public website and documentation on MSDN and TechNet, and members of my 6 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? ANSWER: Not that I'm aware of. 12 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 I live at 731 16th Avenue West in Kirkland, 18 Singhal. Washington. 19 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

around existing patents. 1 QUESTION: Did you do a review of 2 3 existing patents to see if you might be infringing on third-party patents? 4 5 ANSWER: I'm not aware of any such 6 analysis. 7 Is it not part of Microsoft's QUESTION: 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 that involves the review of third-party patents as part 12 of the engineering process. 13 QUESTION: Were there any efforts that 14 15 you made during the development of P2P and PNRP to see to it that Microsoft didn't infringe on any third-party 16 17 patent rights? 18 Could you repeat the question, ANSWER: 19 please? 20 Are you referring to the PeerNet APIs in this question? 21 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?

QUESTION: All development. 1 ANSWER: I can only speak to the time 2 3 that I have spent with the PeerNet APIs since I have managed the teams that have been doing the design and 4 5 development of the PeerNet APIs. So in the time that I have managed the 6 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 on the patents of others? 18 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 involve third-party patents. 25

QUESTION: Isn't it part of your duty as 1 2 the manager of a development team to make sure that your 3 team doesn't develop software that infringes the patents of others? 4 5 It is my duty as an engineering ANSWER: manager to ensure that my team is delivering features 6 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 appropriate quality, and to ensure those features and --10 and scenarios are delivered in conformance with our 11 stated schedules and release criteria. 12 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 I'm not aware of any step in our ANSWER: standard engineering process that includes the 18 19 engineering team doing reviews of third-party patents. (End of video clip.) 20 21 (Video playing.) 22 QUESTION: Mr. Sanders, have you ever had your deposition taken before? 23 24 ANSWER: Yes. 25 QUESTION: What is your current position?

1 I run the development group ANSWER: 2 responsible for the core Windows networking 3 technologies. QUESTION: How long have you had that 4 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 by your development of --14 15 UNIDENTIFIED ATTORNEY: Objection. 16 QUESTION: -- a new product? 17 ANSWER: We don't look at patents as part of our product development. We don't look at 18 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 rights? And I'm asking just for a yes or no answer. 25

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ANSWER: 1 No. 2 (End of video clip.) 3 (Video playing.) QUESTION: Good morning, Mr. Han. 4 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. QUESTION: Okay. Sir, you have said that 10 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 I remember AOL Messenger was ANSWER: 17 using it at one time, and then they moved away from it. 18 OUESTION: And when was that? 19 ANSWER: They used it around 2002, 2003, and after that, I believe they moved away. 20 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 I think they are. ANSWER: 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. Without these back-end systems, it's not very useful. 14 15 QUESTION: I just want to make sure that 16 I understand. The -- is the RTC API still being made available? 17 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?

ANSWER: Yes. 1 2 QUESTION: So why is Microsoft still 3 making the RTC API available via download for other 4 customers? 5 We still hope that other ANSWER: customers may pick it up and then write their 6 7 applications taking advantage of LCS/OCS back-ends. 8 QUESTION: Why does Microsoft have that 9 hope? 10 ANSWER: Traditionally, Microsoft is a platform company. We always want to offer platforms for 11 other customers to either fill holes in our offering for 12 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 make use of the RTC API? 17 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

customer, and customer satisfaction will benefit 1 Microsoft. 2 3 QUESTION: How? ANSWER: How? Satisfied customers will 4 5 always come back to ask for more. 6 So is it Microsoft's belief QUESTION: 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 the best immediate goal for the functionality in the RTC 11 API, which is now in the UCC API. Do you remember that? 12 You used the phrase best immediate goal? 13 ANSWER: Could you clarify best of media? 14 15 QUESTION: Best immediate goal. Do you remember testifying --16 17 ANSWER: Oh, best immediate goal. Yes, I remember that. 18 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

also better business for us. 1 2 QUESTION: How about AOL? Do you know 3 whether AOL made use of the DNS SRV capability in the RTC API? 4 5 I know they don't. ANSWER: 6 Do you know when Microsoft QUESTION: 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 LCS 2003. 10 11 QUESTION: Can you be more specific than 12 that? 13 So in LCS 2003, we allowed the ANSWER: Admins to both do manual provisioning and auto 14 provisioning of the client. And that involves using the 15 16 SRV record for auto provisioning. 17 QUESTION: And when did that develop and begin? 18 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 the default setting for server-to-server communication. 25

QUESTION: Why do you believe, as a 1 2 company, Microsoft, that the -- the communications 3 should be secure by default? ANSWER: Overall, Microsoft is trying to 4 5 develop applications that people can securely communicate with each other, because we recognize 6 7 security is a customer demand. That's why we want to 8 design our software to be secure by default. 9 OUESTION: Has customer demand for secure 10 communications driven Microsoft's development of products making use of TLS in these OCS and LCS server 11 scenarios? 12 13 Security is actually a big ANSWER: 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 connections transparently created in response to DNS SRV 25

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1 requests? From the user's perspective, all 2 ANSWER: 3 the four roles I mentioned earlier, this operation is transparent. 4 5 (End of video clip.) 6 MR. CASSADY: Your Honor, we have an odd 7 We've got six depositions that were actually scenario. 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. MR. CASSADY: May I explain to the jury 14 15 that process? THE COURT: Yes, you may, but first, do 16 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

reading of the depositions, we'd like to wait for the 1 2 transcript to determine the time to split up for 3 Microsoft and VirnetX --THE COURT: 4 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.

QUESTION: What position do you hold at 1 2 Microsoft? 3 ANSWER: Software design engineer. QUESTION: How long have you been in that 4 5 position? 6 In current position, I think ANSWER: 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 wasn't infringing on those patents? 11 12 ANSWER: We were actually told expressly -- excuse me. 13 We were actually expressly told not to 14 15 look at patents. QUESTION: You were told not to look at 16 17 patents during the --18 Development of Meeting Space. ANSWER: 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 --

some other document that states that developers are not 1 2 supposed to look at patents? 3 I'm sure it's written down ANSWER: somewhere. I can't remember where that could be. 4 Ι 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 and address for the record? 11 12 My name is Mu Han; first name ANSWER: M-U; last name, H-A-N. My home address is 7204 153rd 13 Avenue Northeast, Redmond, Washington, 98052. 14 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 of the RTC API to use DNS service records for creating 20 21 TLS connection? 22 So first, we do not use SRV ANSWER: records to create TLS connections. We use SRV records 23 24 to discover the servers. 25 The first version of RTC API, it will be

the API we shipped together with LCS 2003. 1 QUESTION: How is it that the use of DNS 2 3 server records makes customers happy? ANSWER: So say if we do not use SRV 4 5 record at all, the client can query a record in the certain format. The format we use SIP.domain. 6 7 If the admin configures the server in 8 this way, if the name of a server is -- for example, SIP.Intel.com, the OC and OCS will just perform just as 9 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. One choice is that they can tell the --14 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 UI in order to connect. 18 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.

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QUESTION: Does Microsoft itself use the 1 OCS products? 2 3 ANSWER: Yes. QUESTION: When Microsoft employs OCS, 4 5 does Microsoft make use of the DNS service records functionality? 6 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 OCS products with the DNS service record functionality 16 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

clients; is that correct? 1 2 ANSWER: There might be more now using 3 OC. QUESTION: How many more would you expect 4 5 there to be? ANSWER: 6 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 customers, as far as OCS products are concerned? 13 14 There are many big customers. ANSWER: Ι 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

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remember others, but I can think of them up. 1 QUESTION: Right. But it happens that 2 3 using DNS service records is the way that Microsoft does -- does use to discover its service, right? 4 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 them will use it. 12 13 QUESTION: Which ones do? ANSWER: I know HP uses it. 14 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 modifications to Office Communicator that have been 24 25 consider or implemented relating to design-arounds for

any of the asserted patents. 1 What analysis has Microsoft done relating 2 3 to modifying Office -- OCS products as design-arounds for the asserted patents? 4 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 on topic 31? 13 I just -- based on my knowledge 14 ANSWER: 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 Jhawar.

(Deposition of Rajesh Jhawar.) 1 2 QUESTION: Good morning, sir. If I could 3 have you state your name for the record, please. ANSWER: Sure. Rajesh Jhawar. 4 5 QUESTION: Could you spell that. ANSWER: R-A-J-E-S-H is the first name, 6 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. QUESTION: What does Exhibit 22 reflect 10 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. Different channels would be treated differently. 14 15 For the FPP, it would be all the units that are sold in the United States. 16 For the VL, it would be all the licenses 17 that are -- all the customers that are located in the 18 19 United States and the portion of licenses that are 20 attributed to their employees in the United States when the contract with them was set. 21 22 So when the contract with the VL customer is signed, you identify how many of their employees are 23 based out of the United States. So it represents those 24 numbers of licenses for the VL customers. 25

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For the OEM system builder and named 1 2 customers, it would be the number of licenses that they 3 purchased in the United States. For MNA, which is where a majority of 4 5 other covered accounts -- I'm sorry -- which is where the majority of the difference comes in, it is the 6 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 authorized -- Dell could buy from an authorized 11 12 replicator in China, but that would still show up as a 13 license shipped out of the United States in this schedule. 14 15 QUESTION: And the covered OEM products, 16 how are those handled with respect to Exhibit 22? 17 ANSWER: It's essentially the same. Ιt is where the OEM is billed, covered OEM. The biggest 18 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

more licenses showing up in the geographies where there 1 2 is a presence of large OEMs. 3 QUESTION: Let me have you take a note -a look at the last page of Exhibit 22. 4 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. OUESTION: What is the attribute credited 11 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, and to a certain extent, named, but primarily covered, 18 19 what is credited for the United States is not 20 necessarily what is produced, consumed, or shipped in the United States. 21 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 deposition. 2 3 (Deposition of Vadim Eydelman.) QUESTION: Can you please state your name 4 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 records? 16 17 ANSWER: Yes. 18 OUESTION: What does it use DNS SRV 19 records for? 20 ANSWER: DNS SRV record used to discover 21 the service -- a server. Sorry. QUESTION: Does LCS 2003 make use of DNS 22 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? ANSWER: Yes. 4 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 2007 R2 make use of DNS SRV records? 12 13 ANSWER: Yes. QUESTION: Are all of the clients that 14 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 There may be -- other clients that I don't 18 about do. 19 know about may be using some other methods and also is 20 one of the methods may be server can be discovered. There are other methods do the same. 21 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. Is there any change in the way 2 QUESTION: 3 that Windows Messenger would use DNS SRV records to connect to an LCS 2003 server and an LCS 2005 server? 4 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 functionality that DNS SRV records perform? 13 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

specifics a little bit later of what is meant by accused 1 Microsoft software, but, generally, you do have 2 3 knowledge of production, importation, exportation, and distribution channels related to some Microsoft 4 5 software; fair to say? ANSWER: Yes, that's fair to say. 6 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. Ιs 10 that how it works? ANSWER: Yes. 11 12 QUESTION: Then what happens? Are they still -- are there still steps that are taken before 13 your organization becomes involved in the transaction? 14 15 ANSWER: At the time that a customer decides to do the purchase, they will -- for the 16 17 Enterprise Agreement Program that we're speaking about, there will be an agreement and order form which the 18 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.

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QUESTION: What does the regional 1 2 operating center do once it receives -- once it receives 3 that completed agreement? And I'm talking still about the Enterprise Agreement Program. 4 5 ANSWER: There are many things that we We will check the agreement for completeness, make 6 do. 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 the field has to make deals in order to meet the needs 11 12 of a customer, we ensure that those have the appropriate 13 level of authorization and sign off internally, and we will then enter it into our licensing and billing system 14 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 And, again, I'm still talking with respect to customer? 23 the Enterprise Agreement Program. ANSWER: The software is made available 24 25 to the customer in the Enterprise Agreement Program by

put -- by making the software available on download 1 sites. And depending on what the customer has elected 2 3 with physical CD and DVD-based software, that is shipped to them. 4 5 QUESTION: Do customers sometimes elect not to get the physical CDs or DVDs and opt only to 6 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 organization? 12 13 ANSWER: The three main regional operating centers in my organization are -- was the 14 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 Singapore. There are other entities that we call 20 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

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receive the executed customer agreements? 1 2 ANSWER: We don't decide that. The 3 customer decides that. QUESTION: So the customer places the 4 5 order with one of the operating centers, and then the operating center takes it from there with the steps you 6 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 regions that I mentioned, and they will then send the 11 12 agreement to that regional operating center. 13 QUESTION: What about with respect to the media that is ordered through the ROC in Nevada? 14 Where 15 is that manufactured and shipped from? 16 ANSWER: For the Enterprise Agreement 17 Program, orders that are placed with the Americas Operations Center in Nevada. 18 19 That software is manufactured in Puerto 20 Rico and fulfilled from there. It's fulfilled from there to a disk -- to a separate -- a second 21 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

Puerto Rico, what do you mean by that? 1 It's the -- for the enterprise 2 ANSWER: 3 agreement program, orders that go through the Americas Operations Center, the software itself for physical 4 5 product distribution, that physical product is distributed on CD or DVD media, and that media is 6 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 those CDs and DVDs from the Puerto Rico state? 16 17 ANSWER: For the Enterprise Agreement Program, orders that are received through the Americas 18 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

hand you what has been marked as Rossmeissl Exhibit 5. 1 This is a document that is Bates stamped MSFSTVX 585545 2 3 through 547. And if I could have you take a look at it when you receive it. 4 5 MR. CALDWELL: Witness reviews exhibit. ANSWER: I have received it, yes. 6 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 commercial media for the Americas region in Puerto Rico 11 by July 2006. 12 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 percent of commercial media for the Americas region? 23 Does that mean that of the commercial media that are 24 25 ordered out of the AOC, the Americas Operations Center,

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a hundred percent of that would be manufactured in 1 2 Puerto Rico? 3 ANSWER: For the commer -- for what we call the commercial product or program offerings, 4 5 which -- which go through the Americas and which physical media is requested by the customer, yes, a 6 7 hundred percent of that comes from the Puerto Rico 8 manufacturing center. 9 MR. CASSADY: That concludes our depositions, Your Honor. 10 11 THE COURT: And you'll get me the times on those? 12 13 MR. CASSADY: I will, Your Honor. Immediately, I'll get you the time. 14 15 THE COURT: All right. Thank you. 16 All right. Who will be your next witness? 17 18 MR. CAWLEY: Your Honor, at this time, 19 VirnetX rests its case in chief. 20 THE COURT: All right. Very well. Thank you. 21 22 All right, Ladies of the Jury. I have a -- I'm going to go ahead and give you your morning 23 break at this time. I'm going to give you 20 minutes. 24 25 So we'll be in recess until 11:10.

COURT SECURITY OFFICER: All rise. 1 2 (Recess.) 3 COURT SECURITY OFFICER: All rise. (Jury in.) 4 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. MR. CASSADY: We enter this as the next 14 15 set of exhibits. 16 THE COURT: All right. I believe that will be Plaintiff's Exhibit List No. 3. 17 18 Be admitted. 19 MR. CASSADY: And then, Your Honor, we 20 would like to admit demonstrative exhibit -- Plaintiff's Demonstrative Exhibit 15 and 16. These are two slides 21 22 from Mr. Reed's presentation. 23 THE COURT: All right. Any objection? 24 MR. SAYLES: Yes. The objections are the same as those previously made. 25

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THE COURT: Okay. Overruled. 1 MR. SAYLES: And that the Court has 2 3 considered. THE COURT: All right. Those will be 4 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. THE COURT: Any objection to that 14 15 exhibit? MR. CALDWELL: May we approach, Your 16 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 necessarily object to the book coming in, but I think we 23 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

anything of that nature. 1 2 MR. POWERS: Well, if it's in, it's in. 3 But what he testified to is that's just one of several ways that the IP addresses -- one, it's totally 4 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.

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THE COURT: Defendant's Exhibit List 1 No. 3, you may tender that to the Clerk. 2 3 Any objection to those exhibits being admitted? 4 5 MR. McLEROY: No, Your Honor. THE COURT: All right. Be admitted. 6 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.

MR. SAYLES: Yes, Your Honor. 1 2 May it please the Court. 3 THE COURT: Proceed. GURDEEP SINGH-PALL, DEFENDANT'S WITNESS, PREVIOUSLY 4 5 SWORN 6 DIRECT EXAMINATION 7 BY MR. SAYLES: 8 Q. Good morning, sir. 9 Α. Good morning, sir. 10 Q.. Would you tell the ladies of the jury your name, please? 11 12 My name is Gurdeep Singh-Pall. Α. 13 And where do you live? Q. I live in Medina, Washington. 14 Α. 15 And what is your current position with Q. Microsoft? 16 I am Corporate Vice President at Microsoft. 17 Α. And what group do you have responsibility for 18 Ο. 19 as Corporate Vice President? 20 Α. 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.

How many people are on the team that you 1 supervise? 2 3 Approximately 1200 people. Α. And who is the current Chief Executive Officer 4 0. 5 of Microsoft? The current Chief -- Chief Executive Officer 6 Α. 7 is Mr. Steve Ballmer. 8 How many people are there between you and Q. 9 Mr. Ballmer in the reporting process at Microsoft? 10 Α. Two people. Don't get too close. Try that again. 11 Ο. 12 Two people. Α. 13 And you said that you were Corporate Vice Q. President, and we've heard that Microsoft has more than 14 15 80,000 employees around the world. How many persons are there at the Corporate VP 16 level? 17 18 100. Α. 19 Q. What do you do within the Unified 20 Communications Group? 21 Α. 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 Would you tell us just briefly about your 0. 25 family, please?

1 Yes, sir. I am married. I have two children, Α. 2 a five-year old and an eight-year-old boy. 3 0. And where were you born? I was born in India. 4 Α. 5 And where were you educated? Ο. I did my high school and undergraduate work in 6 Α. 7 computer engineering in India. 8 Q. And then where did you go to college? 9 Α. I finished my undergraduate degree in India, 10 and then I came to the United States to attend the master's program at the University of Oregon. 11 12 Q. Before we get to that, what university did you 13 go to in India? The university is called BIT or Birla 14 Α. 15 Institute of Technology. 16 0. And within India, is that a well-known school? It's a well-known school in 17 Yes, sir. Α. engineering. 18 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 I came to the United States in August of 1987. Α. 24 And did you receive a degree from the 0. 25 University of Oregon?

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Yes, sir. I received a master's in computer 1 Α. and information sciences in December of 1989. 2 3 0. Did you have to do a master's thesis? Yes, sir. 4 Α. 5 And what was it on? Ο. 6 My master's thesis was a topic called Α. 7 distributed real-time systems. 8 Q. And when did you join Microsoft for permanent 9 employment? 10 Α. I joined Microsoft on January 8th, 1990. And when you joined in 1990, what was your 11 Ο. position? 12 13 I basically joined as a computer programmer. Α. The official title at the time was Software Design 14 15 Engineer. 16 0. Did you end up working in the Microsoft networking technologies area? 17 18 Yes, sir. I started working on networking Α. 19 area pretty much soon after that. 20 And from what period of time did you work on Q. 21 the Microsoft networking technologies? 22 From just about after I joined to 2002, I Α. 23 worked on Windows networking technologies. And did you develop any technologies when you 24 0. 25 were working in the Windows networking area?

Yes, sir. I worked on several technologies 1 Α. 2 like remote access, or what sometimes people might 3 remember as dial-up networking, the ability to dial up to the internet. 4 5 I worked on VPN technologies. I worked on technologies like TCP/IP, which is the language spoken 6 7 on the internet, and I worked on Wi-Fi, which is 8 wireless technology being used today. 9 Ο. Did you have the opportunity early in your 10 career to work on these various technologies you've described? 11 12 Yes, sir. I worked on many of these Α. 13 technologies quite early in my career. Again, I want to ask you about some of your 14 Q. honors and awards, and it's necessary to do this. 15 16 Were you named by Information Week as one of the 15 innovators and influencors who will make a difference in 17 18 2008? 19 Α. Yes, I was. 20 What is Information Week? Q. 21 Α. Information Week is one of the top 22 publications in the computer industry. Have you authored or co-authored any papers 23 Q. 24 that were presented in any esteemed or important forums? 25 Α. 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.

Q. And where was that presented, sir?
A. That paper was selected -- of the other ideas,
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 about9 internet standards.

10 And would you remind us what the IETF is? Sure. IETF stands for the Internet 11 Α. 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 can talk to each other. 16

Given that there are more than a billion Given that there are more than a billion computers on the internet today, it is very important that the language and the rules that are obeyed by all the computers are standardized. And this group is responsible for standardization of these languages. Q. During periods in your career, have you been active with the IETF?

A. Yes, sir. I was very active in the IETF from 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?

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?

A. Actually, that was the second one. The first one was PPTP, which was even before the industry standard.

Q. All right. Now, we're going to get to PPTP in more detail in a few minutes, but is that something that you had involvement with in the development?

17 A. Yes, sir. I was one of the co-authors of that18 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?

A. Microsoft was founded in 1975.

24 Q. And by whom was it founded?

A. It was founded by Bill Gates and Paul Allen.

Q. And what was the vision or reason for the 1 formation of Microsoft? 2 3 Α. In the early '70s, Intel Corporation designed a computer chip which is very small, and when Bill Gates 4 5 and Paul Allen saw that computer chip, they realized that a whole new set of capabilities would be for 6 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 this computer chip to benefit everyday people. 11 Based on your 20 years of experience at 12 Q. 13 Microsoft and your knowledge of Microsoft's history, would you say it's been a successful company? 14 15 Microsoft has been an amazing American success Α. 16 story. 17 And -- and by what measure would you say that Q. it's been successful? 18 19 Today, more than a billion people around the Α. world use computers for everything from social to 20 business, entertainment. And I think Microsoft has 21 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 And what has been Microsoft's focus on its Q.

1 customers?

<ul> <li>3 customers, making them more powerful, allowing them to</li> <li>4 do more things with their computers, allowing them to</li> <li>5 make the computers easily to use their computers</li> <li>6 easily, and allowing them to trust their computers for a</li> <li>1 lot of important things they do in their lives, I think</li> <li>8 has been a core company value right from the beginning,</li> <li>9 and certainly when I joined Microsoft.</li> <li>10 And we take customer focus very, very</li> <li>11 importantly. When you give us feedback from customers</li> <li>12 on things that are not working well, we work hard to</li> <li>13 improve those things. And it's an ongoing cycle.</li> <li>14 Q. We are here about certain security measures</li> <li>15 with regard to computer software. I'd like to direct</li> <li>16 your attention to the to the issue of security.</li> <li>17 A. Yes, sir.</li> <li>18 Q. Is security important at Microsoft?</li> <li>19 A. Security is very, very important at Microsoft,</li> <li>10 and I assume, in this context, security of the computers</li> <li>21 and the software that we use every day. That is very</li> <li>22 important to Microsoft.</li> <li>23 Q. And could you explain to us what security</li> <li>24 means in the context of computer software?</li> <li>25 A. Sure.</li> </ul>	2	A. I think customer focus or empowering our
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	23	Q. And could you explain to us what security
25 A. Sure.	24	means in the context of computer software?
	25	A. Sure.

Security is a very broad term. You know, in 1 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 about many things. We have to make sure that there is a 4 5 latch on the windows. We have to make sure there's a lock on the door. We have to make sure that the keys to 6 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 pieces. 13 It includes things like the password you type It includes permission on who can look at what 14 in. 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.

Security is about making sure that you don't have these computer viruses which come into your computer and then take out information from your computer and send it to the bad guys. It's about making sure sometimes that you don't get spam e-mail, which sometimes all of us get.

25 So security is a very broad term.

And in your time at Microsoft, from 1990 1 Q. 2 forward, has security been important in these particular 3 regards? Α. Yes, sir. 4 5 Security has been important pretty much throughout, certainly in my career at Microsoft. 6 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 the problem of security keeps changing, because the bad 11 guys keep evolving and becoming, you know, more and more 12 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. Can you give an example of some of your 18 0. 19 personal work in the area of computer software security? 20 Yes, sir. When I was involved in the IETF Α. 21 from 1994 to 1998 or so, during that time, I wrote an informational RFC called Microsoft Point-to-Point 22 23 Encryption, which was about scrambling the information when it was going across either full networks or across 24 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 you, and we're going to call it up on the screen. 4 5 First, let's start at the top with the title. Are you familiar with this document by Bill Gates in 6 7 January of 2002, entitled, Trustworthy Computing? 8 Yes, sir. I'm familiar with this document. Α. 9 0. And were you aware of it at the time it was 10 released? Α. Yes. I read this document when Bill Gates 11 sent it out in 2002. 12 13 Now, I would like you, if you would, to put a Q. context of how this trustworthy computing document came 14 15 up. 16 What was going on at the time? 17 In 2002, we were seeing the increase of Α. computers, lots of people starting to use computers. 18 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.

And I believe it was -- it was published outside of 1 2 Microsoft as well. 3 But the document really said that so far, we've been talking about security of software in 4 5 computers. He said it is time now to elevate the conversation from security to conversation about trust. 6 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 use these things as much as they want without worrying 11 12 about these things. 13 And I think that was a -- that was the key point of trustworthy computing. 14 15 I want to call your attention to the first Q. 16 sentence where it says: As I've talked with customers 17 over the last year, from individual consumers to big enterprise customers, it's clear that everyone 18 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 Yes, sir. That was going on. Α. And, specifically, one of the things he was 23 24 referring to was, we saw a rise in computer viruses 25 where the bad guys were writing programs which would

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come on to a computer and then extract information and 1 2 actually use our computer to do bad things with other 3 computers. And I think that was one of the specific 4 5 points that Bill Gates was referring to. Let me bring you down to the second paragraph 6 Q. 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 company and for our industry over the next decade. 11 12 Now, can you put that in context for us? 13 Yes. You know, this was Bill Gates reminding Α. 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. This is a problem -- the trust and making sure 18 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 Now, Mr. Pall, I'd like to shift your 0. 25 attention to the subject of PPTP.

First of all, we've had a lot of letters and 1 initials here. Remind us what that stands for. 2 3 Α. Yes. PPTP stands for point-to-point tunneling protocol. 4 5 And is that something that you worked on? 0. Yes. I co-authored the PPTP standard in the 6 Α. 7 IETF. 8 Q. Did the PPTP become a commercial product? 9 Α. Yes. PPTP became a commercial product as part 10 of Windows NT 4.0, which was a version of Windows software which shipped in August of 1996. 11 12 Q. Is a VPN -- well, just tell us, what is a VPN? 13 Yes. Virtual private network. Α. There have been lots of descriptions. 14 Ι 15 thought I would try a description of my own. Let's say, you know, we have a home on a 16 17 street, and down the street is a school. Now, we know our home is safe and, you know, the school is safe. 18 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

from the school, and nobody could hear what they are 1 2 saying. 3 That really was the idea of PPTP. How do you create a secret passage across the public internet from 4 5 where you are to where the computers that you need to 6 use are. 7 Would you tell the ladies what circumstances Ο. 8 caused you to become interested and involved in this 9 development? 10 Yes. One of the first assignments I worked on Α. 11 at Microsoft was a product called remote access service. 12 Now, I thought I would give you a little bit of a story around that. 13 When I joined Microsoft, I noticed a very 14 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 the day you came in, the parking lots were always full. 18 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 was no technology which allowed people to work from 23 24 So if they wanted to work, the only option for home. 25 them was to drive into work, park their cars, go to

their offices, sit in front of the computers and work. 1 2 The very first product I worked on which was 3 released to customers in December of 1991, was a product called remote access service, which allowed people from 4 5 their homes, using their phone lines with a modem, they could connect to their work networks and work from home. 6 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 same idea that led to the PPTP invention. 11 Go ahead. 12 Q. 13 What we saw in 1995 or so was the type of Α. company mission was a high-speed internet connection, 14 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 connection. We saw that is a fast connection to the 18 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. Now, before we get into how it worked, let me 25 Q.

just asked you, you said it was a commercial product. 1 What was the first release date to the public of this 2 3 PPTP VPN? It was in August of 1996. 4 Α. 5 Some three and a half years before the patent 0. applications in this case? 6 7 As of the proceedings of this case, that is Α. 8 correct, sir. 9 Ο. And tell the ladies of the jury what Windows 10 NT 4.0 is, just so we can get a little context here. Windows NT 4.0 is just a version of Windows. 11 Α. 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 Ο. And was PPTP included in any other versions of Windows besides NT 4.0? 17 After we first shipped it in -- Windows 18 Α. Yes. 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 5 Beta 2. 22 23 At that point, the marketing people changed the name of NT 5 to Windows 2000. It shipped in Windows 24 25 2000 Beta 3. And then of course, it shipped in Windows

2000 and products after that, like XP. 1 2 Up to 2000, can you give the ladies a sense of Q. 3 approximately how many copies of various versions of Windows were sold that included PPTP? 4 5 Sir, I -- it's been a long time. I don't have Α. 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 Windows 98 software copies available for customers, but 11 12 I cannot be more precise than that, sir. 13 Now, you have told us about working from home Ο. to the office. Could PPTP be used in any other settings 14 15 or context? 16 Α. Yes, sir. There were three ways that PPTP 17 could be used, and we considered all those three ways when we designed PPTP standard. 18 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 work network. 22 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.

And then the last way it could be used is that if you were still using a modem to connect to your ISB, like AT&T, AT&T would create a virtual private network 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.

Let's look at the title. First, just tell the Let's look at the nature of this document is. A. This is a document from Microsoft which describes the virtual private networking capabilities in Windows NT 4.0 product.

Q. Now, since it references Windows NT 4.0, would that take us back to 1996, in terms of what's being described?

A. Yes, sir. This document refers to the productwhich shipped in August of 1996.

22 Q. Now, does Microsoft carry on its website 23 informational documents such as this?

A. Yes. You can go back many years later, 1025 years later, and still find these documents on the

1 microsoft.com website.

Q. I want you to look right down here in the right-hand corner. There's a date of February 1, 2008. Does that mean that it's describing technology that was invented in 2008, or what is the significance of that date?

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.

Q. Now, I'm going to ask you to explain to the ladies of the jury how the PPTP VPN worked. Would the diagram on Page 5 of the document be helpful in doing that?

16 A. Sure, sir.

17 Q. I'm talking about the diagram that is the18 second one right here (indicates).

19 A. Sure. This describes one of the three ways I20 said PPTP can be used.

In this diagram, I think an easy way to think of it, let's say this is the Microsoft corporate hub or our corporate network in Washington. And let's say Microsoft has -- not let's just say -- Microsoft has a 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 secure connection, can communicate with any user in 4 Redmond who's sitting on Microsoft's private network. 5 And of course, the other way around as well. 6 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 So if a bad guy comes in on the Yes. internet, which is the cloud, they will not be able to 18 19 see which person is sitting on a computer in the Dallas branch office who is communicating with which user 20 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.

Did the PPTP that you've just described for us 1 Q. 2 provide what we've been calling data security? 3 Yes, it did, because it scrambled all the Α. communications. 4 5 And what is data security? Is that the Ο. 6 message? 7 Data security is really how the packets which Α. 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 what is it that I'm -- what is being sent, communicated 11 across that particular connection. 12 13 Ο. And were the IP addresses on the computers in the branch office and the IP addresses at the corporate 14 hub, were they visible or hidden? 15 16 Α. They were always hidden. 17 Did PPTP, the server, put any restrictions on Q. who could access it? 18 19 Α. Yes, sir. PPTP --20 Would you describe what you mean by that, Q. 21 please. 22 I'm sorry, sir. Α. 23 PPTP servers only allowed authenticated and 24 permitted users to connect. 25 Could you tell us the significance of PPTP at Q.

the time it was introduced in 1996? 1 2 PPTP was a very important invention in 1996. Α. 3 It really allowed people to work effectively and securely from home. 4 5 Because previously, the only thing they could do was use the phone line with a modem, and these modems 6 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 so it was a very important development. 11 12 And was PPTP designed to allow a user to only Q. use it with specific programs? 13 PPTP was designed so that wherever you 14 No. Α. 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 was running, which needed to connect to other computers 18 19 could work all the time. 20 Did you file for any patents on PPTP? Q. 21 Α. No, sir. We did not file for any patent. 22 Why not? Q. Sir, in the mid-1990s, it was a very important 23 Α. 24 time in the industry. The internet was just starting to 25 take off, and there was a lot of excitement in the ITF

on creating standards which allowed lots of users to use 1 the internet. 2 3 And when I was working in the ITF on standards, I decided that it was more important for 4 5 Microsoft to contribute towards the establishment of standards, that anybody in the industry could use rather 6 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. And was -- that almost answers the next 11 Ο. 12 question. Was PPTP successful? 13 PPTP was very successful, both in terms of Α. users using the product and these capabilities and also 14 in terms of the number of companies that started 15 supporting the standard in '96, '97, '98 and so on. 16 17 Was PPTP easy to use for the user that might Q. wish to do so? 18 19 PPTP, for a user who uses this product on a Α. 20 daily basis, was a very, very easy VPN to set up. 21 0. 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?

This is a document called Microsoft Yes, sir. 1 Α. 2 Windows NT Server, and it's what we call a White Paper, which means it describes the Microsoft virtual private 3 networking capabilities. 4 5 And it says: Using Point-to-Point Tunneling Protocol for Low-Cost, Secure, Remote Access to the 6 7 Internet. 8 Q. And what were these White Papers for? 9 Α. They were there for our customers to read, to 10 understand these capabilities, and then start thinking about how they will deploy these capabilities in their 11 networks. 12 13 Let's turn the page and look at the copyright Ο. 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 (By Mr. Sayles) Copyright 1996. Q. It's showing that this document is 18 Α. Yes, sir. 19 copyrighted in 1996, which would be -- I'm sorry --20 which would be accurate, given that Windows NT server shipped in 1996. 21 22 All right. I want to turn to Page 3 of the Q. 23 document. And the last sentence there, I'd like to 24 highlight that and have you read it, the last sentence of the paragraph. 25

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Α. Yes, sir. 1 2 This -- basically, this sentence says that VPN 3 technology gives users an economical and easy-to-implement solution for creating secure and 4 5 encrypted communications across the internet. And was that an accurate description that was 6 Q. 7 in this White Paper? 8 That -- that was a very accurate description Α. 9 of the product. 10 Q. Let's turn to Page No. 6. And when we get there, I will take you to the 11 12 last sentence of the middle paragraph, right here 13 (indicates). 14 Would you tell us what this says? 15 Yes, sir. Α. 16 Ο. Or read it. Yes. This sentence is: All of this makes 17 Α. Microsoft's multi-protocol VPN the easiest way for 18 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

bullet point. 1 Yes, sir. 2 Α. 3 This paragraph says: Providing for easy implementation. Microsoft virtual private networks have 4 5 been designed to make their implementation easy for network administrators. Benefits of using a VPN include 6 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. Do you recall that? 11 12 Α. Yes. 13 First, is a PPTP the same thing as a IP SEC Q. tunnel that he was going through the instructions for? 14 15 No, sir, it is not. Α. 16 0. Is a PPTP easier to set up than what he went 17 through here in Court? 18 Α. Definitely. 19 Q. And is the technology the same? 20 No. It's a different technology. And I'd Α. 21 like to say one more thing on that. 22 Q. Would you explain that, please? 23 Yes. I think a lot of the documents which Α. 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.

End users who use these products are like -like me, who just sits in the car and drives it and takes it anywhere. I don't even change my oil myself. That's why we have mechanics who do those things. And those documents are really written for the mechanics, 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.

It says: Microsoft's multi-protocol VPN enabled by point-to-point tunneling protocol, PPTP, is the easiest way for businesses to securely and economically extend their private networks across the internet to remote users.

Ease of use has been built into VPN from its inception for both the server and client personal computer. For network administrators faced with rolling out new technologies, ease of use means rapid and effective adoption.

Could you explain that just in short and in 1 2 laymen's words? 3 Α. Yes, sir. You know, this is really the same point, that 4 5 PPTP VPN was really easy to install and much, much easier to use. And, you know, this is from my own 6 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 easily this VPN can be created by any user and used on a 11 daily basis, just like getting in your car and driving 12 13 it. I want to refer you to Page No. 20 of this 14 Ο. 15 document, while we're on it, to the bullet point that is entitled AutoDial. 16 17 MR. SAYLES: Would you block that 18 paragraph for me? 19 (By Mr. Sayles) Read that. Q. 20 AutoDial makes it easier and faster for remote Α. 21 users to connect to their corporate networks. 22 Okay. We have a new word here. Tell us what Q. 23 AutoDial is. 24 AutoDial literally stands for automatically Α. 25 dial. And the idea was, how you can automatically

connect your modem or your VPN when you start using your 1 2 computer. 3 0. And did you personally have a role in developing AutoDial? 4 5 Yes, sir. I came up with the idea of AutoDial Α. when, you know, discussing things with my colleagues. 6 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 us." 10 And I built the first prototype of AutoDial. 11 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 And did AutoDial ship with NT 4.0 in August of Q. 1996? 16 17 Yes, sir. AutoDial feature shipped with Α. Windows NT 4.0 in August of 1996. 18 19 Ο. And so this was also a technology actually 20 sold to customers? 21 Yes, sir. This was a technology sold to Α. 22 customers from that point on. 23 And what was the main benefit or use of Q. 24 AutoDial? 25 The main benefit was that prior to AutoDial, Α.

users would first have to dial their modem or make their 1 VPN connection and then start using their applications, 2 3 like e-mail or start the browser or other applications. With AutoDial, we were able to -- for most 4 5 cases, we were able to make the connection into a single The user would just have to start their browser 6 step. 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 it even easier to use. 11 12 Q. Did PPTP win any awards? 13 Yes, sir. PPTP won an industry award. Α. 14 0. I'm going to show you Exhibit 3270, and do you 15 recognize this magazine? Yes, sir. When we got the award, I remember 16 Α. 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 Was PC magazine an important magazine in your Q. 21 industry at the time? 22 It was one of the leading publications in Α. computers in the '90s. 23 24 And let me show you the date at the top. It's Ο. 25 December the 17th. We can't see it until it's pulled

And that's when this was published, right? 1 up. 2 Α. Yes, sir. This award was given out by this 3 magazine on December 17, 1996. 4 THE COURT: Mr. Sayles? 5 All right. And let's go --Q. THE COURT: Mr. Sayles, it's a little 6 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 come back to this after lunch. No problem. 12 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 will see you back here at 1:30 today. 1:30. 16 17 COURT SECURITY OFFICER: All rise. 18 (Jury out.) 19 (Lunch recess.) 20 21 22 23 24 25

1 2 CERTIFICATION 3 4 I HEREBY CERTIFY that the foregoing is a 5 true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the 6 7 best of my ability. 8 9 10 11 /s/\_ SUSAN SIMMONS, CSR Date 12 Official Court Reporter State of Texas No.: 267 13 Expiration Date: 12/31/10 14 15 16 /s/\_ JUDITH WERLINGER, CSR Date 17 Deputy Official Court Reporter State of Texas No.: 731 18 Expiration Date: 12/31/10 19 20 21 22 23 24 25

EXHIBIT F8

IN THE UNITED STATES DISTRICT COURT 1 FOR THE EASTERN DISTRICT OF TEXAS 2 TYLER DIVISION 3 VIRNETX Civil Docket No. 6:07-CV-80 \* 4 VS. \* Tyler, Texas 5 \* \* March 11, 2010 \* 6 MICROSOFT CORPORATION 1:30 P.M. 7 TRANSCRIPT OF JURY TRIAL 8 BEFORE THE HONORABLE JUDGE LEONARD DAVIS UNITED STATES DISTRICT JUDGE 9 10 11 APPEARANCES: 12 FOR THE PLAINTIFFS: MR. DOUGLAS CAWLEY MR. BRADLEY CALDWELL 13 MR. JASON D. CASSADY MR. LUKE MCLEROY McKool-Smith 14 300 Crescent Court 15 Suite 1500 Dallas, TX 75201 16 MR. ROBERT M. PARKER 17 Parker, Bunt & Ainsworth 100 East Ferguson 18 Suite 1114 Tyler, TX 75702 19 20 APPEARANCES CONTINUED ON NEXT PAGE: 21 22 COURT REPORTERS: MS. SUSAN SIMMONS, CSR Ms. Judith Werlinger, CSR 23 Official Court Reporters 100 East Houston, Suite 125 24 Marshall, TX 75670 903/935-3868 25 (Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

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1	
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20	* * * * * *
21	<u>proceedings</u>
22	COURT SECURITY OFFICER: All rise.
23	(Jury in.)
24	THE COURT: Please be seated.
25	MR. CASSADY: Your Honor, I have those

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times for you.
1
2
                  THE COURT: All right. Very well.
3
                  MR. CASSADY: The read depositions were
   22 minutes for VirnetX.
4
5
                  THE COURT: Okay.
                  MR. CASSADY: And three minutes for
6
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
             Mr. Pall, just before we took our lunch break,
        Ο.
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
                Winner, point-to-point tunneling protocol.
18
   top here is:
19
   Is that what you've been describing to the jury, the
20
   invention that we've been through, to some extent?
21
        Α.
          Yes, sir.
22
             Right here, I see a couple of names. Who are
        Q.
23
   these people that are named here?
24
             Bill Verthein, who's the first name, was one
        Α.
25
   of the co-inventors with me for this protocol. Tom
```

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Stoner and Tim Mortsolf worked for U.S. Robotics, 1 actually at that time, Bill Verthein, Tom, and Tim 2 3 worked for U.S. Robotics. I don't see your name on there. Could you 4 0. 5 explain that for us, please? 6 Α. 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 any one name, but instead call it the PPTP Development 11 12 Team, which is the team I managed who developed this 13 technology. 14 All right. Now, let's take a look at what the Ο. 15 award says, starting in the first column with the line 16 that begins the point-to-point tunneling protocol. 17 Α. Yes, sir. It says the point-to-point tunneling protocol, 18 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 0. In one sentence, is this a pretty good 24 description? 25 A. It's a pretty good description. I would add

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easy to it. 1 Let's go down this same column to the sentence 2 Q. 3 beginning with in effect. Α. 4 Yes. 5 In effect, PPTP makes the internet a It says: part of your intranet, and with excellent security. 6 7 All right. And then let's go across to the Ο. 8 third column towards the bottom, right before the 9 acknowledgement to Microsoft, beginning with using PPTP. 10 Using PPTP, network administrators can extend Α. a virtual private network from their Windows NT server 11 12 throughout the internet while locking out unauthorized 13 users. Is this a way of saying that there's VPN 14 Ο. 15 security? 16 Α. Yes, sir. 17 Now, if you would, I -- I want to bring the Q. page out. I notice there are a couple of finalists 18 19 here, and one of them is Windows Microsoft NT 4.0. It's 20 right there. 21 Α. That's a funny story, sir. 22 Could you tell the ladies of the jury what Q. that is and how it came about? 23 24 Α. When PC Magazine was looking at all the 25 products and saying which products deserved the award,

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they actually gave the award to PPTP. The product that 1 2 actually included PPTP was the finalist, and it did not 3 get the award. So it's kind of like the supporting actor wins the Best Actor Award, what happened in this 4 5 case. I certainly, you know, had some fun with 6 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 Α. I was on both teams, yes. 11 0. And here in the runner-up portion, there's a 12 sentence that begins NT Server 4.0. 13 Yes. And it starts off by saying: Important Α. 14 new enhancements, such as point-to-point tunneling 15 protocol. 16 All right. Now that we have talked about PPTP 0. 17 and how it worked, I want to ask you about one other subject, and then after that, we're going to show the 18 19 ladies of the jury how it all works, all right? 20 Α. Yes, sir. 21 But first, let me ask you about L2TP, another Q. 22 set of letters. 23 Could you tell us what that is? 24 Α. Yes, sir. 25 When people working on PPTP most of 1995, we

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got the work done and we presented it to the IETF early, 1 either March or April of 1996. And we presented it to 2 3 the IETF and invited everybody to participate in the formalization of that standard. 4 5 And at that time, one of Microsoft's competitors also was working on a VPN protocol called 6 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 standard. 11 And we took PPTP and L2F and we started 12 working on a new VPN standard called L2TP. You can 13 14 almost add those two names together to get L2TP, which 15 stands for Layer Two Tunneling Protocol. 16 0. And this was a VPN, also? 17 Yes, sir. Α. Was it adopted as a standard? 18 0. 19 Α. 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 using IP SEC. 23 24 Do you see that? 25 Α. Yes, sir.

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Now, the important part I want to refer you to 1 Q. 2 is on Page 21. 3 Would you turn to Page 21 and reference --Paragraph 6 references Footnote 1. 4 5 Α. Yes, sir. Tell us what we've got here. 6 Q.. 7 What you see is the first reference -- in this Α. 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 document was written and published in August of 1999. 11 12 And the G. Pall you see there is Gurdeep Pall, myself. 13 14 Okay. Now, have you prepared a demonstration Ο. 15 to show the ladies of the jury how the PPTP would be 16 implemented using AutoDial? 17 Yes, sir. I have prepared a demonstration to Α. show, as I was saying earlier, driving the car using the 18 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 (By Mr. Sayles) Mr. Pall, would you come 0. 25 around, and the first thing I'm going to ask you to do

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1 is describe what we have set up here.

A. Yes. In order to demonstrate this for you
today, we have created a VPN network right inside the
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.

Q. Is this a simulation of it to demonstrate? A. Yes, sir. This is a simulation, and this is a very common practice that we do when we meet customers, and we show them how they can use our products. So this is a very, very common way that is used for selling Microsoft products.

We have a customer in the room, we set this up, and we let them experience the product themselves so they can decide if want to buy it. So this configuration really simulates when actually we deploy 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

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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 computer, which is running NT 4.0. It's particularly 6 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.

So what I'm going to do here -- and I think we are going to project it on the screen -- if you don't mind, I'm going to sit here with my back to you, and I'm going to show you the system working.

MR. SAYLES: Your Honor, may I step from 20 behind the podium for a moment?

THE COURT: Yes, you may. A. The first thing I'd like to do -- Dr. Short, in his demonstration, showed you that using this ping command, you can see if the VPN is actually working or 5 not. So first, I will show you a case where the VPN is

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not working to prove to you that I do not have a 1 connection, a virtual connection, from this computer to 2 3 my work network. Tell us what you just typed in before you hit 4 0. 5 enter. I just tried to ping a computer on my work 6 Α. 7 And ping basically sends a message, and you network. 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 you to make a VPN connection. Again, I'm not telling 14 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 to your workplace. 18 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 And I will say that on the internet, it may take fast. 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

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happened so fast that we put in the beep sound to tell 1 2 you that you are now connected. That's the beep sound 3 you just heard. Now that the VPN is set up, I can try to ping 4 5 the server at my work network. And you will see this time around, it's not destination host unreachable. You 6 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. So that's it. You saw me click -- right click 10 on that icon and select, and that's it. The VPN 11 connection was established. 12 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 I will show you AutoDial and how that can make it it. even easier. But you notice I had to do two things. 18 Ι 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 server. 24 25 And here I disconnected the VPN. Let me try

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it one more time to show you how easy it is. 1 2 I'm connected. And it shows you who you're 3 connected to and the line speed -- the speed at which you are connected. 4 5 Now, I'm going to show you how AutoDial works. Just to prove to you again that I don't have a 6 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 website which is at work. 11 12 I was not connected. I connected to the website, and in the process of connecting to the 13 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

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without knowing anything about the technology, but they 1 2 can do it easily and safely. That really is my 3 demonstration. All right. Would you please retake the 4 0. 5 witness stand? (Complies.) 6 Α. 7 Mr. Pall, I now want to change the subject for Q. 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 communications. 11 12 Can you tell us what that is, please? Real-time communications and unified 13 Α. 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 connect with video conferencing with people who are in 18 19 other places. You can do chat or instant messaging. 20 These set of technologies which allow you to communicate in what we call real-time, which means 21 22 instant -- instantaneously with another person across the network is what we call real-time communications, or 23 24 more recently, unified communications. 25 Q. Now, I'm going to ask you some questions about

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API-associated real-time communications, but before we 1 2 do that, tell us what an API is, please. 3 Α. Yes. API stands for application programming 4 5 interface, and, you know, one way to think about APIs, it's kind of like, you know, if your software was like a 6 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. He's got tools he uses all the time like a hammer, and 11 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 would be. Tools help you build things. APIs help you 18 19 build applications. 20 Are there literally thousands of APIs in Ο. Windows XP and Windows Vista? 21 22 There are thousands and thousands of APIs. Α. 23 Q. Now, with respect to real-time communications, 24 did Microsoft create any APIs associated with that? 25 Yes. We created what we call RTC APIs with Α.

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that capability. 1 And what are they used for? 2 Q. 3 They are really used by programs who can use Α. these tools to build applications like chat, phone calls 4 5 over the internet, et cetera. And when were these first shipped? 6 Q. 7 The first RTC APIs shipped in Windows XP in Α. 8 August of 2001. 9 0. To your knowledge, did any third-party 10 developers create any applications that used the RTC 11 APIs? Yes. There were a few that I can recall now. 12 Α. 13 I know there weren't many. There were a few. I remember Dassault the sole systems which was making 14 15 design software. I remember -- I guess AOL used it. Ι 16 had forgotten about it. I learned -- it reminded me today during the Court. 17 18 And the third was Reuter's also built an 19 application on RTC APIs. 20 Ο. Were RTC APIs that were included in Windows 21 Vista? 22 No. RTC APIs were not included in Windows Α. 23 Vista. 24 Ο. Why not? 25 A. What we found was that people who were --

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sorry -- developers who were writing programs on top of 1 RTC APIs were really using them with Live Communications 2 3 Server or Office Communications Server. So we realized there is no value in having RTC APIs in Windows XP, 4 5 frankly, anymore. So when the next version of Windows Vista --6 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 Ο. And what were they called? They were called UCC APIs, Unified 12 Α. Communications Client APIs. 13 And is OCS a different piece of software from 14 Ο. 15 Windows Vista? Yes, sir. It is a completely different 16 Α. 17 product than Windows Vista. Now, let's talk about another product. Let's 18 0. 19 talk about Office Communicator and Office Communications 20 Server. 21 Do you have knowledge of those? 22 Yes, sir. Those are the products that I'm Α. currently managing that are being developed by my team. 23 And what is Office Communications Server? 24 Ο. 25 A. Office Communications Server, along with

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Office Communicator, allows users, wherever they are, to 1 2 make phone calls over the internet, to do video 3 conferencing with their colleagues, to share their stream with their colleagues, do instant messaging, 4 5 check whether their colleagues are online or not. So the Office Communicator application works together 6 7 with Office Communications Server to enable this 8 capability for users. 9 Can you give us some examples of the types of 0. 10 things Office Communicator can do, and have you prepared a graphic that helps with that? 11 12 Α. Yes, I have, sir. 13 MR. SAYLES: I'm going to ask for 2.1. 14 Yes. I don't have the clicker, so I will have Α. 15 to count on somebody clicking for me. All right. Let's --16 0. 17 So this is a user who is sitting either on the Α. desk at work, or they could be sitting at home in front 18 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 Office Communicator. And now this user can -- could you 23 24 click, please? 25 They can do video conferences with the people

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sitting at work or people that want to communicate with 1 2 who actually may be sitting in their own homes as well. 3 So here they can chat, do video conferencing with that person. They can make phone calls over the 4 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, you want to point to things and say, you know, take a 11 12 look at this, and why don't you change that. And if you have screen-sharing, you can do those things. 13 All right. This is Office Communicator. 14 0. 15 Can you tell us what Office Communications 16 Server allows you to do? 17 Α. Office Communications Server is really the server, which, of course, as an end user you never see, 18 19 but it's what the Office Communicator program connects 20 to, to actually enable this capability. 21 Ο. And let's look at Graphic 2.2. Is this Office Communications Server? 22 23 Α. 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

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who works at Chevron. And what you see across the 1 internet cloud is the Office Communications Server, and 2 3 you see the IP addresses for both those computers here. All right. Now, you've heard -- you've been 4 0. 5 in the courtroom and you've heard that part of what the VirnetX party is complaining about here is a way in 6 7 which Office Communicator connects to Office 8 Communications Server. 9 You're aware that they make that claim? 10 Α. Yes, sir. How does Office Communicator connect to Office 11 Ο. Communications Server? 12 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 application Office Communicator stops on Sue's machine, 18 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

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different ways. The reason we have four ways is because 1 2 we want to give options to our new customers on 3 different ways that they can do things. So these are four ways that the Office Communicator will try. 4 5 The first one is the manual entry of server name or address, which means that Sue can go in to 6 7 Office Communicator and type in the name of the server. 8 For example, they could type in 9 server1.chevron.com. So Sue could always do that. And what I'm 10 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 go to the next option. 17 Did the IT manager or IT administrator, which 18 19 I like to call here, the car mechanic. The car mechanic 20 actually automatically adds a name to Office Communicator so that Office Communicator knows which 21 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

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Sue's computer, our Office Communicator on Sue's 1 computer, is talking to the DNS server on the internet 2 3 to say, I need to connect to an Office Communications Server for chevron.com. Please tell me what is the 4 5 server for chevron.com. And DNS server would send back a name and say 6 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 only way I can talk over the internet. 11 12 And then it gets that IP address and makes the 13 connection. If that scheme also does not work, so one 14 15 didn't work; two didn't work; three didn't work, then 16 Office Communicator automatically assumes a name. Ιt 17 says, you know, one didn't work; two didn't work; three didn't work. Let me try a name which has chevron.com, 18 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 that Office Communicator uses are used. 22 23 0. 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?

22

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Yes, sir. The discussion and the focus in 1 Α. 2 this case is on the third way. Of the four ways, the 3 third way of how Office Communicator finds Office Communications Server. 4 5 But you're saying there are these three other 0. ways that are not even accused in this case? 6 7 Yes, sir, that's what I'm saying. Α. 8 Q. And how long have you been aware of DNS SRV? 9 Α. Yes, sir. 10 DNS SRV requests have been part of internet standards in the IETF since the mid-'90s. In fact, the 11 12 standard for DNS SRV requests was written sometime in October of 1996. 13 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 All right. We've been talking about sending Q. 23 requests. 24 Can you explain what secure requests are and 25 unsecure requests?

Yes, sir. 1 Α. 2 After the first way doesn't work, the second 3 way doesn't work, and you get to the third way, Office Communicator asks for four different names from the DNS 4 5 server. The first name -- and the reason it's four is 6 7 there are two names which are available on the internet, 8 and two names that are available inside the work network, because you could be starting Office 9 Communicator either inside your work or outside your 10 work. And so there's two inside and outside. 11 12 And then you have secure and unsecure. So when you do two times two, you end up with four names 13 that Office Communicator asks for from the DNS server. 14 15 Have we shown that graphically? Q. 16 Α. Yes. 17 So, basically, there are four different DNS SRV requests that are sent out by Office Communicator to 18 19 the DNS server. 20 Is it important to send both secure and Q. 21 unsecure requests? 22 Certainly, they are part of the product, but Α. I'm not aware of any customer who uses the unsecure 23 24 requests anymore. 25 Q. And would you have been able to take out a

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not-send request for unsecure connections? 1 2 Α. Yes, sir. You can easily take out -- if you 3 could build the slide, please. You could easily take out the unsecure name 4 5 request from the product, and, you know, this thing would just work as well. 6 7 And does Microsoft make any recommendations as Q. 8 to how customers should deploy OCS? 9 Α. Yes. Our recommendations are the customer 10 should only use secure methods for connecting between Office Communicator and Office Communications Server. 11 12 Q. All right. Would you tell the ladies of the 13 jury what is it about OCS -- OC/OCS that makes it a useful and valuable product to a user? 14 Yes, sir. 15 Α. 16 Office Communicator has become a very 17 important application in today's workplace. You know, as we see increasingly, people are working from home; 18 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.

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So that's a very -- that's a tall order, but 1 2 that is something that is very important in today's 3 times and something that, you know, this product does really, really well. That is the value of Office 4 5 Communicator. Let me show you Exhibit 3111. 3111. Let's 6 Q. 7 start with the cover. 8 Just tell us what this is, please. 9 Α. Yes, sir. 10 This is a marketing material of documents that describes the Microsoft Office Communicator 2007 11 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 little bit? 18 19 (By Mr. Sayles) Does this describe some of the Q. 20 uses and benefits? 21 Α. 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 And then over on the second page, there's Ο. 25 working together in real-time and office on the road.

It's actually Page 3. 1 That is correct, sir. That is a very 2 Α. 3 important part of our Office Communicator. Now, I want to turn to Page 8, and the jury 4 0. 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 Α. Yes, sir. 9 It says anywhere access lets you work remotely Q. 10 without the need for a virtual private network, (VPN), 11 to connect to your corporate network. 12 Do you see that? 13 Α. Yes, sir. What does that mean? 14 0. 15 What that means, sir, is that Office Α. Communicator can connect to Office Communications Server 16 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 No, sir. Α. 21 As a company which invented the first -- one 22 of the first VPNs and has done more VPN work after that, we have a lot of VPN technology within the company. 23 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.

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Q. And why isn't a VPN needed in this situation? 1 2 In our configuration, we thought that you Α. 3 simply need to connect from Office Communicator and just communicate with the people that you want to, and you do 4 5 not need a VPN for that particular connection. We were not trying to hide IP addresses. 6 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 All right. Were you -- you were in the Ο. 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 forming a VPN that will provide the security that you 18 19 need. 20 Did you hear him give that interpretation? 21 Α. I heard him give that interpretation, sir. 22 Is that at all accurate? Q. Respectfully, sir, I completely disagree. 23 Α. For 24 someone who has worked on these products right from the 25 beginning, that was the first time I've heard an

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interpretation of that comment. 1 2 0. Now, one final area, just a couple of 3 questions. Now, you heard Mr. Munger testify about his 4 5 company's policy with regard to third-party patents, and you were in the courtroom when various Microsoft 6 7 personnel were asked about third-party patents, right? 8 Α. Yes, sir. 9 I want to ask you, what is your personal Ο. 10 practice with regard to third-party patents? Sir, my personal practice is that we -- we are 11 Α. 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 our engineers, and that is how we work on a day-to-day 18 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 song, you don't go out and see has anybody else written 23 24 a song like this before I send it out? 25 In the same way, we create an environment for

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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.

There are times when we find out, when we are building the products or even before we build the products, that some company has some intellectual property, like patents or software, that is in the area that we are going to build products in.

In those cases, we will proactively reach out to those companies and license that technology for use in our products. I have done that myself. There's a company called Scitechnics in 2006, we needed some important technology. We negotiated with them. We got the rights to license that technology, and that is part of Office Communicator today.

Now, when you are building products in this way, every now and then somebody will come to us, maybe after we've shipped a product, and say that it seems that the products that you have may be covering some area that is -- that is something that we may have a patent on.

At that point, we give consideration to that patent. In some cases, when it is relevant, we will

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license that patent, or we will put up -- we will change 1 2 the product to not use that patent. If we cannot 3 negotiate with that, and, you know, that's sort of how we work. 4 If -- of course, if somebody comes and tells 5 us that here's the patent, why don't you take a look at 6 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 negotiate with them, really find if there is we infringe 18 19 or not, and then take the appropriate steps. 20 All right. Thank you, Mr. Pall. Q. 21 MR. SAYLES: I pass the witness. 22 THE WITNESS: Thank you, sir. THE COURT: Cross-examination. 23 24 MR. CAWLEY: May I approach, Your Honor? 25 THE COURT: Yes, you may.

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CROSS-EXAMINATION 1 BY MR. CAWLEY: 2 3 0. Afternoon, Mr. Pall. Let me start by asking you a few questions 4 5 about the demonstration you showed us. Yes, sir. 6 Α. 7 I notice that for the first time today, some Ο. 8 of these beige computers came to the courtroom. 9 Why did you bring those kind of computers 10 here? 11 Α. 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 1996 doesn't work very well on computers that are 14 15 available today. So these computers were -- we needed 16 to go find these computers. 17 So you wanted to show the jury the state of Q. affairs for your product in 1996? 18 19 In case of PPTP, yes, sir. Α. 20 And did you run software on the computers that Q . 21 shows the jury how the system would have worked around 1996? 22 23 Α. Yes, sir. 24 Well, let me draw something on the pad here 0. from that time going forward. 25

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Α.

0.

Α.

Q.

Α.

Q.

Q.

Α.

Q.

Α.

Yes, sir.

computer.

Do you happen to remember when the patents in this case were filed, the first one? I believe it was in 2000, sir. I think the evidence is pretty clear that it was February the 15th of the year 2000. So that's what that line is going to represent. Sir, I cannot see the line. I know. Actually, I'm about to ask you or ask the Judge if he would let you step back down to this Sure. And you might as well, I guess, have a seat, because I'm going to ask you --MR. CAWLEY: First of all, can we get the screen that has the computer back on the projector? Thank you. (By Mr. Cawley) This is one of the computers you bought -- you brought -- excuse me -- to the courtroom that has software on it that you want to demonstrate to the jury how your product would have operated around 1996. Yes, sir. In any event, that's well before the patent was filed in February of 2000.

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1	Q .	All right. What is a BIOS?
2	Α.	BIOS is I think it's called Basic I/O
З	System.	
4	Q.	Basic Input/Output System?
5	Α.	Yes, Basic Input/Output System.
6	Q.	That's a basic component of a computer, isn't
7	it?	
8	Α.	Yes.
9	Q.	If you don't have the BIOS on this computer,
10	it wouldn	't work, right?
11	Α.	It wouldn't work.
12	Q.	It would be useless, correct?
13	Α.	It would be useless.
14	Q.	Would you click the start button, please?
15	Α.	Yes, sir.
16	Q.	Select programs.
17	Α.	(Complies.)
18	Q.	Select administrator tools.
19	Α.	(Complies.)
20	Q.	Select Windows NT diagnostics.
21	Α.	Yes, sir.
22	Q.	What does that screen tell you?
23	Α.	Well, the screen shows me that, you know, this
24	is Versio	n 4.0 with 3081 of Microsoft Windows NT
25	workstati	on.

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And where is the date of this BIOS? 1 Q. The date of the BIOS is -- actually, I don't 2 Α. 3 see it, sir. Is it here somewhere? System -- click the system tab, please. 4 0. 5 Α. There you go. What's the date of the BIOS on the computer 6 Q. 7 that you were using to demonstrate to the jury how 8 things worked in 1996? 9 Α. The date says July 12th, 2000. 10 Q. July, 2000. That's after the patent was filed, wasn't it, 11 Mr. Pall? 12 13 Sir, all that shows is --Α. 14 Sir, I'm sorry. My question to you was, July Ο. 15 is after the patent was filed, correct? 16 Α. July is definitely after the patent was filed. 17 All right, sir. And your system could not Q. have even been built; this system with this version of 18 19 BIOS before the patents were filed? 20 Α. 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.

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(By Mr. Cawley) We have three different 1 Q. computers here, right? 2 3 Α. Yes, sir. And this -- these things with screens on them 4 0. 5 are actually monitors, correct? That is correct, sir. 6 Α. 7 And the computers are actually these things Ο. (indicates), one, two, three that are usually called 8 9 towers. 10 Α. Yes, sir. That's what I've heard them called anyway. 11 Ο. 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. Where is the computer? 14 15 It's down here, sir. Α. 16 Oh, well, is there a reason that you set these Q. 17 three computers up on the table and put that one under the table where I don't think the jury can see it? 18 19 Α. Yes, sir. I thought that putting it on the 20 table would obstruct the view. 21 Q. I see. 22 And the reason I put those there is because Α. 23 I'm trying to simulate that this is the home. 24 Excuse me for interrupting you, sir. 0. 25 Α. Yes, sir.

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Really, what I asked you was, the reason you 1 Q. 2 put this one down here, and you say it's so you won't 3 obstruct the view. Yes, sir. 4 Α. 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 some people to do some kind of unusual things here. 11 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 Α. 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.

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```
Q.
             Two days after, not 1996 for sure.
1
2
        Α.
             Not 1996.
3
        0.
             No, sir.
             So you would agree with me that that computer
 4
5
   that you were using to explain and demonstrate to the
   jury how your software existed in 1996 has a sticker on
6
7
   it that says Windows 2000, correct?
             Correct, sir?
8
9
        Α.
             I disagree, sir.
10
        Q..
             You disagree that the sticker is there?
             No, I dis -- I agree that the sticker is
11
        Α.
12
   there.
13
             Thank you, sir. That was my --
        Q.
             All I'm saying is that the software, which is
14
        Α.
15
   running on the computer, was built in 1996 --
             My question --
16
        Ο.
             -- in the software.
17
        Α.
             I'm sorry. Maybe my question wasn't clear.
18
        0.
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
   2000, correct?
22
             The hardware that I used has a sticker on it
23
        Α.
24
   that says 2000.
25
        Q. Yes, sir. Thank you.
```

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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 Ο. And you know that his deposition was taken in 3 this case? I think I'm aware of that, sir. 4 Α. 5 And that deposition will be played, part of Q. it, for the jury probably on Monday. 6 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. Are you aware that he testified to that? 11 12 I'm aware of that, sir. Α. 13 Okay. And you are aware that he also Q. testified that AutoDial's only function is to reconnect. 14 15 Are you aware of that? 16 Α. I didn't read the whole deposition, but -- so 17 I'm not aware of that completely. Q. It doesn't sound like it surprises you, does 18 19 it? 20 I am completely surprised, because AutoDial Α. 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 Α. Yes, sir. 25 Q. Okay.

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I was responsible for the feature. 1 Α. 2 You were responsible for the idea, but he was Q. 3 the man that actually sat down and wrote it out, correct? 4 5 He was responsible for link failures. Α. So this will be clear, you had the idea, but 6 Q. 7 he was one of the people who actually -- who implemented 8 it, right? 9 Α. In my supervision --10 0. He was one of the people that actually 11 implemented it, correct? 12 Α. In my supervision, yes. 13 Thank you, sir. Q. 14 Now, let me move on to another subject. Get 15 the easel out. MR. CAWLEY: And that first board, if you 16 could hand it to me. 17 (By Mr. Cawley) Have you read the patents in 18 0. 19 this case, Mr. Pall? 20 Α. I have not read the whole patents, sir. 21 Q. After all this time, you still have not even 22 read the patents? 23 Α. No, sir. 24 Okay. But you have been in Court, and you've 0. seen some of them, some of the claims, correct? 25

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Yes, sir. 1 Α. 2 Q. And you've seen this claim, for example? 3 Α. Yes, sir. Claim 1 of the '135 patent. 4 0. 5 Yes, sir. Α. 6 And this part of the claim says that one of Q. 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 Α. Yes, sir. See that? 11 Ο. 12 And 3 says: In response to determining that 13 the DNS request in Step 2 is requesting access to a secure website automatically initiating VPN. 14 15 Do you see that? 16 Α. Yes, sir. 17 So you see that one of the features of Claim 1 Q. of the '135 patent is this determining feature. 18 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 (By Mr. Cawley) Do you need me to repeat my 0. 25 question?

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1 Yes, sir. Α. You see that some of the steps in Claim 1 of 2 Q. 3 the '135 patent call for the system to determine whether a secure website is to be accessed to determine whether 4 5 it's going to be a secure connection. That's what it reads like. 6 Α. 7 Okay. Sure. Now, let's go back to your Ο. 8 system. 9 Α. Yes, sir. 10 Q.. Can you go ahead and reconnect the VPN if it's 11 not connected? 12 Α. (Complies.) 13 And we heard that beep. Does that mean that Q. 14 the VPN is connected? 15 The second beep said it's connected, sir. Α. 16 Q. Okay. Good. 17 Could you test it with the ping to be sure? 18 Α. It's connected. 19 Q. Okay. Now, would you please disconnect the 20 VPN. 21 Α. (Complies.) 22 Q. And go ahead and close the ping window. 23 (Complies.) Α. 24 Ο. And close and open Internet Explorer. 25 (Complies.) Α.

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Is that newly opened? I didn't see before. 1 Q. 2 Α. I just opened it. 3 0. Okay. But I'll open it again. 4 Α. 5 Okay. Now, instead of this time looking for Q. your secure website -- you're familiar with eBay, right? 6 7 Yes, sir. Α. 8 And connecting to ebay.com is not a secure Q. website, is it? 9 10 Connecting to ebay.com, if you're not Α. connecting with https, it's not. 11 12 Q. Right. Okay. So type in your browser 13 www.ebay.com. 14 (Complies.) Α. 15 And push yes to connect. Q. (Complies.) It's connected. 16 Α. Do we have a VPN? 17 Q. 18 Α. You have a VPN, sir. 19 Q. We do have a VPN? 20 Α. You have a VPN. 21 Q. Can you test it and show us? 22 The VPN is up, so -- but that page which Α. 23 you're trying to connect to actually doesn't exist 24 there. 25 Well, I know it doesn't exist there because Q.

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you have chosen not to set your system up -- hook your 1 system up to the internet, right? 2 3 Α. Yes, sir. Okay. But my question is, the first time you 4 0. 5 demonstrated this to the jury --6 Α. Yes. 7 -- you connected to a secure website and got a Ο. 8 VPN. 9 Α. No, sir. 10 Q.. You didn't get a VPN? No. That was not the first time. 11 Α. 12 Well, maybe not the first time, but you showed Q. 13 us typing in a secure website and getting a VPN, 14 correct? 15 The second time, I typed in a website, and I Α. got a VPN. 16 17 And this time you've typed in eBay, which is Q. not a secure website, and you still got a VPN, didn't 18 19 you? 20 Yes, sir. Α. 21 Q. In fact, if you close -- disconnect the VPN. 22 (Complies.) Α. 23 And open and close Internet Explorer. Q. Ι 24 should say close and open again. 25 (Complies.) Α.

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1 Q. It doesn't matter what you type in, does it? 2 You're still going to get the VPN. 3 Α. I think it depends on the configuration. Well, let's try it. 4 0. 5 Please type in www -- type in 6 www.thisisnotasecurewebsite. 7 Α. (Complies.) 8 Q. Then connect. 9 Α. (Complies.) It's not found. 10 Q. What? 11 Α. It said it's not found. 12 Q. Not found? Do we get a VPN? 13 Yep. Α. We still get a VPN. 14 Q. 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 access to a secure website? 18 19 Α. 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 Α. Sure. (Complies.) 25 Q. Put this down so it won't be in the way.

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MR. CAWLEY: Mr. Moreno, what do I need 1 2 to push here to get back to your... 3 MR. MORENO: Right at the bottom. MR. CAWLEY: Thank you. 4 5 (By Mr. Cawley) Let me show you a document Q. that we saw yesterday. It's Plaintiff's Exhibit 148. 6 7 And you remember this document, don't you, sir? You saw 8 it yesterday when Mr. Jones was testifying? 9 Α. I think it -- yeah. It definitely was shown 10 on the screen. He said that before the lawsuit was filed, he 11 Ο. went to Microsoft's website and saw this section talking 12 13 about serverless DNS technology. 14 Do you remember that? 15 Yes, I think I remember that. Α. 16 0. And then he testified that after the lawsuit 17 was filed, this was changed and now appears as -- in Plaintiff's Exhibit 507 so that DNS was taken out, and 18 19 serverless name resolution was put in. 20 You remember that? 21 Α. I remember him talking about it. 22 My question to you, Mr. Pall, is, were you Q. 23 responsible for this change? 24 Α. No, sir. I --25 Q. Do you know who was?

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I have no idea, sir. It's not in my group. 1 Α. 2 Q. All right, sir. Thank you very much. 3 Α. That is not an area that I work on. Let me move on to a different document that I 4 Ο. 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 I think maybe if I see the next page, maybe I Α. 11 will. 12 (By Mr. Cawley) Yeah. Let's look at the next Q. page. 13 I think I'm familiar with this document. 14 Α. 15 It looks as though it's a presentation that, I Q. guess, you presented, right? 16 17 I'm -- definitely, sir. Α. And it's -- looks like the copyright date is 18 Ο. 19 2005. Is that about accurate? 20 Α. Should be. 21 And, in fact, you think this is some slides or Ο. 22 graphs that you used in a presentation probably around 23 August of 2005? 24 Α. That would be about right. I don't remember 25 the exact dates or timeframe.

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Okay. Let's go to the next portion of this 1 Q. 2 document. Up at the top there, you indicated to your 3 audience -- and who attended this presentation? I don't specifically remember who attended --4 Α. 5 I don't mean their names; I mean what kind of 0. 6 people? 7 Is it Tech -- was it Tech Ready? Do you mind Α. 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. 227. 11 Α. 12 Tech Ready is a present -- is a meeting that Microsoft has, I think, twice or thrice a year, and it 13 is for what the Microsoft sales force -- where they come 14 to Redmond or some other place and people present to 15 16 them. 17 Okay. And one of the things you told your Q. audience back in August of 2005 was that RTC has high 18 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? Real-time communications. 23 Α. 24 All right. And that's one of the products we 0. were talking about that's being accused in this lawsuit, 25

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1 right? 2 Α. You mean RTC API, sir? 3 0. Yes, sir. Yes. RTC doesn't necessarily mean RTC API, 4 Α. 5 so... Okay. But let me ask you, what is TDM? 6 Q. 7 TDM means technical decision-maker. Α. 8 And why did you tell your audience that RTC Q. 9 has a high-technical decision-maker value? 10 This is an audience, which is the Microsoft Α. sales force. So you have to -- you tell them that when 11 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 0. Okay. And then you talked about BDM value. What's BDM? 17 I apologize for all these acronyms, but a BDM 18 Α. 19 means business decision-maker. 20 Okay. So why did you tell your audience that Q. 21 RTC has high business decision-maker value? 22 Because a typical -- let's say that you're Α. working at Chevron, and Chevron has a sales force. 23 The 24 sales force is working in many different cities and 25 perhaps even around the world.

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The head of sales for Chevron would be the 1 2 business decision-maker here. And they are really 3 interested in making sure that their sales force can talk to each other and have the best software for 4 5 communicating. So that would be BDM value. So RTC has value both for customers who have 6 Q. 7 got technical decisions to make and customers who have 8 business decisions to make, fair? 9 Α. Yeah. That -- the way you articulated it 10 sounds a little -- not how I would use it, but --11 Ο. You don't disagree with me, though, do you? 12 So I -- I think it's -- it's -- the way the Α. 13 sentence is constructed is just a little different than I would --14 15 I see. You don't like the way I constructed Q. the sentence, and you'd rather construct it some other 16 17 way. Is that what you're saying? Sir, respectfully, I just want to make sure I 18 Α. 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 -please -- we'll probably move faster if you would just 23 24 say, I don't understand, and I'll be glad to repeat the 25 question.

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1 So you've told us that RTC has high value for 2 people who are technical decision-makers, correct? 3 Α. Yes, sir. And it also has high value for people who are 4 0. 5 business decision-makers, correct? 6 Α. Yes --7 Ο. Okay. 8 Α. -- sir. 9 0. And now a little below that, there's more 10 highlighted language where you indicate that office RTC will do \$150 million as a group next year, correct? 11 12 Α. Yes, sir. 13 And then you say it's one of the fastest Q. 14 growth areas in the company. I guess the company is 15 Microsoft, right? 16 Α. Yes, sir. 17 And that it's growing nearly 80 percent --Q. what is Y/Y? 18 19 Α. Year over year. 20 Year over year. Okay. Q. 21 So this area, not only were you going to do 22 \$150 million as a group next year, but it was going to grow 80 percent year over year, correct? 23 24 Α. Yes, sir. 25 And you told the group that you have 900 Q.

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people in the office RTC team representing one of the 1 2 larger investments for IW, right? 3 Α. Yes. IW is? Ο. 4 5 Information worker. Α. 6 Let's look at another document. This is Q. 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 Α. Yeah, I recognize this document. Okay. Did you write this document? 11 Ο. I was one of the main authors of this 12 Α. Yes. 13 document, sir. Okay. It says Gurdeep Singh-Pall. 14 0. That's 15 you, right? 16 Α. Yes. 17 And company, I guess that's other people who Q. worked with you? 18 19 Α. There are a few people who authored the 20 document, and that's the short form of --21 Q. Okay. 22 -- the way you're putting that. Α. 23 Well, I don't want to read it all, but let's Q. 24 go down to some of the highlighted language here. 25 Who was the audience for this -- this paper or

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presentation? 1 The audience was my whole organization. 2 Α. This 3 is a document that I'm writing to tell them about how we can think about the next versions of our products. 4 5 And you wrote this document in 2008, correct? Q. One second. 6 Α. 7 I think there's a --Ο. 8 I'm sorry. What's the number again? Α. 9 0. Yeah. I'm sorry. It's Plaintiff's Exhibit 228. 10 I guess I've written it -- I can't tell the 11 Α. exact time, but that's -- it would be either 2007 or 12 2008. 13 Okay. And you were projecting in the language 14 0. we're about to read some goals that are relevant to 15 16 where you wanted to be by fiscal year 2010, correct? 17 Α. Yes, sir. And one goal you list is that the UC 18 0. 19 business -- and remind us what that is. 20 Α. The unified communications products business. 21 Ο. The unified communications product is a \$3.4 22 billion business. 23 Is that -- did I read that right? 24 You read that right, sir. Α. 25 Okay. And what -- what's the next highlighted Q.

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portion, MOC 700 million? 1 MOC stands for Microsoft Office Communicator. 2 Α. 3 Okay. That's one of the products accused in 0. this case, correct? 4 5 Α. Yes, sir. And you say that that alone is 700 million, 6 Q. 7 right? 8 Α. In the document, it says that, sir. 9 0. Okay. And these numbers don't include your 10 projections, if you even have any projections, for what might happen with Windows, do they? 11 12 No, sir. That's not my responsibility. Α. 13 Okay. So you weren't even including the 0. Windows products in these projections. 14 15 No, sir. This is only about Office Α. Communication Server and Microsoft Office Communicator. 16 17 All right, sir. And isn't it true, Mr. Pall, Q. that back in 2005, that you had about 300 people on the 18 19 Live Communications Server team? 20 Α. Yes, sir. 21 0. And that at least at the time your deposition 22 was taken, you had about 700 people on that team? 23 Α. Yes, sir. 24 And that the projected revenue for Office 0. 25 Communication Server for 2009 was \$422 million; is that

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```
1
   right?
2
        Α.
             Sounds about right.
3
             Okay. You also showed us some sections that
        0.
  we've seen before in the trial from Defendant's 3111.
4
5
             Do you remember that?
             Let's pull that up so you can be sure of the
6
7
   document we're talking about. Do you see 3111? Do you
8
   recognize that?
9
        Α.
             I recognize it, sir.
10
        0.
             And to save us all some time, it was in this
   document that we saw a few or maybe several references
11
12
   saying you can communicate securely with this product
13
   without the need for a VPN.
14
        Α.
             That is correct, sir.
15
             And this is the document about which Dr. Jones
        Q.
   said he interpreted that to mean, you don't need to go
16
17
   out and buy a VPN product because you get it with this
   product, and you said that that wasn't what you think it
18
19
  means, correct?
20
        Α.
             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
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machine on either network can communicate with each 1 2 other. 3 Do you remember that? I don't remember the exact words, but it 4 Α. 5 sounds right, sir, something --It's kind of a mouthful, but --6 Q. 7 -- something -- what I would say, yeah. Α. 8 Q. You didn't hear anything in there you 9 disagreed with, right? 10 Α. No. And you agree that, therefore, a VPN is more 11 Ο. than just a point-to-point connection? 12 13 Α. Yes, sir. Okay. And does this product that was being 14 0. 15 described in Defendant's Exhibit 3111 allow one machine to connect to a network that has many machines? 16 17 Α. Yes, it does. Does it allow -- may it allow -- I don't mean 18 0. 19 it necessarily does, but can it allow one network with 20 many machines to connect to another network with many 21 machines? 22 Office Communicator does not, sir. Α. 23 Okay. You have other products that do? Q. Not in this context. 24 Α. 25 Q. Okay.

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But Office Communicator does not. 1 Α. Now, in this document, we've seen several 2 Q. 3 references that we talked about a minute ago saying that you can use this product without a VPN. 4 5 And it's your contention, is it not, that Microsoft Office Communicator 2007 does not use or 6 7 create a VPN? 8 Sir, it's not my contention; it's what I Α. 9 designed the product to do. 10 Ο. Well, I think we're about to get into some definitions here, but my question to you is, do you or 11 do you not contend that Microsoft Office Communicator 12 13 2007 does not set up a VPN? Office Communicator 2007 does not set up a 14 Α. 15 VPN. 16 Okay. Thank you, sir. Q. 17 Now, you remember that in your deposition, you were asked to list all the reasons why what Microsoft 18 19 Office Communicator 2007 does is not a VPN. 20 Do you remember that? I don't remember exactly, but if you would 21 Α. 22 show it, I would --23 Would you like to read it in your deposition? Q. 24 Α. Sure. 25 MR. CAWLEY: I'm sorry, Your Honor. May

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I approach, since I'm already here? 1 2 THE COURT: Yes, you may. 3 (By Mr. Cawley) You told us, sir, that you 0. don't create a VPN because there's no tunneling, no 4 5 encapsulation, and no applications other than Office Communication can access connection when connected to 6 7 Office Communication Server. 8 Α. 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. MR. CAWLEY: I'm sorry, Your Honor. 11 Ι 12 thought I had written the page number down. 13 (Pause in proceedings.) (By Mr. Cawley) All right. Start -- take a 14 Ο. 15 look at your deposition, beginning on Page 97. 16 Α. Yes, sir. 17 You see that? Q. And you might just want to glance over that 18 19 down through Page 100. 20 Α. Yes, sir. 21 0. 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 Yes, sir. Α. 25 And you did mention three things, didn't you? Q.

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1 Which three things specifically are you Α. 2 talking about, sir? 3 0. You mentioned tunneling, right? Yes. 4 Α. 5 You mentioned encapsulation, right? 0. 6 Α. Yes. 7 And you mentioned that no other applications, Ο. 8 other than Office Communication can access the 9 connection when the connection is connected to Office Communication Server? 10 Α. Yes, sir. 11 12 Q. Okay. And you said that those are the only 13 three things that you knew of. And Office Communications may include all 14 Α. applications written on UCC APIs, which I consider part 15 of Office Communicator. 16 17 All right, sir. But you were asked in your Q. deposition under oath the reasons you could think of why 18 19 you say your product doesn't create a VPN, and those are 20 the three reasons you gave. 21 Α. Yes, sir. 22 Okay. That's all I'm trying to establish. Q. Now, I understand, Mr. Pall, that you have a definition 23 24 of what a VPN is, and I guess Microsoft has a deposition 25 on -- a definition. Maybe your definition is

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Microsoft's deposition -- definition. I don't know. 1 2 But right now, I'd like you to look at Judge 3 Davis' definition of what a VPN is. And here it is. Could you read that, sir? You don't have to 4 5 read it out loud. I think we've heard it before. (Complies.) Yes, sir. 6 Α. 7 All right. Now, let me ask you this: Your Ο. 8 three reasons. 9 First reason, no tunneling. 10 Do you see any reference to tunneling in Judge Davis' definition? 11 12 It's not there, is it? 13 I can read it in there, sir. Α. Well, I'm not asking if you can read it in 14 Ο. 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? I don't see the word tunneling in there. 18 Α. 19 All right, sir. Do you see the word, second Q. 20 reason, encapsulation? Do you see that in there? 21 Α. I do not see encapsulation. 22 And do you see any reference that multiple Q. 23 applications must be able to access over the communications link? 24 25 A. No, sir.

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All right, sir. Now, you remember you showed 1 Q. 2 us a slide -- and in the interest of time, I won't 3 bother to get it out, but it showed four different communications protocols or choices. 4 5 Remember what I'm talking about? I think --6 Α. 7 Ο. Relating to the DNS SRV? 8 Α. 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 the third way, there were four names that it looked for. 11 12 All right, sir. But as far as the four ways Q. 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 Α. Yes, sir. 17 And do you remember him saying that Microsoft Q. always uses way three, the DNS RSV request? 18 19 I heard him say that, sir. Α. 20 Do you remember him testifying -- he didn't Q. 21 just say it; he testified -- that that's also true for Hewlett-Packard and Intel? 22 I believe that's what he said, that's right. 23 Α. 24 And didn't you say in your deposition, sir, 0. 25 that the DNS RSV is the default?

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I -- can you please show me that, sir? 1 Α. I'm 2 not sure. 3 Well, I don't know if it's worth the time, but 0. isn't it true that it is the default, sir? 4 It's not the default. 5 Α. You don't disagree with that, do you? 6 Q. 7 Well, it's not the default. Α. 8 Q. You think that it's not the default? 9 Α. Well, the default way, if -- of the four ways 10 that are there, if one doesn't work, two doesn't work, three doesn't work, the fourth is the default where it 11 12 will assume a name and connect to that, sir. 13 All right, sir. Let's -- let's go on to the Q. 14 last subject that I want to ask you about. And let's 15 start discussing it by taking a look at Defendant's Exhibit 3066. 16 17 Do you have that in front of you, or can you see it on the screen? 18 19 Α. Yes, sir. 20 Tell us what this is again. Q. This is a document which talks about how to 21 Α. 22 secure L2TP using IP SEC. Okay. And who prepared this document? 23 Q. 24 As in other IETF documents, the name of the Α. 25 authors are kept at the top right corner --

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Q. Okay. Let's --1 2 Α. -- of the document. 3 0. Let's go to that. Top right corner. Someone from Intel, couple of people from 4 5 Microsoft, someone from Cisco Systems, right? 6 Α. Yes, sir. 7 And tell us again the body that put this paper 0. 8 out? 9 Α. IETF. And that stands for? 10 Q. Internet Engineering Task Force. 11 Α. 12 Okay. And this is the group of people you Q. 13 talked about that are working on the internet on a 14 pretty constant basis, right? 15 Which group of people are you referring to, Α. 16 sir? 17 Q. Well, I thought you testified earlier that this is a group of people who is trying to make the 18 19 internet work better. 20 Are you talking about these specific people in Α. the document or --21 22 Q. No, no, no. I'm talking about the organization. 23 24 A. Oh, the organization is focused on making 25 internet standards to be right, yes, sir.

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1 So let's take a look at a piece of this Q. 2 document that we haven't seen, Page 28. Up at the top 3 there -- not the first paragraph, but the second, I'm going to read you some language and ask you if you've 4 5 read this before. I can't --6 Α. 7 IETF invites any interested party to bring to Ο. 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 standard. Please address the information to the IETF 11 executive director. 12 Do you see that sir? 13 14 Α. Yes, sir. 15 So you recognize, don't you, that this Q. 16 organization, the IETF, actively invites people to let 17 them know if there may be patents. In 2001, they were doing that, sir. 18 Α. 19 Q. Yes, sir. Okay. 20 That's in the document --21 Yeah. Α. 22 -- that's in evidence, right? Q. 23 Α. Yes, sir. 24 Okay. So now let's look at a document we've 0. 25 seen several times, Plaintiff's Exhibit -- I don't

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```
know -- 2 -- 120.
1
2
             This is a letter from SAIC to Microsoft.
3
             And let's start in the upper left. It was
   addressed to Mr. Anoop Gupta, Corporate Vice President,
 4
5
   Unified Communications Group.
             Do you know Mr. Gupta?
6
 7
        Α.
             I know Mr. Gupta, sir.
8
             And Mr. Gupta, he was -- was he in the Unified
        Q.
   Communications Group when you knew him?
9
10
             Yes, sir. He was my boss.
        Α.
11
        Ο.
             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
   over to the right-hand side, if we go to the far right,
14
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.
             I trust that happened, sir.
18
        Α.
19
        Q.
             Do you know Mr. Smith?
20
             I -- he's a distant colleague.
        Α.
21
        Q.
             Distant colleague.
22
             I don't work with him closely.
        Α.
23
             And then below that, it shows -- just below
        Q.
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. Do you know Mr. Phelps? 2 3 Yes, as, again, a distant colleague. Α. Okay. At this time, May of 2006, he was the 4 0. 5 lead intellectual property lawyer for Microsoft, right? I don't remember his exact title, but he was a 6 Α. 7 pretty senior person. 8 Q. And he was in the Legal Department. 9 Α. Yeah, I would think so. I --10 He was responsible for intellectual property Q. 11 matters, things like patents, correct? 12 Α. I knew he was involved with that, that's 13 correct. Okay. And then finally, we see just to the 14 Ο. 15 left of that, apparently, the inner office mail was working okay, because the next day, we see, received by 16 17 Marshall Phelps on May 3rd. Do you see that? 18 19 Yes, sir, I see that. Α. Now, the letter, I'll remind you --20 Q . 21 MR. CAWLEY: If we can go down into the body of it, in the first line or two --22 (By Mr. Cawley) -- offered an opportunity to 23 Q. 24 enter into a mutually beneficial business arrangement. 25 And then below that, it identified by number the '135

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```
1
   patent.
2
             Do you see that?
3
             Yes, sir.
        Α.
             And then near the end of the letter, it
 4
        0.
5
   offered to license the letter.
6
        Α.
             License the letter, sir?
 7
             License the letter. I guess that wouldn't get
        Q.
8
   very far.
9
             It offered to license the patent?
10
             -- could you highlight that so that --
        Α.
11
        Ο.
             Sure.
12
        Α.
             Yes.
13
             First of all, before -- just to make it short,
        Q.
14
   before we get there, apparently, it enclosed a copy of
15
   the patent.
16
             Do you see that?
17
             Yes. I do see the highlighted part.
        Α.
18
                  MR. CAWLEY: And let's go down further,
19
   and here we go.
20
             (By Mr. Cawley) We believe the '135 patent
        Q.
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
```

```
Microsoft.
1
2
             Do you see that language?
3
             Yes, sir, I see that.
        Α.
             Now, did you see this letter?
 4
        0.
5
             I don't recall seeing this letter, sir.
        Α.
             Now, remind us, what was your position in
6
        Q.
7
   2005?
8
             In 2005, I was a corporate vice president
        Α.
   focused on Office Communicator and Office Communications
9
10
   Server.
             And those products are mentioned in this
11
        0.
12
   letter, right?
13
             Yes, they are, sir.
        Α.
             And yet you're not sure whether you saw this
14
        0.
15
   letter or not.
16
        Α.
             Yes, sir. I'm not sure.
17
             Is that your testimony?
        Q.
             I'm not sure.
18
        Α.
19
        Q.
             Did Microsoft, after receiving this letter,
20
   take any steps to avoid infringing the '135 patent?
21
             I do not know of taking any steps. I know
        Α.
22
   there was follow-up to the letter, but I do not know of
   any steps we would take on infringing the letter.
23
24
        Ο.
             Now you said it.
25
             I said it. On infringing the patents.
        Α.
```

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Thank you. Okay. We're even, I guess. 1 Q. 2 Isn't it true, Mr. Pall, that the way you operate your 3 team is that you don't focus on what intellectual property or patents that other people may own or things 4 5 like that that are going on in the industry? 6 Α. I disagree, sir. 7 Well, isn't that what you said in your Q. 8 deposition? 9 Let's take a look at your deposition. 10 Page 77. 11 Do you have Page 77? 12 Yes, sir. Α. 13 MR. CAWLEY: Let's highlight this language that begins with the witness, all the way down 14 15 to the next -- there you go. Stop. 16 (By Mr. Cawley) You said: I cannot comment 0. 17 for Microsoft and how broadly Microsoft operates in this area. I can tell you how I guide my team. And the way 18 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.

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1 Is that what you testified in your deposition, 2 sir? 3 That's what I said, sir. Α. Yes, sir. 4 0. 5 Do you know Henry Sanders? I know Henry Sanders, sir. 6 Α. 7 Did you see him testify this morning? Ο. 8 Yes, I saw him testify. Α. 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 networking technology, didn't he? 12 13 Α. Yes, sir. And he testified this morning by deposition 14 Ο. 15 that there is no step where Microsoft checks whether 16 someone's patent will be infringed. 17 Do you remember that testimony? 18 Α. Yes, sir. 19 Q. Do you know Mr. Ryan Kim? 20 I don't know him, sir. Α. 21 You don't know Mr. Kim. Well, he's probably a 0. 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 I saw his testimony being -- part of his Α.

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testimony being read out, but I don't know him, sir. 1 2 Q. What's a developer? 3 A developer is a programmer. Α. A programmer. He's a guy who sits in front of 4 0. 5 some computer and types away programming, right? Yes, sir. 6 Α. 7 And you heard him testify this morning, didn't Ο. 8 you, that Microsoft developers are told by Microsoft not 9 to look at patents. Did you hear that? 10 Yeah, I heard him say that, sir. 11 Α. 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 BY MR. SAYLES: 18 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 innovation. 22 23 Α. Yes, sir. 24 Are you in any way trying to say anything 0. 25 differently today?

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The only -- it's the same -- the same 1 Α. 2 operating model that we have at Microsoft is pretty well reflected there. 3 If -- as I said earlier, if somebody comes --4 5 approaches us with some intellectual property and shows that we are actually using that intellectual property, 6 7 then we take the appropriate steps. 8 All right. And I -- I think that you may have Q. 9 already answered this, but I just want to make sure. Mr. Cawley asked you about one of the letters that was 10 sent on behalf of VirnetX. 11 12 Do you recall that just a minute ago? 13 Yes, I saw that, sir. Α. And were you in Court when the replies were 14 Ο. 15 shown asking for information -- Microsoft asking VirnetX for information? 16 Yes, sir. I was in Court when I saw the 17 Α. letter from Microsoft back to SAIC/VirnetX. Yeah, I saw 18 19 that letter, sir. 20 With regard to the exhibits that you were Q. 21 shown earlier, 227, 228, several that you authored where 22 you were writing to your group about RTC, do you remember those documents? 23 24 Α. Yes, sir. 25 Q. Tell the ladies of the jury what you're

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addressing when you address RTC as a whole? 1 2 Α. I'm talking about products like Office 3 Communications Server, Office Communicator, the application that allows you to make phone calls over the 4 5 internet, do video, do instant messaging. I'm talking about all those capabilities as 6 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 by most of our standards. 10 11 Do you remember that? 12 Yes, sir. Α. 13 Now, are those people and that budget all 0. directed to the accused feature in this case involving 14 15 RTC? 16 Α. No, sir, not at all. 17 A few minutes ago, with regard to the Q. demonstration that you performed, VirnetX's attorney 18 19 asked you to type in www.ebay.com. 20 Do you remember that? 21 Α. Yes, sir. 22 And VirnetX's attorney suggested that this Q. demo was somehow invalid, I think would be fair, because 23 24 typing in www.ebay.com caused a VPN connection to be 25 established.

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Do you remember that? 1 2 Α. I remember that, sir. 3 Were you surprised when the VPN was created? 0. I was not surprised when the VPN was created. 4 Α. 5 Q. Why not? The main reason I wasn't surprised is, the way 6 Α. 7 the software is written and configured, it's designed to 8 make the VPN connection for a name that is typed in. 9 0. Now, AutoDial -- and why is that important? 10 Would you explain that? It's very important. 11 Α. 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, you know, connecting to your workplace to access a 18 19 computer on the net. 20 So depending on the configuration, the 21 software can allow you to do many things. 22 Do you recall when Mr. Cawley focused your Q. attention on the fact that the BIOS had a 2000 version 23 24 in it? Do you recall that? 25 Α. Yes, sir, I saw that.

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Q. Would this demonstration have worked any 1 2 differently if you had a 1996 version? 3 Α. No, sir. Can you explain that, please. 4 0. 5 Yes, sir. You can buy a computer in 2000, Α. 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 a 2001 computer. What you saw was exactly what you 11 would see in 1996. 12 13 So why use a 2005 BIOS? 0. 14 Α. 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. So we -- I think we found went and found the oldest 18 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 with Mr. Cawley and looking under the table, and there 23 was a sticker on the side of the box down there? 24 25 A. Yes, sir.

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Is that of any significance at all with 1 Q. respect to the demonstration that you did? 2 3 No, sir, not at all. Α. Would you explain that, please. 4 0. 5 Yes, sir. That sticker shows when the Α. hardware was made. It does not show when the software 6 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 made in 1995, '96, '97, '98, '99, 2000, 2001, 2002, 11 probably after that -- I don't know if the hardware 12 13 would support software from 1996. So it is really of not any significance for 14 15 this particular demonstration, sir. 16 0. And one final thing, Mr. Pall, have you ever 17 appeared in Court and testified as a witness before? No, sir. This is my first time. 18 Α. 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 Demonstrative 17, the timeline that I drew. 24 25 THE COURT: Any objection?

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1 MR. SAYLES: As a demonstrative, there's 2 no objection. 3 THE COURT: All right. Be admitted. All right. You may step down, Mr. Pall. 4 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 witness be? 16 17 MS. WEISWASSER: Your Honor, Microsoft calls Tyler Barton. 18 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:

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Good afternoon. Q. 1 Good afternoon. 2 Α. 3 0. Please introduce yourself to the jury. My name is Tyler Barton. 4 Α. 5 Mr. Barton, who is your employer? 0. I work for Microsoft. 6 Α. 7 Have you had involvement in the area of Ο. 8 peer-to-peer technologies at Microsoft? 9 Α. Yes, I have. I've had extensive involvement in that area. I was a program manager in the 10 peer-to-peer group for three years, from the summer of 11 2006 until the summer of 2009. 12 13 Have you also been involved in Windows Meeting Q. Space? 14 15 Yes, I have. I've worked on the PeerNet APIs Α. 16 and on Windows Meeting Space. 17 We're going to talk about your work in the Q. peer-to-peer area later, but first let's talk a bit 18 19 about your background. 20 Did you go to college? 21 Α. Yes, I did. I received my bachelor of 22 software engineering degree from the University of 23 Waterloo in 2006. 24 0. Where is the University of Waterloo? 25 It's a short drive from Toronto, Canada. Α.

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

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help of software development and test engineering teams.
 I worked on Windows Meeting Space, and I worked on the
 PeerNet APIs.

Q. Mr. Barton, I know you haven't had a chance to be in the courtroom over the past few days, but the jury has heard quite a bit about some of these technologies. But let's go through some background.

8 What are peer-to-peer technologies? 9 Α. 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 In client server, your computers do make use of server. 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, your computer doesn't send that e-mail directly to hers. 18 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 intermediary. And with peer-to-peer, your computers 24 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

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peer-to-peer applications. 1 2 0. Do the PeerNet APIs have use to someone 3 sitting at their computer, if there is no peer-to-peer application? 4 5 As I said, APIs aren't something that you A. No. use directly. They're used by applications. So if 6 7 there's no application that uses the API, it kind of 8 lies dormant. 9 0. How many PeerNet APIs are there? 10 Α. There are three technologies in the PeerNet APIs. They are called PNRP, grouping, and graphing. 11 Do Windows XP and Windows Vista have APIs 12 Q. other than the PeerNet APIs? 13 Yes. Windows has thousands of APIs. 14 Α. Windows 15 Vista and XP have thousands of APIs. And the PeerNet APIs are a few of these thousands. 16 17 Now, if I were to buy Windows XP in a box, say Q. at Best Buy, would that box actually contain that 18 19 PeerNet APIs? 20 Α. Yes. The APIs would be in the box, yes. 21 Ο. And would that box contain any peer-to-peer 22 applications based on the PeerNet APIs? 23 No. No, there are no applications that use Α. 24 PeerNet APIs in XP. 25 Q. Let me ask you the same question about Windows

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1 Vista. 2 So if I buy a box containing Windows Vista, 3 does that box contains the PeerNet APIs? Yes, it does. 4 Α. 5 Would it contain any peer-to-peer applications Ο. based on the PeerNet APIs? 6 7 Α. There's one. It's called Windows Meeting 8 Space, and it's available in Windows Vista. 9 0. So there's one application in Windows Vista 10 that is called Windows Meeting Space? That's right. Yes. 11 Α. 12 Q. Have you worked on Windows Meeting Space? 13 I have, yes. Α. 14 0. 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 Α. Yes. 19 Q. And you've worked on that application? 20 I've worked on Windows Meeting Space, yes. Α. 21 Q. So let's just start by talking about, what is 22 Windows Meeting Space, what does it do? 23 Α. 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

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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.

Q. Now, you mentioned in a meeting. Is Windows Meeting Space typically used in face-to-face meetings, or is it used over the internet?

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.

Q. I'd like to talk about a few subjects relating to how Windows Meeting Space works. Now, I know you've not been in Court for the testimony of this week, because of Judge Davis' order excluding fact witnesses. But I would like to bring up an example that has been used, which is a library.

But since you said that Windows Meeting Space is not designed for remote use over the internet, why don't we take a library example where a group of students are, say, having say a study session in a particular room.

Let's go through how Windows Meeting Space is used that they might share files on their computers in that room, and then let's talk about how others might Case 6:07-cv-00080-LED Document 395 Filed 04/05/10 Page 87 of 178

get invited into that Windows Meeting Space session. 1 2 Α. Okay. This is where it would help if I could 3 use the easel. MS. WEISWASSER: Your Honor, may the 4 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. MS. WEISWASSER: Can y'all see okay? 10 11 THE COURT: Yes. Do we have the microphone? 12 13 THE WITNESS: Thank you. (By Ms. Weiswasser) So let's start with our 14 Ο. 15 library sample and students are in a study session in a room at the library and they'd like to use the Windows 16 17 Meeting Space application to share some files with each 18 other. 19 How would that work? 20 Okay. Let's say we have three people. Let's Α. 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 together in the library, and each one of them pulls out 23 24 their Windows Vista laptop, and they connect these 25 laptops to the wireless network there.

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Now, one of the first things these computers 1 2 have to do is get what's called an IP address. 3 What is an IP address? Ο. An IP address is a number that a computer uses 4 Α. 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 So the three of them have started up Okay. their computers. They've connected to the network, and 11 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 0. Okay. So now let's say that someone named Kay -- that Kay has some files that might be helpful to 17 the session, and she's also in the library. They'd like 18 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 Okay. I'll use a different marker now so that Α. 25 we can see the new stuff.

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Let's say that Kay arrives late, and the three 1 2 of them are already participating in a meeting. So 3 she's got to join the meeting, connect up her computer to theirs. So Kay will come and she'll open up her 4 Windows Vista laptop, and she'll get an IP address, 5 which, again, is one of those numbers that she can use 6 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 is -- that's really what's necessary when a new computer 11 12 is getting invited into a Meeting Space session. 13 So just to make sure we're clear, are you Q. 14 saying that the Windows Meeting Space session, the 15 people in that, need to find out Kay's IP address in order to include her in the session? 16 17 Α. That's right. Yes. So how would they go about doing that 18 Okay. 0. 19 in getting her involved? 20 There are three ways that this can happen with Α. Windows Meeting Space. The first is using a technology 21 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

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any other people here that I might invite into a Windows 1 Meeting Space session? So his computer will shout out; 2 3 it will find Kay's computer; and he can invite her to come in and join the meeting. 4 5 With this People Near Me method for inviting 0. Kay, is the PNRP technology used? 6 7 This is a different technology. People Α. No. 8 Near me is not -- is unrelated. 9 Q. Okay. 10 There's a second technique that Windows Α. Okay. Meeting Space can use, and it's using something called 11 12 Meetings Near Me. So with Meetings Near Me, it's Kay's 13 computer that shouts out Meetings Near Me. So Kay's computer shouts out and asks, are 14 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 the Meeting Space session that way. 18 19 Okay. So if Kay has shouted out with Meetings Q. 20 Near Me, has the PNRP technology been used? 21 Α. 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

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case, Bill or Ted, one of these people, has to decide 1 2 that they want to invite Kay using e-mail. They use 3 Windows Meeting Space, and it creates what's called an invitation file. This is a file that they can send by 4 5 e-mail to Kay's computer. And it will contain the IP addresses of the 6 7 machines involved in the meeting so that she can use 8 them and connect them. 9 0. So let me ask you a question about that. 10 Are you saying that the e-mail invitation will actually contain an IP address in it? 11 12 Α. That's right. Yes. 13 So is the PNRP technology used in that 0. situation? 14 15 No. It's not used in this situation. Α. 16 Mr. Barton, then, is there any way in which Q. 17 PNRP could be used to invite Kay to join the meeting? There's a very specific sequence of 18 Α. Yes. 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 Why don't you walk the jury through the Q. various events that would have to happen for PNRP to be 23 24 used. 25 Okay. I'm going to use another piece of Α.

```
1
   paper.
2
             Okay.
                    So it's a difficult sequence, and it's
3
  a very specific sequence, as I said.
             It starts with Ted arriving early. So Ted has
 4
5
  got to get there before the other participants or the
  other people in his study group arrive. But Ted is
6
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
   e-mail invitation.
11
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?
                  The e-mail invitation includes Ted's IP
16
        Α.
             Yes.
17
   address or that number that his computer uses to
   communicate.
18
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
```

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fires up his laptop. This is a little -- slightly 1 2 different study group, different people. But two of 3 them arrive and they decide that they want to join this meeting, and Ted is here. 4 5 So they connect up, and Meeting Space is connected, and these three people are able to use it to 6 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 Ο. 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 Α. Yes, that's right. 17 Q. Okay. 18 Okay. So the next step -- and this is Α. 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 PRNP 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

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person arrives late. Tom is late. And he's going to 1 arrive after Ted has already left, and Tom has to decide 2 3 to use that e-mail invitation to join the meeting. He can't use those other technologies I talked about. 4 He 5 can't use People Near Me or Meetings Near Me. He has to decide to use the e-mail invitation. And he must arrive 6 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 complex sequence that's got to happen before PNRP is 11 involved. 12 13 I just want to make sure we're clear. Ο. 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 Α. Yes, that's right. Those would have been 19 options. 20 In those cases, PNRP would not be used? Q. 21 Α. That's right. His computer would have instead 22 just kind of shouted out and found these computers instead of using PNRP. 23 24 Okay. So does that explain, then, the only 0. 25 situation in which PNRP would be used to have a new

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person join a Windows Meeting Space session? 1 This is the situation in which PRNP is 2 Α. Yes. 3 used to join. Okay. Mr. Barton, if I could just ask you to 4 Q. 5 sit down now. I think we can continue from there. (Complies.) 6 Α. 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. THE COURT: All right. So marked. 10 11 Any objection? 12 MR. McLEROY: No objection, Your Honor. 13 THE COURT: Be admitted. 14 MS. WEISWASSER: Thank you. 15 (By Ms. Weiswasser) Now, have we covered every Q. 16 way that PRNP could have been involved in joining Windows Meeting Space session? 17 Yes. Certainly in joining a Windows Meeting 18 Α. 19 Space session, yes, we have. 20 Okay. So I'd like to switch topics, still Q . 21 relating to PNRP, and ask you about something called 22 graph maintenance. 23 Α. Okay. 24 And, again, I know you weren't here to hear 0. this. But yesterday, VirnetX's expert talked about 25

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something called graph maintenance and the involvement 1 2 of PNRP. 3 Α. Okay. So I'd like to ask you about that topic. 4 Ο. 5 First of all, what is graph maintenance in Windows Meeting Space? 6 7 Α. 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 maintenance, kind of like an oil change or fixing up the 11 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 maintenance. 18 19 Are you saying that this is a standard sort of Q. 20 housekeeping process that computer applications generally do? 21 22 It -- it -- this is not uncommon in software Α. to have a maintenance -- maintenance like this. 23 24 So is -- is PNRP the only way that this 0. 25 routine graph maintenance process can be done?

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In -- a lot of things happen in graph 1 Α. 2 maintenance, and it's like there are a bunch of 3 different chores that are taken care of. PNRP is used in a very specific chore in Meeting Space or in the 4 5 graph. It's used in something that we call long-term 6 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 collection and can't connect back to the larger group. 11 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 PRNP is used in one of the ways that you can heal or 16 bring the computers back together. 17 Are you saying that there are a number of Q. other chores, though, involved in this graphing 18 19 maintenance that do not involve PNRP? 20 Yes, there are other chores that don't involve Α. 21 PNRP. 22 I have one more topic that I'd like to ask you Q. about with Windows Meeting Space, and that's the 23 24 following: If we could just go back and think about our 25 study session that involves Ted, Kay, and Tom having a

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Windows Meeting Space session. And they are connected 1 2 securely to each other, and their communications with 3 each other are secure; is that correct? Yes. Their documents are screened that they 4 Α. share. That's secure; nobody else can see that. 5 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 Α. Okay. 11 Ο. 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. Is there anything about Kay's IP address, 14 15 while she's connected to a Windows Meeting Space session, that somehow prevents her from getting this 16 17 e-mail from Anne over the internet that somehow requires some special authorization for access? 18 19 Meeting Space won't stop you from doing Α. No. 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

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```
computer simply because she's part of the Windows
1
   Meeting Space session?
2
3
        Α.
             No.
             Mr. Barton, I appreciate your time. Thank
 4
        Ο.
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
   BY MR. MCLEROY:
14
15
             Good morning -- or good afternoon, Mr. Barton.
        Q.
16
        Α.
             Good afternoon.
17
             My name is Luke McLeroy, and I'm one of the
        Q.
   attorneys here for VirnetX, of course.
18
19
             Now, in your direct examination, you focused
20
   mainly on how often PNRP was used, correct?
21
        Α.
             Yes. We talked a great deal about that.
22
             Now, you agree that it is used by Meeting
        Q.
   Space application, right?
23
             Yeah. There's a situation where PNRP is used.
24
        Α.
25
        Q.
             But you didn't talk about very much how PNRP
```

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actually works, did you? 1 No, we didn't. 2 Α. 3 You didn't talk about the features that it Ο. provides; is that right? 4 No. We didn't talk about that. 5 Α. Now, you understand that Microsoft contends 6 Q. 7 that the PNRP APIs do not infringe any of VirnetX's 8 patents; is that right? 9 Α. Yes. I believe so, yes. 10 Q.. And you were here for opening statements? 11 Α. I was, yes. 12 So you understand that Microsoft contends that Q. 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 witness. 17 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

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issue, and this is a fact witness. It's also beyond the 1 2 scope of my direct. 3 THE COURT: Restate your question. (By Mr. McLeroy) Do PeerNet APIs provide 4 Q. 5 anonymity? 6 MS. WEISWASSER: Again, Your Honor, it's 7 beyond the scope of my direct. THE COURT: Well, if the witness 8 9 understands what you mean by anonymity. 10 Α. I think it would be helpful if you would 11 clarify anonymity. 12 Q. (By Mr. McLeroy) Can -- in the PeerNet APIs, could a hacker see the identity of the individuals using 13 the PeerNet APIs to set up a meeting like you drew on 14 15 the board here? 16 Α. They'll be able to see the IP addresses of the 17 computers involved. And would you say that it's not anonymous? 18 0. 19 MS. WEISWASSER: Your Honor, I have the 20 same objection. 21 THE COURT: Overruled. 22 Seeing the IP addresses reveals information Α. about who is participating in the meeting, so no. 23 24 (By Mr. McLeroy) So, no, it's not anonymous? 0. 25 The IP addresses are revealed. Α.

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Do you know Mr. Sandeep Singhal? 1 Q. 2 Α. Yes, I do. 3 You'd agree with me that he is one of the most 0. knowledgeable people at Microsoft regarding the PeerNet 4 5 APIs; is that right? He's a very knowledgeable person about them, 6 Α. 7 yes. 8 And although you weren't here earlier today, Q. 9 we saw a video of his deposition earlier. 10 MR. McLEROY: Now, can we look at Plaintiff's Exhibit 245? 11 12 I think this is big enough for us to see. 13 (By Mr. McLeroy) This appears to be a Q. 14 presentation that Mr. Singhal authored, right? 15 Α. Yes. 16 Ο. And if you look at the bottom right corner, 17 there is a date there. It says 2006, Microsoft Corporation. 18 19 Do you see that? 20 I do, yes. Α. 21 Q. At that time, I guess Dr. Singhal, was he the 22 Product Unit Manager for Windows P2P and Collaboration 23 Technologies? 24 Α. That was his title. 25 And based on the title of this document, is it Q.

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safe to assume that this presentation relates to the 1 2 PeerNet APIs or peer-to-peer platform in Windows; is 3 that right? Yes, I think that's fair. 4 Α. 5 Now, can we turn to the page -- there aren't Ο. page numbers other than the long string of number in the 6 7 bottom right-hand corner -- the page that ends in 612. 8 Do you see the two dark blocks on this page? 9 Α. Yes, I do. In the top block, there are three words. 10 Q. 11 Could you read them? 12 I see the words. It's a little harder now, Α. but I know what they are. Distributed, anonymous, and 13 14 mobile. 15 That is a lot harder now. 16 Would you agree that the adjective distributed Q. describes the PeerNet APIs? 17 I don't know if it describes the APIs, but it 18 Α. 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 say the peer-to-peer platform is distributed? 22 23 Α. 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. Well, I guess in your direct examination you 2 Q. 3 did discuss the difference between a client server approach to computing versus a peer-to-peer approach 4 5 computing. Yes, we talked about that. 6 Α. 7 And you would agree with me that the Ο. 8 peer-to-peer approach is a more distributed approach, 9 right? I think that's fair, yeah. 10 Α. And then also, the third word here is mobile. 11 Ο. 12 Do you see that? 13 Α. I do. And I guess we've talked a little bit here 14 Ο. 15 about how users can move around with their laptops; is 16 that right? 17 I suppose so, yeah. Α. And used the Meeting Space application? 18 0. 19 Α. I'm sorry. Could you repeat? 20 And used the Meeting Space application and Q. 21 move around with their laptops, right? 22 Α. Yes. 23 Q. All right. So you'd agree that mobile 24 describes the PeerNet APIs; it's a feature they provide? 25 Α. Yes. I suppose so, yes.

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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?

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```
Α.
             Yes.
1
2
        Q.
             Now, are you aware that Microsoft seems to
3
  have two different positions regarding whether or not
   PNRP is a DNS technology?
 4
             I don't believe that that's correct.
5
        Α.
            You don't think they have two different
6
        Q.
7
   positions?
8
        Α.
             I don't think so, no.
9
        Q.
             All right.
10
                  MR. McLEROY: Well, can we bring up
  Plaintiff's Exhibit 148?
11
12
        Q.
             (By Mr. McLeroy) This is a printout from
13
   Microsoft's website, isn't it?
             Yep. It looks like it's from MSDN, which is
14
        Α.
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
   that's the date, it's dated October 1st, 2007; is that
18
19
   right?
20
        A. I see that, yes.
21
                  MR. McLEROY: Now, if we could go back up
22
   to the top.
23
            (By Mr. McLeroy) We'll see this document is
        Q.
24
   called about PNRP; is that right?
25
        A. Yes, that's right.
```

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And the first line under about PNRP reads: 1 Q. 2 The peer name resolution protocol (PNRP) name space 3 provider (NSP) is a serverless DNS technology. Do you see that? 4 5 Α. 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 (By Mr. McLeroy) And before we look at this Q. one, have you been told one way or another whether or 11 not VirnetX contends that the PNRP is a secure DNS in 12 this lawsuit? 13 I -- I don't -- I don't recall a secure --14 Α. 15 whether or not --16 0. You don't remember that from the opening 17 statements, that PNRP is a secure DNS? I think that I might have heard that, yes. 18 Α. 19 Q. Okay. Now, let's look at this page now. 20 MR. McLEROY: Can we pull up the date on this one? It's down toward the bottom. 21 22 (By Mr. McLeroy) This page is dated April 9th, Q. 23 2009. 24 Α. Uh-huh. 25 Q. And that's after this lawsuit had been pending

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1 for a while; is that right? 2 Α. I suppose so, yes. 3 I think by this point, you had already given a 0. deposition in this lawsuit? 4 5 Yes. That's right. Α. Now, if we go back up to the top, this is the 6 Q.. 7 same about PNRP page, isn't it, on the website? 8 Α. Yes. I see that, yes. 9 0. All right. And here it says: The peer name 10 resolution protocol, name space provider (NSP). So so far, it's the same as the last page we looked at, right? 11 12 Yeah. That's right, yes. Α. 13 All right. It says: Is a serverless name Q. resolution technology. 14 15 Did I read that right? 16 Α. Yeah, that's right. 17 So you would agree there is a change in this Q. page on Microsoft's website from 2007 until 2009? 18 19 Yes. There has been a change, yes. Α. 20 Did you have any responsibility for making Q. this change? 21 22 No, I did not make this change. Α. 23 Mr. Cawley asked Mr. Pall earlier, he said it Q. 24 wasn't his group responsible for making the change. 25 Was anyone in your group responsible for

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making this change? 1 2 My group is an engineering group, and there is Α. 3 a collection of writers that are responsible for this documentation. So they are not my group, no. 4 5 So you probably don't know who made this 0. 6 change, do you? 7 In this case, I don't, no. Α. 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 party, Mr. Saydjari, who's here from out of town. 18 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

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1 get him. 2 THE COURT: We will do the best we can. 3 We'll try. MR. POWERS: Very well. Thank you, Your 4 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? THE COURT: Yes, you may. 16 17 SAMI SAYDJARI, DEFENDANT'S WITNESS, SWORN 18 DIRECT EXAMINATION 19 BY MS. WEISWASSER: 20 Q. Good afternoon. 21 Good afternoon. Α. 22 Please introduce yourself to the jury. Q. 23 My name is Sami Saydjari, and I am the CEO of Α. 24 the Cyber Defense Agency. 25 Q. What is the Cyber Defense Agency?

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We provide strategic consulting to the United Α. States government, the military, on how to secure computers against the most sophisticated attacks from foreign countries. Who founded the Cyber Defense Agency? 0. I did in the year 2002. Α. Ο. Where is your company located, Mr. Saydjari? We're located in Wisconsin, Rapids, Wisconsin. Α. Q. Do you also live in Wisconsin, Rapids? Α. Yes, I do. Ο. Have you had to take time away from running your business in order to travel here to Tyler, Texas, to testify in this case? Α. Yes, ma'am. Is Microsoft compensating you for your time Q. lost in your business as a result of coming to this trial? Α. Yes, ma'am. Q. How much are you being compensated? My commercial rate. Α. Q. What is that, Mr. Saydjari? Α. That's \$475 per hour. Let's get started with your background. Q. Did you go to college? Α. Yes, ma'am. I went to college at Rice

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University in Houston, Texas, where I earned my 1 2 bachelor's of computer science and electrical 3 engineering, and my master's at Purdue University in Indiana. 4 5 Was your master's degree also in computer Ο. 6 science? 7 Yes, ma'am. Α. 8 Q. What did you do after college? 9 Α. I joined directly the Department of Defense. 10 Q.. Is that the United States Department of 11 Defense? 12 Α. Yes, ma'am. 13 And at the United States Department of Q. Defense, were you working in the Washington, D.C., area? 14 15 Yes, ma'am, I was. Α. 16 0. And did you join the Department of Defense in 17 1983? 18 Α. Yes, ma'am. 19 Q. How many years did you spend at the United 20 States Department of Defense? 21 From 1983 to the year 2000. Α. 22 So what did you do for the Department of Q. 23 Defense over the 17 years that you were working with 24 them? 25 I did research into securing computers against Α.

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113 foreign attackers for the entire 17 years. So were you focused on issues involving Yes, ma'am. Computer security, network Did that also involve internet security? Yes, ma'am, internet security was definitely Now, is computer and internet security important to the Department of Defense? Yes, ma'am. It's absolutely vital to the security of the Defense Department to protect the secrets that are contained on the computers that are

basically -- DOD uses to fight war. 14 15 Was there a particular group within the Q. 16 Department of Defense that you worked for from 1997 to 17 2000?

That would be the Defense Advance 18 Α. Yes, ma'am. 19 Research Projects Agency also known as DARPA.

20 Ο. What does DARPA do?

1

2

3

4

5

6

7

8

9

10

11

12

13

Q.

Α.

Q.

Α.

0.

Α.

included.

computer security?

security, the entire range.

21 Α. DARPA has a very simple mission. It's to 22 avoid technological surprise. And so the job of DARPA is to keep the military on the very leading edge of 23 technology, to develop the best of the best technology 24 25 to give our troops the advantage in securing the -- for

national security. 1 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 background. 4 5 What did you do after you completed your work at DARPA in the Department of Defense in 2000? 6 7 After that, I briefly joined a non-profit Α. 8 organization called Stanford Research Institute, and 9 then I went on to found my own company. 10 Have you given congressional testimony in the Q. 11 area of internet security? 12 Yes, ma'am, I have. Α. 13 What year was that? 0. That was April of 2007. 14 Α. 15 Who did you provide that testimony to? Q. That would be to the United States Congress, 16 Α. 17 the House Committee on Homeland Security, the Subcommittee on Emerging Threat. 18 19 So other than the invitation to testify before 0. 20 Congress, have you received any other honors for your 21 work on internet security? 22 Yes, ma'am, a number of them, including Α. 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.

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Q. Let's turn back to your work for DARPA. 1 2 You said that you were at DARPA from 1997 to 3 2000. Yes, ma'am. 4 Α. 5 What was your role at DARPA? 0. 6 Α. 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? It's basically a programming in computer and 11 Α. 12 network security to figure out how to defend the 13 military systems against the next generation of threats. Does that focus on internet security? 14 0. 15 Yes, ma'am, computer and internet security. Α. 16 0. Is this a prestigious position? Yes, ma'am. I would estimate less than 1 in 17 Α. 10,000 professionals in the field would get chosen to go 18 19 to DARPA. It's highly prestigious. 20 So I understand from that answer that Q. Okay. 21 it's a selective position. 22 Α. Yes, ma'am. 23 How were you selected to become the program 0. 24 manager for the Information Assurance Program at DARPA? 25 I was recommended by two different program Α.

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managers of DARPA, and then hand-approved by the 1 2 Director of DARPA himself. 3 So what were your responsibilities as the head 0. of Information Assurance from 1997 to 2000? 4 5 My job was to formulate a vision about how to Α. dramatically improve security of the military's computer 6 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 that vision. 11 12 Q. Now, was this budget provided by the 13 Department of Defense? 14 Α. Yes, ma'am. 15 And what was the amount of your budget? Q. Α. It was \$30 million every three years. 16 17 So that was a budget, then, that you were able Q. to use to invest in technologies? 18 19 Α. Yes, ma'am. 20 And would those be technologies that would Q. 21 further your vision? 22 Yes, ma'am. Α. 23 So what was the vision that you selected as 0. 24 head of Information Assurance at DARPA? 25 My -- my interest was in putting together the Α.

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technologies that were out there and new technologies to 1 2 provide a systematic defense, to weave the technologies 3 together in a way that would make it very, very difficult for our potential adversaries to break into 4 our computer systems. 5 I'd like to ask you, Mr. Saydjari, about one 6 Q. 7 of the first technologies that you funded --8 Α. Yes, ma'am. 9 -- in your role as head of Information 0. 10 Assurance. 11 Are you familiar with the system called Dynamic Virtual Private Network? 12 13 Α. Yes, ma'am. Does that also, by the way, go by the name of 14 0. 15 Dynamic VPN or DVPN? Yes, ma'am. 16 Α. Is that one of the first programs you funded 17 Q. while you were at DARPA? 18 19 Α. Yes, ma'am, it was. 20 So why did you choose to fund the Dynamic VPN Q. 21 system or program? 22 The DVPN program was one of the most worked on Α. and urgent, important problems to the Defense Department 23 known as the coalition problem. 24 25 What is the coalition problem? Q.

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A coalition problem is, the United States was 1 Α. 2 increasingly fighting wars with partners in 3 battlefields, and so the United States doesn't go in alone. It goes with other countries. 4 5 And so when we do that, there is -- there needs to be communication between each of the coalition 6 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 we're going to be and when we're going to be there, they 11 12 can kill people. 13 And so protecting those communication paths was a matter of life and death and highly urgent to do 14 15 it quickly and easily. 16 Now, let's just make sure we have our timeline 0. 17 set here. What year did you fund the Dynamic VPN 18 19 project? 20 Α. That would have been in late 1997. 21 Ο. 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 Yes. It would have to be fast to set it up, Α. 25 and it would have to be fast to change it, because

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coalition partners come and go due to politics of the 1 2 situation. 3 So one country may come in and become a member of the coalition at one point, and then they may leave 4 5 the coalition at another point. So it has to be fast to set it up and fast to reconfigure it. 6 7 Would it be important that the setup be Ο. 8 automatic? 9 Α. Yes, ma'am, quickly. It had to be automatic. 10 0. And how about ease of use? Would that have been important? 11 Absolutely. It would have been critical. 12 Α. Ιn 13 order to set it up fast and quickly, it would have to be easy to use. That was one of the military criteria for 14 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 Α. That would be Trusted Information Systems, 19 also known as TIS. 20 Q . What is TIS or Trusted Information Systems? 21 Α. They were one of the premier research and 22 development firms in computer security at the time. 23 Do you recall who at Trusted Information Q. 24 Systems you worked with on the Dynamic VPN project? 25 Yes, ma'am. That would be Dan Sterne. Α.

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Q. Had you worked with Mr. Sterne before? 1 2 Α. Yes, I had. 3 And what did you think of his work on internet 0. security? 4 5 I found he was an outstanding researcher. Α. So was Trusted Information Systems able to 6 Q. 7 build a prototypes of the Dynamic VPN system? 8 Α. Yes, they were. 9 0. And did the Dynamic VPN system solve this 10 coalition problem that you talked about earlier? Yes, ma'am. It did create secure pipes 11 Α. 12 quickly and easily between the coalition partners. 13 Now, I'd like to talk about the subject of 0. 14 whether the Dynamic VPN project generally was a 15 classified or secret project in any way. 16 Was it? 17 No, ma'am. Quite the opposite. It was Α. intended to be an open project, openly available, widely 18 19 distributed. 20 And why was it intended to be an open and Q. 21 widely distributed project? 22 Α. The United States military preferred to consume its technology as commercial product. And so it 23 24 was very, very important to let people know about the existence of the technology so that we could have one or 25

more vendors produce it. 1 2 And the reason why it's important to be a 3 commercial product is because it's cheaper, faster, easier for the military to consume commercial products 4 5 than it is government-specialized developed products. In addition, it's really very important to the 6 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 Yes, ma'am, it was. In March of 1998, as a Α. 15 part of a technology demonstration series that we did 16 called integrated feasibility demonstrations. 17 So let's just make sure we're clear on a Q. couple of things, and then we'll turn to some documents. 18 19 You said that the Dynamic VPN system was demonstrated in 20 March of 1998? Yes, ma'am. 21 Α. 22 And you said that it was demonstrated at Q. 23 something called the integrated feasibility demonstration? 24 25 A. Yes, ma'am.

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Now, that's a mouthful, so let's just explain 1 Q. 2 to the jury, what is an integrated feasibility 3 demonstration? Yes. If we -- if we take the words 4 Α. 5 individually, feasibility means that we are demonstrating the capabilities of the technology. So we 6 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, and we would show that it works in the context of a 14 15 military problem so that when we showed it to military people, they could understand how it worked with respect 16 17 to their problem. Are integrated feasibility demonstrations 18 0. 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 Α. 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.

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Now, is that your program? 1 2 Α. It was the office in which my program resided, 3 yes, ma'am. Okay. And it says that it was prepared by GTE 4 Q. 5 Internet Working and BBN Technologies. Yes, ma'am. 6 Α. 7 What was their role in this integrated Ο. 8 feasibility demonstration project? 9 Α. BBN was the technology integrator, so their 10 job was to put the technologies together, to weave them together in sort of a fence-like structure in the 11 context of a military problem and also to orchestrate 12 the demonstration. 13 So let's turn to some of these descriptions of 14 Ο. 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 highlight from the three major objectives down through 18 19 Dynamic Virtual Private Networks. 20 Actually, a little bit up. No. 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 (By Ms. Weiswasser) The primary objective is Q.

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to successfully stand up and demonstrate the 1 2 capabilities and/or technologies listed below. 3 So, Mr. Saydjari, what does this mean? It means what I had indicated before. 4 Α. The purpose of -- of the feasibility demonstration was to 5 show that the capabilities of the -- show the 6 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 Okay. Why don't we turn to Page 8 of this Q. 14 document, which is the 3009.012. 15 MS. WEISWASSER: And, again, Chris, if you can focus on 2.2.1.1 Dynamic Virtual Private 16 Networks. 17 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 Private Network Technology in the -- right there. 23 24 That's good. 25 And then why don't we highlight Dynamic

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Security Perimeter Technology and DNS SEC. 1 2 (By Ms. Weiswasser) So, Mr. Saydjari, Dynamic Q. 3 Security Perimeter, is that the same thing as Dynamic VPN? 4 5 Α. Yes, ma'am, it is. Okay. So in this paragraph, is this 6 Q. 7 describing the dynamic virtual private network system 8 that was demonstrated in March of 1998? 9 Α. Yes. It's given a bit more detail on how it 10 worked. And is this an accurate reflection of how it 11 Ο. worked? 12 13 Yes, ma'am, it is. Α. Now, what does DNS SEC mean? 14 0. DNS SEC is a secure version of the domain name 15 Α. 16 system, which associates a network address with the name 17 that we like to use like www.microsoft.com. We, as human beings, would use those, but networks use an IP 18 19 address, and the security of that is what DNS SEC is

20 about.

Q. And the dynamic virtual private network
22 system, did that use DNS SEC technology?
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

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```
1
   system.
                  MS. WEISWASSER: If you could just
2
3
   highlight, Chris, 3.2.1.1. You can highlight that whole
   section.
 4
5
                  And let's -- let's make sure we
   understand. We're talking about the dynamic virtual
6
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.
             (By Ms. Weiswasser) So, Mr. Saydjari, what is
11
        0.
12
   this telling us about the dynamic virtual private
13
   network system that was demonstrated in March of 1998?
             Well, when we do a demonstration, we wanted to
14
        Α.
15
   set up what the success criteria was, what it would mean
   for the program to be successful. And so these are set
16
17
   up as the evaluation criteria, the success criteria, by
   which we judge the demonstration.
18
19
        Q.
             And I see in the first bullet, it says
20
   transparency within the VPN.
21
             What does that mean?
22
             That means it needs to be -- it's basically
        Α.
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
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use the same applications without having to do anything 1 different, without having to click anything else 2 3 different. They basically just use it and automatically a 4 5 secure pipe is set up, if they're talking to a coalition partner, because the firewall is basically this big, if 6 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 So the third bullet references ease of setup Ο. 11 and use. What does that mean? 12 13 Well, before DVPN, what has to happen, Α. 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 a very long time and was prone to error. 18 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 another country and their address for that -- for their 23 24 local area network. 25 And then once he did that, either added

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somebody or deleted somebody, it was automatic that all 1 2 of the coalition partners were then added who were on 3 the list, and those who were not on the list were subtracted and could no longer read the communication 4 5 between the members. Were transparency and ease of setup and use 6 Q. 7 important to the success of the Dynamic VPN system that 8 was demonstrated in March of 1998? 9 Α. Absolutely. You'll notice in the first three 10 of the list, so they were absolutely critical to us. And did the dynamic virtual private network 11 0. 12 system satisfy those criteria? 13 Yes, ma'am. That was a great success that Α. 14 way. 15 Well, let's -- let's talk a bit about Q. Okay. 16 who attended the integrated feasibility demonstration in 17 March of 1998, when the Dynamic virtual private network system was demonstrated. 18 19 Who -- who attended? 20 All of the integrators who were involved would Α. have attended. DARPA and its staff would have attended 21 22 as well as those who DARPA believed would be interested in the technology either as a consumer. 23 24 So, for example, military leaders would attend 25 the demonstration to see how it worked as well as

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potential producers, military contractors and companies 1 2 who might be interested in creating that technology to 3 that the DOD can then consume it. So about how many people attended this March 4 Q. 5 of 1998 demonstration of Dynamic VPN? About 30. 6 Α. 7 Now, you mentioned earlier that this March of Q. 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. Why don't we first look at 3009.09. 11 12 MS. WEISWASSER: Chris, if you can look at the end of -- the beginning of the second paragraph. 13 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, unclassified integration environment. 18 19 (By Ms. Weiswasser) What does that mean? Q. 20 Unclassified means that it was an open Α. 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.

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Your Honor, this is one of the subjects 1 2 of the pending motion. 3 THE COURT: Okay. MS. WEISWASSER: So I will just have the 4 5 witness testify about it but not put it up on the screen and not reveal any sustains. 6 7 Is that how I should proceed? 8 THE COURT: All right. Okay. 9 MS. WEISWASSER: Okay. THE COURT: What exhibit number is it? 10 MS. WEISWASSER: It's DX3008. 11 12 (By Ms. Weiswasser) Mr. Saydjari, if you could Q. 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 1998. 17 18 Α. 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?

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1 MR. CAWLEY: The objection is hearsay, 2 Your Honor. 3 THE COURT: Response? MS. WEISWASSER: We have a pending motion 4 5 on this issue. We don't believe it's hearsay because we're not offering it for the truth of what's asserted 6 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. THE COURT: All right. 11 Be admitted. 12 MS. WEISWASSER: Okay. So in that case, why don't we put 3008 up on the screen. 13 14 (By Ms. Weiswasser) Do you have that in front 0. 15 of you, Mr. Saydjari? 16 Α. Yes, ma'am, I do. 17 Okay. So, Mr. Saydjari, what is this Q. document? 18 19 This would be the document that was presented Α. 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

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```
through the end DARPA IA program.
1
2
                  And why don't you actually highlight
3
   rapid automated VPN reconfiguration.
             (By Ms. Weiswasser) What does this mean?
 4
        0.
5
             Rapid reconfiguration means, basically, to be
        Α.
  able to set the network up and change it in minutes as
6
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.
             So is that an accurate description of the
11
        0.
12
   Dynamic VPN system that was demonstrated in March of
   1998?
13
14
        Α.
            Yes, ma'am, it is.
15
                  MS. WEISWASSER: Why don't we just
16
   highlight also in the next part DNS SEC.
17
             (By Ms. Weiswasser) What does that mean here?
        Q.
   I know you testified earlier what it means, but does
18
19
   this indicate that DNS SEC was also a part of this
20
   system?
21
        Α.
             Yes, ma'am, without a doubt.
22
             Okay.
        Q.
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
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1 first bullet point: Membership verified by DNS SEC 2 query to coalition domain; e.g., what is IP address of 3 enclave?

(By Ms. Weiswasser) What does that mean? 4 Ο. 5 That means that in order to figure out who is Α. in the enclave, the DNS SEC server, the computer that 6 7 handles the DNS SEC request would have a list of 8 everybody who was in and not in the coalition, and that list would include both names and addresses of the 9 10 computers that are associated with memberships of -members of the coalition. 11

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.

Q. Okay. Why don't we look at Slide 8. And my first question for you on this slide is, dynamic security perimeter. Does that mean dynamic -- the dynamic virtual private network system we've been talking about?

20 Yes, ma'am. The names were interchangeable. Α. 21 0. Okay. And what does this slide show? 22 It shows how a VPN would be established Α. between two members of a coalition; in this case, Red 23 24 Cross and FEMA, kind of representing a disaster relief 25 operation that the military often is involved in.

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Okay. So is this an accurate depiction of the 1 Q. 2 dynamic virtual private network system demonstrated in 3 March of 1998? Yes, ma'am. It shows how it goes to the DNS 4 Α. 5 SEC to find the addresses, and then it shows how it sets up the pipeline between the two members. 6 7 Okay. I have one final question for you about Ο. 8 this document. MS. WEISWASSER: Chris, if you can just 9 10 go back to the first page of it. And in the bottom, it references two dates, December 18th, 1997, and March 11 9th, 1998. 12 13 (By Ms. Weiswasser) Now, my first question for Q. 14 you is, why are there two dates on here? 15 It would not be unusual for our contractors to Α. 16 reuse slides from one presentation to another. 17 So it's highly likely that this was given to me as a status report in December of 1997 by the 18 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 And do you actually have a recollection of 0. 24 seeing these slides prior to the integrated feasibility 25 demonstration?

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Yes, ma'am. I would have seen them. 1 Α. 2 Q. And who would have shown you these slides? 3 Α. That would have been Dan Sterne. And who do you think, by the way, would have 4 0. 5 presented these slides at the integrated feasibility demonstration in March of 1998? 6 7 The principal investigator would have been Α. 8 required to present those slides, so I'm almost certain 9 it was Dan Sterne. 10 Okay. All right. Finally, let's look at 3046 Q. 11 in your binder. 12 THE COURT: Counsel, let me -- before you go on, just point out that you have used 30 minutes, and 13 I know it's your desire to leave time to cross so that 14 15 the witness can leave by this evening. So I'm not trying to rush you, but I'm just pointing out where we 16 17 are. MS. WEISWASSER: Thank you, Your Honor. 18 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 of this document and then the first section under 23 24 progress with the bullet points. 25 Why don't we highlight 16, March, 1998 at

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the top to 30, April, 1998 at the top, and why don't we 1 2 highlight the word progress, and why don't we highlight the second bullet, provided dynamic security VPN demo at 3 IFD 1.1. 4 5 (By Ms. Weiswasser) Mr. Saydjari, what is this Q. 6 document? 7 This is a status report from the contractor to Α. 8 me on what's going on in the contract. 9 Ο. And what does that tell you about the 10 demonstration of the dynamic VPN system? It clearly confirms that it did happen. 11 Α. 12 Q. Does it confirm that it happened sometime 13 between March 16th and April 30th of 1998? 14 Α. Yes, ma'am. 15 Okay. One final subject for you. Are you Q. 16 familiar with a company called SAIC? 17 Α. Yes, ma'am. And how about a gentleman named Mr. Gif 18 0. 19 Munger? 20 Α. Yes, ma'am. 21 Q. And how are you familiar with SAIC and 22 Mr. Munger? 23 Mr. Munger came in to pitch an idea to be Α. 24 funded under my program. 25 And do you recall what time period he would Q.

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have sought the funding? 1 2 Yes, ma'am. After reviewing e-mails, it Α. 3 looked like it was between August of 1998 and March of 1999. 4 5 And do you recall the technology that Q. Mr. Munger and SAIC were presenting to you? 6 7 Yes, ma'am. It was a VPN-based technology. Α. 8 And was this in your role as head of Q. 9 Information Assurance --10 Α. Yes, ma'am. 11 Ο. -- Program at DARPA? 12 Α. Yes, ma'am. 13 And did DARPA fund the SAIC and Mr. Munger's Ο. VPN invention? 14 15 No, DARPA did not. Α. 16 0. Why did DARPA choose not to fund the invention? 17 In the evaluation of the proposal, it was 18 Α. 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 duplicate of what we had already created. 23 24 Okay. Now, did SAIC actually formally apply 0. 25 for funding after that?

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Yes, ma'am, through one of our solicitations. 1 Α. 2 Q. And were they awarded that funding? 3 No, ma'am, for the very same reasons. Α. 4 0. Okay. Thank you. 5 MS. WEISWASSER: I pass the witness. 6 THE COURT: Cross? 7 CROSS-EXAMINATION 8 BY MR. CAWLEY: 9 Mr. Saydjari, I have to start asking you Q. 10 questions about the elephant in the room. It went by very quickly at the beginning of your examination, but 11 12 did you say you're being paid by Microsoft? 13 I said I was being compensated for lost time, Α. 14 yes. 15 For lost time. Q. 16 Now, just -- let's get that straight. We've 17 seen some expert witnesses in this case. I guess you haven't, but we have. Dr. Jones and Mr. Reed and I 18 19 guess tomorrow we're going to see some expert witnesses for Microsoft. 20 21 But you're not an expert witness here, are 22 you? That's correct. I'm a factual --23 Α. 24 You weren't paid to study anything in this 0. case and express an opinion, right? 25

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That's correct. I'm a fact witness. 1 Α. You're a fact witness. 2 Q. 3 Α. Yes, sir. Now, you say that Microsoft has agreed to 4 Q. 5 compensate you for your lost time. That's correct. 6 Α. 7 Okay. Let's talk about that. Ο. 8 What is the rate that you charge for technical 9 consulting? 10 Α. For commercial clients, it's \$475 per hour. I see. 11 Ο. 12 And how long has that been the case? 13 Oh, I'm not exactly sure. Probably at least a Α. couple of years, maybe a year and a half. 14 15 Do you remember when your deposition was taken Q. in this case? 16 17 Approximately. Within the last six to nine Α. months. 18 19 Q. Let me give you a copy of your deposition. 20 MR. CAWLEY: Are we able to pull this up on the screen? 21 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?

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```
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.
   Okay. I've got it.
 4
5
                  MR. CAWLEY: Okay.
             (By Mr. Cawley) Actually, let's start at Page
6
        Q..
7
   83 of your deposition, because this is important, and I
8
   want to make sure we understand it.
             When was your deposition taken?
9
10
        Α.
             You asked me to look at the document.
11
        Ο.
             Do you remember when it was taken?
12
             No, I don't have a specific remembrance of
        Α.
13
   what date it was.
             Well, let me see if I can find the date.
14
        0.
   Does July 23rd of 2009 sound about right?
15
16
        Α.
             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
             (By Mr. Cawley) So let's take a look at
        Q.
23
   Page 83 starting at Line 23. And let me get on the same
24
   page.
25
             Are you with me?
```

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Α. Yes. 1 Page 83, Line 23, you were asked a question: 2 Q. 3 Are you being paid for your time here today? You answered: I am. 4 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? Answer: It is -- well, that's hard to answer, 11 because I have different rates for different things that 12 13 I do. So it's standard for this type of work, but it's not standard for the technical consulting that I do. 14 15 Have I read that correctly so far? 16 Α. Yes, you have. 17 Next question: When you say this type of Q. work, are you talking about litigation consulting? 18 19 No, sir. I'm talking about --Α. 20 I'm sorry. I'm reading from your deposition Q. 21 still. 22 Α. Oh. 23 Q. Yes. 24 I apologize. Α. 25 The question was -- I'm sorry for not making Q.

1 it clear. 2 Question: When you say this type of work, are 3 you talking about litigation consulting? And you answered: Yes, correct? 4 5 Did I read that correctly? 6 Α. You read that correctly, yes. 7 All right. But then you were asked the Q. 8 question: Have you consulted on other litigations in 9 the past? 10 And you said: I have not. Question: This is your first time? 11 12 Answer: Yes. 13 Is that still true? 14 Α. Yes, sir. 15 So you testified that you have a standard rate Q. for litigation consulting, but the fact of the matter 16 17 is, you've got one client for litigation consulting, and that's Microsoft, correct? 18 19 I don't have a litigation client at all, Α. 20 because this is not a litigation consultation. 21 Q. Oh, I see. 22 It's a commercial consultation. Α. Well, didn't you just testify in your 23 Q. 24 deposition here that you were -- that this was standard 25 for litigation consulting?

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No. I think it said that it was a standard 1 Α. 2 rate for this type of work, and I was referring to 3 commercial work, not litigation work. Ο. Well, let's read on then. 4 5 You were asked the question, Page 84, Line 19: What is your technical consulting rate? 6 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 recently changed that rate. I would say it's somewhere 14 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? I do. 18 Α. 19 Okay. And then going down to Page 85, Q. 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 Α. I do.

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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

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1 something. 2 Q. Didn't you say, Page 85, Line 4, that it's 3 somewhere between 300 and 420 an hour? Yes. So I was in error. Α. 4 5 And, in fact -- well, that was -- you gave 0. that testimony under oath, just like you're under oath 6 7 now, didn't you? 8 Right. And I also said that I didn't know Α. 9 exactly and that I thought it was about that range. And 10 so under oath -- I was, in fact, under that oath. You didn't know what you were making. 11 Ο. 12 I'm sorry. Did you ask me a question? Α. 13 You testified that you didn't know what you 0. were making, but you thought it was somewhere between 14 15 300 and \$420 an hour, correct? 16 Α. That is correct. That's what I testified. 17 And now you're telling us that Microsoft is Q. paying you 475 an hour, right? 18 19 Α. That is correct. 20 And isn't it true, sir, that that's higher Q. 21 than the rate you charge other clients? 22 Α. No, it's not. 23 You charge all your other clients 425? Q. 24 Α. No. 25 475? Q.

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Not all of my clients. I have different rates 1 Α. 2 for different kinds of work. 3 0. What rates do you have for what you're doing for Microsoft? 4 5 It's my standard commercial rate, which is Α. 6 \$475 an hour. 7 And how many commercial clients do you have? Ο. 8 Α. About three or four. 9 Ο. Three or four? Who are they? 10 Α. I can't name them. Oh, you can't name them or don't want to name 11 Ο. them? 12 13 A. I have contracts -- obligations not to name these -- these people in a public forum. 14 15 Q. Okay. MS. WEISWASSER: Your Honor, Mr. Saydjari 16 does a lot of confidential work. He should not be 17 required to reveal the names of his other clients in 18 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 questioning went by, that Microsoft was compensating 23 24 you, making it up to you for your lost wages. 25 The fact of the matter is, this is just a

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paying job for you, isn't it? 1 2 Α. Negative. No, it's not a paying job. It's 3 making up for lost time. You have commercial clients, right? 4 Ο. 5 Α. Yes. And you're charging Microsoft just like a 6 Q. 7 commercial client. 8 I am losing wages that I would have been paid Α. 9 during this time that I am testifying for Microsoft, and 10 they are compensating me at my commercial rate for my lost time. 11 Do you bill this money yourself personally, or 12 Q. 13 do you have a company that gets it? 14 Α. I'm not sure what you're asking me. 15 Well, you say your lost wages. Do you -- do Q. 16 you -- have you -- are you losing wages? 17 By being here, I'm not earning wages, Α. Yes. that's correct. 18 19 Q. Okay. How -- do you -- do you have a salary? 20 I have a partial salary, and I'm also Α. 21 partially reimbursed on an hourly rate, depending on 22 what we're doing. 23 Okay. So is your salary docked because you're Q. 24 here? 25 My hourly rate certainly would be docked, yes. Α.

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No, not your hourly rate, your salary. 1 Q. My salary is not, but it's way less than that. 2 Α. 3 Your salary is not docked. Your hourly rate 0. is made up of hourly work you charge clients, right? 4 5 Right, which I can't do while I'm here. Α. Well, you're doing it, aren't you? 6 Q.. 7 I'm here to testify about the facts, and Α. No. 8 I'm losing the wages that I would have been making 9 during this time. 10 Is it your testimony under oath that if you Ο. were not here testifying in front of this jury about the 11 12 facts in this case, you would be doing work for some 13 other client at the rate of \$475 an hour? 14 I can't say that for a fact, but that was the Α. 15 potential, yes. 16 0. Thanks. All right. 17 Well, let's talk about some of those facts that you've been paid to come here and testify about. 18 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.

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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

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1 time period, that easy-to-use automatic virtual private networks were needed. 2 3 Α. Yes, sir. Now, you've testified about a project called 4 Ο. 5 DVPN, right? We heard about that. 6 Α. Yes. 7 And that was a project that you funded in your Ο. 8 Information Assurance Program, correct? 9 Α. That is correct. And you selected Dynamic DVPN -- excuse me --10 Q. Dynamic VPN as an early target, because it was, in your 11 words, a very hot problem. 12 13 Α. That is correct. I believe it was an urgent problem, in fact, 14 Ο. 15 right? That is correct. 16 Α. 17 And now, we're talking about a project that Q. happened more than 10 years ago, right? 18 19 Α. Yes. 20 And you have never looked at the source code, Q. 21 the computer code, for DVPN, true? 22 I don't specifically recall looking at the Α. 23 source code. 24 Ο. Well, have you looked at it or not? 25 I don't recall looking at it. It would not Α.

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have been normally part of my job to look at the source 1 2 code. 3 Let's look at your deposition. Do you still 0. have it in front of you? 4 5 Α. Yes. Turn to Page 192, Line 25. 6 Q. 7 Question: Do you recall even seeing the 8 source code? 9 Answer: I recall specifically not seeing the 10 source code. Does that refresh your recollection? 11 12 Yeah. It sounds right. Α. 13 Okay. Now, the DVPN project was managed by Q. the Trusted Information Systems; is that right? 14 15 That is correct. Α. 16 Q. But it's also true that you don't remember any of your interactions with them on this project, right? 17 No, that wouldn't be correct. I don't have 18 Α. 19 a --20 Q. Okay. 21 -- specific day-by-day --Α. 22 Look at your deposition, Page 163 at Line 9. Q. 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

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interactions, just because there was so much going on. 1 2 Do you recall that now, sir? 3 Α. I do. Okay. And you don't recall how many times the 4 0. 5 DVPN prototype was demonstrated, do you? I do recall it was at least once. 6 Α. 7 But you don't recall how many times. You Q. 8 recall once; you don't know if there were more. 9 Α. Right. Directly recalling out of my memory, 10 that's correct. And you testified about some of the kinds of 11 Ο. 12 people who attended the demonstration, but you don't 13 remember any of the specifics of who those people were, do you? 14 15 Well, I remember some specifics, and others I Α. 16 don't remember. I couldn't give you a list of 30 names, 17 if that's what you're asking me. Okay. How many names could you give me a list 18 0. 19 of? 20 I don't know. I haven't been asked to do Α. 21 that, so I imagine I can give you a list of about four 22 or five people. Okay. But beyond that, you don't remember? 23 Q. 24 Not off the top of my head, no. Α. 25 And you don't recall asking anyone to attend Q.

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the demonstration, correct? 1 2 Α. I don't specifically recall inviting a 3 particular person, but I would recall, yes, asking people to attend. 4 5 Q. Okay. So you recall that, generally, you asked people to attend, but you don't remember which 6 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, Mr. Saydjari, you don't remember the details of the DVPN 11 demonstration? 12 13 Do you mean the technical details of how it Α. worked? 14 15 Well, I mean, what you were asked in your Q. 16 deposition when you were asked, do you remember the 17 details of the demonstration demonstrating -- do you remember what you saw there? And you said you didn't 18 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 worked. I would remember that it was -- that it worked 23 24 and that it was demonstrated. 25 Q. Okay. Fair enough. Now, remember Defendant's

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Exhibit 3008? 1 MR. CAWLEY: Should we see that again? 2 3 (By Mr. Cawley) I think it's in your binder. 0. Yeah, the document with two dates on it. 4 5 Α. Yes. What's your best recollection, sir, of when 6 Q.. 7 this demonstration actually occurred? 8 Α. 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? I would not recall independently of when the 11 Α. documentation was given. The documentation indicates 12 13 around the middle of March. I think it was the 16th, if I recall the documentation correctly. 14 15 Now, Mr. Saydjari, in your experience, isn't Q. 16 it typical to simplify the operation of a system for a demonstration? 17 A. Can be. 18 19 For example, it might be desirable to do that, Q. 20 to focus on a particular aspect of that system in the 21 demonstration. 22 It's theoretically possible, yes. Α. 23 Q.. And you've seen that happen, haven't you? 24 Α. I have. 25 Q. But you don't recall whether the DVPN was

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simplified, do you? 1 2 Α. I don't recall specifically, no. 3 Okay. And you don't recall the specific 0. equipment that was used in the DVPN demonstration, 4 correct? 5 If you mean the exact configuration of the 6 Α. 7 computer down to the bits, I absolutely do not remember 8 that. 9 Ο. And in fact, let's get to this point 10 specifically: You don't have a specific recollection of how the DVPN technology triggered the VPN, correct? 11 That is correct. 12 Α. 13 Okay. And furthermore, even though you don't Q. remember it exactly, you would doubt that it used a DNS 14 15 call as a trigger, correct? 16 Α. I don't know whether I -- I don't really know 17 for sure. In fact, in point of fact, I wouldn't remember the technical details independent of the 18 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 Line 22: Do you have any recollection of whether the 23 24 DVPN system used the DNS request to trigger a VPN? 25 Your answer: I don't have specific

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1	recollect:	ion, 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	recollect	ion 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	recollect	ion of what you said in your deposition?
8	Α.	Yes.
9	Q.	Have you met with Microsoft's lawyers before
10	this test:	imony?
11	Α.	Yes.
12	Q •	How many times?
13	Α.	I would estimate, oh, maybe three or four.
14	Q.	When's the last time?
15	Α.	Let's see. Probably today.
16	Q.	Today? Probably today?
17	Α.	Yes.
18	Q.	Any doubt about that, sir?
19	Α.	Well, no. I'm sorry. It was today.
20	Q.	Aah, it was today.
21	Α.	It's a bit of a blur over the last few days.
22	I apologi:	ze.
23	Q.	You're not aware of any products that were
24	developed	out of the DVPN technology, are you, sir?
25	Α.	That is correct.

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You're not aware of any government agencies 1 Q. 2 who use the DPN -- DVPN technology? 3 I don't know whether they did or didn't. Α. And you're not aware of any return on that 4 0. 5 investment, other than the prototype that was demonstrated in one of your meetings? 6 7 Α. 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. Α. Sure. 11 12 Q . Before Microsoft's lawyers contacted you, you 13 didn't remember anything about the SAIC proposal, did you? 14 15 I don't know that it's fair to say anything, Α. 16 but I certainly had very little recollection of it. 17 Okay. And when you -- you do recall, though, Q. that when you met with Mr. Munger and his team, what you 18 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 Α. Yes. That was an aspect. 23 Q. And IP hopping is a type of VPN, correct? 24 It can be implemented with VPN, that's Α. 25 correct.

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1 IP hopping involves, in simplified terms, the Q. 2 constant switching of IP addresses to make it harder to 3 track them. That's correct. Α. 4 5 And you don't recall any discussion with Ο. Mr. Munger or SAIC regarding how VPNs should be set up, 6 7 true? 8 Α. That's true. 9 All you remember evaluating was -- with 0. 10 Mr. Munger and SAIC was their IP-hopping ideas. Directly remembering off the top of my head 12 11 Α. 12 years later, that is correct. 13 And you don't recall discussing or evaluating Q. SAIC's ideas regarding DNS-triggered VPNs? 14 15 That is not correct. I did, in fact, review Α. the evaluation after the fact. My documentation 16 17 refreshed my memory that I reviewed the entire proposal, not just the IP-hopping idea. 18 19 Q. That's not what you said in your deposition, 20 is it? 21 Α. I don't know. You would have to show me, and I'll have to read it. 22 23 I'd be glad to. Page 144, Line 8. You with Q. 24 me? 25 Question: You don't recall them explaining to

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you that they were proposing to set up VPNs using DNS 1 2 triggers? 3 Your answer: I don't specifically recall that, no. 4 5 Α. That is --Is that the testimony that you gave, sir? 6 Q. 7 Yes, but I think that's different than the Α. 8 question you just asked me. 9 0. Well, is that the testimony that you gave? 10 Α. That is the testimony that I gave, yes. One of the reasons that you decided not to 11 Ο. 12 fund SAIC's project was your feeling that it was too 13 close to the DVPN project, correct? 14 Α. One of them, yes. 15 And at the time you met with Mr. Munger, you Q. 16 had already started funding DVPN. That is correct. 17 Α. In fact, you had been working on DVPN for at 18 0. 19 least the previous year, right? 20 Α. Since December of 1997, so approximately a 21 year. 22 Q. Okay. 23 Α. Not quite. 24 And in fact, you believed that you may have 0. 25 even finished the DVPN project at the time you were

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meeting with SAIC; isn't that right? 1 2 Α. Yeah, that's correct. 3 And you didn't believe it was prudent to make 0. two investments in that small aspect of your program, 4 correct? 5 That is correct. 6 Α. 7 All right. Now, finally, sir, it's not 0. 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. You agree with that? 11 12 I agree with that. Α. 13 And, in fact, you've experienced that at 0. 14 DARPA, haven't you, when you've experienced at times 15 decreases in your funding and at times increases? My funding at DARPA was consistently high, 16 Α. 17 actually, during the entire time I was there. Ιt actually reached a peak while I was there. 18 19 Well, I'm not saying that it was ever high or Q. 20 All I'm saying is that the availability of money low. varies, doesn't it? 21 22 Certainly, it's finite, yes. Α. And, in fact, in 2008, 2009, DARPA and other 23 Q. 24 government agencies' funding for computer security 25 research decreased, didn't it?

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Α. Yes. 1 2 And you noticed a similar change in funding --Q. 3 not decrease, but in some ways increase, for example, after 9/11? 4 5 In computer security, I don't know that I Α. would -- I would say that that's a true statement. 6 7 And it's not a true statement because, in 0. 8 fact, priorities shifted to antiterrorism activities, 9 correct? 10 I really can't speak for the government's Α. priorities and how the funds shifted. I'm not an expert 11 12 on the budget. 13 You were in that business, sir, though, and Q. you would agree with me, wouldn't you, that after 9/11, 14 15 when everyone was focused, and properly so, on defeating terrorism, it left less money to go to things like 16 17 computer security. It's -- it's possible. I just don't recall 18 Α. 19 specifically during that year. 20 Ο. Thank you, sir. 21 MR. CAWLEY: Pass the witness. THE COURT: Redirect? 22 23 MS. WEISWASSER: Your Honor, just a few 24 questions, please. 25 THE COURT: All right.

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2 <u>BY MS. WEISWASSER</u> : 3 Q. Mr. Saydjari, VirnetX's lawyer spent i	most of
2 O Mr. Caudiari VirnatVis lawyor spont	most of
3 Q. Mr. Saydjari, VirnetX's lawyer spent	
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 t	he
9 nation's computer security, is your testimony t	oday,
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. Saydja	ri, 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 offension	ve.
21 MS. WEISWASSER: No further ques-	tions,
22 Your Honor.	
23 THE COURT: Thank you. Any furt	her
24 recross?	
25 MR. CAWLEY: No, Your Honor.	

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1 THE COURT: All right. You may step 2 down. 3 May this witness be finally excused? Any objection? 4 5 MR. CAWLEY: No objection. MS. WEISWASSER: No objection, Your 6 7 Honor. 8 THE COURT: All right. Thank you. You 9 are excused. All right, Ladies of the Jury. 10 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 as best I can determine, if they take all of their time, 14 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 got about eight more hours of testimony to go. 17 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

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planning purposes, I just wanted to let you know where 1 2 we are in the process. 3 Thank you again for your attention. It's been a long day. You've worked very hard, all of the 4 5 lawyers have, and it's very much appreciated. Drive careful going home. 6 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 you back here in the morning at 9:00 o'clock. 11 12 The jury is excused. 13 COURT SECURITY OFFICER: All rise for the 14 jury. 15 (Jury out.) THE COURT: Please be seated. 16 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 further DVPN depositions following up on -- they'll be 23 24 Mr. Sterne, who was referenced by Mr. Saydjari, and then 25 Mr. Kindred, who is also DVPN as well.

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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. THE COURT: Okay. And will that conclude 4 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 validity, which is another long examination. 10 There's a couple more depositions that 11 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.

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We could bring in the jury when they're 1 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 afternoon. 4 5 MR. POWERS: If it can be done, we will, Your Honor. I don't think it's possible. 6 7 THE COURT: Okay. All right. Very well. 8 Just for the parties' information, the Plaintiff has used 10 hours and 50 minutes, and the Defendant has used 9 10 8 hours and 48 minutes. MR. POWERS: Your Honor, there is one 11 matter that it would help to resolve before tonight, and 12 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 exhibits affect the cuts in the video depositions that 18 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

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summarize or put it on. What's your preference? 1 2 MR. POWERS: 3061, Your Honor. 3 THE COURT: Excuse me. 3061? MR. POWERS: 3061 is the source code. 4 5 The only objection is authentication. Mr. Kindred testifies about that authentication and authenticates 6 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 code? 22 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

> Microsoft and Apple v. VirnetX, IPR2014-00403 Petitioner Apple Inc. - Ex. 1028, p. 1924

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1 up to me. If I can... 2 And this is where he authenticates it? 3 MR. POWERS: Yes, Your Honor. THE COURT: Okay. What's the Plaintiff's 4 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 was used in this March 1998 presentation. All he 11 12 testifies to -- and I believe you'll see this when you 13 read it -- is that this source code was waiting for me or given to me when I arrived, and I modified it to 14 those future versions of DVPN. 15 16 MR. POWERS: And, Your Honor, the second 17 relevant point, of course, is that the source code, like all source code, is dated as to when it was created and 18 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

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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

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```
Honor, is Exhibit 3040.
1
2
                  THE COURT: That's the e-mail from Turchi
3
  to Sterne?
                  MR. POWERS: Exactly, Your Honor. And
 4
5
  the objection is hearsay. And obviously, it's like
  every other document that's been admitted of exactly
6
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.
                  THE COURT: And where did you get this
10
   e-mail?
11
12
                  MR. POWERS: This was -- well, let me
  figure out the answer to that.
13
                  (Counsel confer.)
14
15
                  MR. POWERS: My understanding, Your
16
  Honor, it was produced by Mr. Sterne.
17
                  THE COURT: Okay. And what did
  Mr. Sterne testify about this e-mail?
18
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
```

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believe this has been proved up as a business record, 1 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 was prepared at or near the time of the events in 4 5 question, that being this March 1998 presentation. What the evidence shows is that DVPN 6 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 of the VirnetX patents. 11 12 So there are a lot of changes made to the 13 source code. That's why we believe at or near the time of the event is very critical here, and that has not 14 15 been proved up with respect to any of the remaining documents. 16 17 THE COURT: It's dated, though, isn't it? MR. McLEROY: It is dated, Your Honor. 18 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

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document was used for. And this, as I understand it, 1 2 was actually used as part of --3 THE COURT: Now, that doesn't have any authors, I notice. 4 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 was prepared at or near the time of this demonstration, 18 19 which is exactly what they're offering it to prove. 20 THE COURT: What does Mr. Sterne say about it? 21 22 MR. POWERS: Your Honor, the testimony is at Page 28, Line 22 through 25; also 17 -- it's 23 24 summarized at Page 7 of our brief. I could hand that up 25 for you as a road map.

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1 THE COURT: I'd like to see the 2 testimony, if you have it there. 3 MR. POWERS: I do, Your Honor. THE COURT: What page is it? 4 5 MR. POWERS: Well, the first page, Your Honor, for 3041 is Page 28. 6 7 THE COURT: Line? MR. POWERS: 22 to 25 is the first 8 9 excerpt that discusses the team, which is, of course, relevant to that. 10 Page 29, Lines 3 through 12 is discussing 11 12 the issue directly in terms of its creation in the ordinary course of the business. 13 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?

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MR. POWERS: The last one, Your Honor, is 1 3045. And the relevant pages from Mr. Sterne's 2 3 deposition are 61 to 62. THE COURT: And this is a diagram of the 4 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, It's March -- the date is March 21 of 1998. 14 Your Honor. 15 THE COURT: All right. And where is 16 Sterne's testimony, what page? 61? 17 MR. POWERS: 61 and 62, Your Honor. THE COURT: Beginning on Line -- that's 18 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?

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1 THE COURT: Oh, that's the -- he said it 2 was probably produced by BBN. 3 MR. POWERS: BBN is that contractor that Mr. Saydjari just testified about, who was the 4 5 integrator, who's the one that was participating in the March conference. 6 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 business record. 17 MR. POWERS: May I respond, Your Honor? 18 19 THE COURT: Yes, you may. 20 MR. POWERS: Trusted Information Systems 21 was working with BBN. Mr. Saydjari just testified to 22 The document is dated, and they were working that. 23 together as part of that exact demonstration. 24 The title is Virtual Private Network 25 Demonstration, and Mr. Sterne's testimony, I think,

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gives all the information we need. 1 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, Your Honor. 12 13 THE COURT: All right. Anything else from the Plaintiff? 14 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

1 2 3 CERTIFICATION 4 5 I HEREBY CERTIFY that the foregoing is a 6 true and correct transcript from the stenographic notes 7 of the proceedings in the above-entitled matter to the 8 best of my ability. 9 10 11 12 /s/\_\_\_ SUSAN SIMMONS, CSR Date 13 Official Court Reporter State of Texas No.: 267 14 Expiration Date: 12/31/10 15 16 17 /s/\_\_\_\_ JUDITH WERLINGER, CSR Date 18 Deputy Official Court Reporter State of Texas No.: 731 19 Expiration Date: 12/31/10 20 21 22 23 24 25

EXHIBIT F9

IN THE UNITED STATES DISTRICT COURT 1 FOR THE EASTERN DISTRICT OF TEXAS 2 TYLER DIVISION 3 VIRNETX Civil Docket No. 6:07-CV-80 \* 4 VS. \* Tyler, Texas 5 \* \* \* March 12, 2010 \* 6 MICROSOFT CORPORATION 9:00 A.M. 7 8 TRANSCRIPT OF JURY TRIAL BEFORE THE HONORABLE JUDGE LEONARD DAVIS 9 UNITED STATES DISTRICT JUDGE 10 11 APPEARANCES: 12 FOR THE PLAINTIFFS: MR. DOUGLAS CAWLEY MR. BRADLEY CALDWELL 13 MR. JASON D. CASSADY MR. LUKE MCLEROY McKool-Smith 14 300 Crescent Court 15 Suite 1500 Dallas, TX 75201 16 MR. ROBERT M. PARKER 17 Parker, Bunt & Ainsworth 100 East Ferguson 18 Suite 1114 Tyler, TX 75702 19 20 APPEARANCES CONTINUED ON NEXT PAGE: 21 22 COURT REPORTERS: MS. SUSAN SIMMONS, CSR Ms. Judith Werlinger, CSR 23 Official Court Reporters 100 East Houston, Suite 125 24 Marshall, TX 75670 903/935-3868 25 (Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

1

1	ADDEADANCES CONTINUED.
2	<u>APPEARANCES CONTINUED</u> :
З	FOR THE DEFENDANT: MR. MATTHEW POWERS MR. JARED BOBROW
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19	Suite 101 Tyler, TX 75703
20	* * * * * *
21	<u>PROCEEDINGS</u>
22	(Jury out.)
23	COURT SECURITY OFFICER: All rise.
24	THE COURT: Please be seated.
25	All right. Is there a matter before we

```
bring the jury in?
1
2
                  MR. CASSADY: Your Honor, just one small
3
  housekeeping matter. Exhibit 732 was inadvertently left
  off of our list yesterday. It's an MCP -- MCPP license.
 4
5
  It might be other licenses that were let into evidence,
  and I wanted to give Mr. Sayles a chance to object
6
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.
                  THE COURT: All right. Any objection?
11
12
                  MR. SAYLES: I object to the first
13
  numbered exhibit --
                  MR. CASSADY: 732.
14
15
                  MR. SAYLES: -- 732 on the grounds that
   it's an irrelevant, non-comparable license agreement and
16
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.
```

(Jury in.) 1 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 evidence today, probably a little bit of evidence on 6 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 Johnson. 13 14 THE COURT: Okay. David Johnson. 15 I believe Mr. Johnson has been sworn, hasn't he? 16 17 MR. BOBROW: Yes, he has, Your Honor. DAVID JOHNSON, DEFENDANT'S WITNESS, PREVIOUSLY SWORN 18 19 DIRECT EXAMINATION 20 BY MR. BOBROW: 21 Q. Good morning, sir. 22 Good morning, sir. Α. 23 Can you please introduce yourself to the jury? Q. 24 Yes. My name is David Johnson. Α. 25 Q. Where do you live Mr. Johnson?

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In Houston, Texas. 1 Α. 2 Q. How long have you lived there? 3 Α. I've been in Houston now a total of 19 years. And --4 0. 5 I'm sorry. 29 years. Excuse me. Α. What do you do for a living in Houston? 6 Q.. 7 I'm a tenured full professor of computer Α. 8 science and in electrical and computer engineering at 9 Rice University. 10 How long have you been a professor there? Q. 11 Α. Ten years. 12 Q. Were you a professor before that? 13 Yes. I was at the Carnegie Mellon University Α. in Pittsburgh for eight years. 14 15 So when did you start as a professor at Q. 16 Carnegie Mellon? In 1992. 17 Α. 18 0. When did you start as a professor at Rice? 19 Α. 2000. 20 And what has been the focus of your research Q . 21 and your work at Carnegie Mellon University and at Rice? 22 Focus on my research has been in the area of Α. network protocols and internet and operating systems and 23 24 allowing those computers to communicate with each other, 25 including issues such as efficiency, reliability, and

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security. 1 2 Q. Now, would you please tell us why you're here 3 today? I've been asked to give my opinion as to 4 Α. 5 whether Microsoft infringes the asserted VirnetX's 6 patents. 7 Have you formed opinions on that subject? Ο. 8 Yes, sir, I have. Α. 9 0. What opinions have you formed? 10 Microsoft does not infringe the patents. Α. All right. Now, before we get into the 11 0. 12 details of that and the work that you did in your 13 forming those opinions, what I would like to do, first of all, is get a little bit more of your background out 14 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 that, if you could give us a sketch of your educational 18 19 background since high school. 20 Α. Yes, sir. 21 I attended high school at Spring High School 22 in Spring, Texas, near Houston, and graduated there in I went from Spring High School to Rice University 23 1978. 24 and received my bachelor's there in computer science and 25 in mathematical sciences in 1982.

In 1985, I received my master's in computer 1 2 science also from Rice University, and in 2000 -- excuse 3 me -- in 1990, I received my Ph.D. in computer science at Rice University. 4 5 All right. Now, Professor Johnson, as a Q. professor at Carnegie Mellon and at Rice, have you 6 7 taught courses in the field of networks and the 8 internet? 9 Α. Yes, sir, I have. I've taught courses at both 10 the graduate and undergraduate level in networks and operating systems. Primarily my teaching is graduate 11 12 courses in mobile and wireless network protocols and 13 undergraduate courses in operating systems. And I teach 14 those courses every year. 15 Do you also teach courses outside of the Q. university setting? 16 17 Yes, sir, I have. I've taught more than a Α. dozen short courses, one-day courses typically, at 18 19 computer science conferences. 20 Okay. And does any of the teaching you do Q. 21 involve network security? 22 Yes, sir, it does. In both of the classes Α. that I mentioned, the graduate mobile and wireless 23 24 networking course and undergraduate operating systems 25 course, I teach network security or cover that in both

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of those classes, including issues such as encryption, 1 2 authentication, denial of service attack prevention. 3 Virtual private networks, prevention of viruses, issues such as that. 4 5 All right. Now, I think a couple of times you Q. mentioned to us that some of your work involves mobile 6 7 networks, mobile IP and wireless. 8 Can you give us a very brief description of 9 what that's about? 10 Α. Sure. A mobile network is one in which the computers can move around and connect to the network at 11 12 different places, and, in fact, can move around while they're even in use. 13 And wireless networking is the most common 14 15 example of a mobile network. And does the mobility of those devices that 16 0. 17 you've described create any particular problems? Yes, sir, it does. 18 Α. 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

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computer and the location on the computer breaks, so 1 2 routing becomes much -- much more difficult. 3 Now in that last answer, you talked about Ο. hackers and the word hack. 4 5 Can you please tell us what you mean by that? The way computers communicate with each other 6 Α. 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. That's just the basic unit of communication 11 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 internet? 18 19 Α. 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.

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Can you remind us, please, what that stands 1 2 for? 3 Yes. Thank you. Α. RFC is the name of the documents that -- that 4 5 specify all the different standards that make now the internet works. 6 7 Ο. 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 Α. 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. And the danger then comes in or the security 16 17 problem then comes in is, it would then be possible for hackers to essentially fake those location update 18 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.

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Q. Thank you. 1 2 Now, you mentioned this mobile IP standard. 3 How widely is that standard used, sir? It's very widely used. It turns out the most 4 Α. 5 widely used aspect of it is in the cellular telephone industry, and from the latest statistics from the cell 6 7 phone industry, there are over a billion users of the mobile IP standard worldwide. 8 9 Ο. Okay. Now, shifting from some of your 10 standards work, have you done any work on the issues of networking or the internet for the United States 11 government? 12 13 Α. Yes, sir, I have. I have received seven grants from the National 14 15 Science Foundation, two grants from DARPA, the Defense Advanced Research Products Agency, and one grant from 16 NASA all in the areas of -- of networking. 17 Did any of that work that you just described 18 0. 19 for the United States government involve issues of 20 network security? 21 Α. 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

Science Foundation. 1 2 Now, sir, as a professor at Carnegie Mellon Q. 3 and at Rice University, have you authored any papers or books or articles on the subject of networks or the 4 internet? 5 Yes, sir, I have. 6 Α. 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 deal directly with different aspects of -- of computer 11 12 network security, particularly mobile network security. 13 Okay. Now, before your work on this case, Q. 14 have you ever worked as an expert in any other cases? 15 Yes, sir, I have. This is the --Α. 16 Have you -- I apologize, sir. Go ahead. 0. 17 I was just going to say, yes, this is the Α. twelfth case that I've been retained as an expert 18 19 witness for. 20 Have you ever been hired by the party that Q . 21 owns the patent, sometimes the Plaintiff? 22 Yes, sir, I have. Α. And you've been hired, I take it then, for 23 Q. 24 work on behalf of defendants, the parties that have been sued for infringement; is that right? 25

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Yes, sir, that's correct. 1 Α. Okay. Now, earlier you told us your opinions 2 Q. 3 that Microsoft does not infringe the two patents of VirnetX that are at issue in this lawsuit. And I wanted 4 5 to first find out about the work that you did leading up to your opinions. 6 7 Now, I understand, sir, that you have prepared 8 some slides or overheads to assist in your presentation; 9 is that right? Yes, sir, that's correct. 10 Α. All right. So the first thing I'd like you to 11 0. 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 All right. I studied the patents at issue in Α. 16 this case. I studied their prosecution histories before 17 the Patent Office. I studied, of course, Judge Davis' claim construction in this case. I studied a large 18 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 software accused in this case. Studied Dr. Jones' 23 24 reports, including the Wireshark data that he collected 25 and presented earlier this week in this case. And I

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prepared reports in this case to describe my findings in 1 2 this case. 3 All right. Now, what I'd like to begin with, 0. since we have two patents and we have two sets of 4 5 products, let's start, if we may, with the '135 patent and the products of Microsoft that are involved there, 6 7 okay? 8 Yes, sir. Α. 9 Ο. 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 All right, sir. I've prepared on this next Α. 15 slide a list just to summarize the different pieces of 16 software. So one of those was Windows XP, and another one was Windows Vista. 17 All right. And what else have you looked at? 18 Ο. 19 All right. So in the case of Windows XP, it Α. 20 was only versions of XP that included the RTC or real-time communications APIs Version 1.2 or later. 21 22 In the case of Windows Vista, it was only those that included the UCC APIs which meant that only after a user 23 24 had either downloaded those APIs from the web or 25 installed them into that version of Windows Vista, when

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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 Console, Live Communications Server, and Office 4 Communications Server. 5 All right. Now, that's quite -- quite a 6 Q. 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? That's great. Thank you. 11 Α. 12 Q. Okay. Now, let's go back and let me ask you, 13 have you formed an opinion on whether this RTC software that you've just described infringes any of the claims 14 15 of the '135 patent? 16 Α. Yes, sir, I have. 17 Tell us what your opinion is. Q. That Microsoft does not infringe any of the 18 Α. 19 asserted claims with the RTC software. 20 Tell us, please, how you arrived at that Q. 21 opinion. 22 I have summarized on -- I'm sorry. I forgot Α. 23 which slide I was on. 24 What I did was compared the asserted claims 25 given Judge Davis' claim constructions, to the accused

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software and determined that at least three elements of 1 2 those claims are missing in the accused products. 3 Okay. Three elements? Ο. 4 Α. Yes. 5 All right. Now, before I ask you to go Q. 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 viewable for ladies of the jury? 9 10 THE COURT: Just a minute. We're having a little technical difficult. 11 12 There we go. 13 MR. BOBROW: Thank you very much. 14 (By Mr. Bobrow) All right. So you had Ο. 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? Yes, sir. 18 Α. 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

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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

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doesn't use or include a virtual private network or a 1 VPN, okay? 2 3 Yes, sir. Α. All right. So, first of all, can you please 4 0. 5 remind us what a VPN is? 6 Α. 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 traffic on insecure communication paths between the 10 11 computers. 12 Q. Okay. Now, is it your understanding that 13 Judge Davis' construction requires both data security 14 and anonymity? 15 Yes, sir, that's correct. Α. 16 All right. Can you begin, then, by telling us 0. 17 what data security is? Data security in the context of the patents 18 Α. 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 are discussed. 22 23 Q. All right. And can you tell us, then, what 24 the patent says there about data security? 25 Yes. Data security involves keeping the Α.

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information secret. And so the patent here describes, 1 2 for example, data security is usually tackled using some 3 form of data encryption. Now, you had mentioned anonymity. 4 0. 5 Can you tell us what anonymity is? 6 Α. 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 unable to determine which computers are communicating. 10 I've highlighted here a sentence from the patents that 11 12 describes that where they say: Also, it may be desired 13 to prevent an eavesdropper from discovering that Terminal 100 is in communication with Terminal 110. 14 15 And the language of the patents, Terminal 100 and Terminal 110, simply identify two computers that they 16 17 are talking about in these two paragraphs that are communicating with each other. 18 19 And if I've got this right, the portion of the Q. 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 Α. That's correct, sir. 24 All right. Now, I'd like to shift from the 0. 25 patent and, please, I'd like you to explain for us how

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it is that a typical VPN, virtual private network, 1 2 provides anonymity. 3 Would you do that for us, please? All right, sir. 4 Α. 5 So I have prepared an animation to help explain how a typical VPN works and provides anonymity. 6 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 whose address begins with the 204 sending it -- a packet 11 12 to the one whose destination -- whose IP address begins 13 with 122. I've shown also in this picture the internet 14 15 in the middle of the -- of the picture, and then a computer at the edge of the internet on each side, which 16 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 source computer takes that information, puts it into an 21 22 IP packet that is addressed from the source computer's IP address -- this 204 IP address -- to the destination 23 24 computer's IP address -- this 122 IP address. 25 That computer then sends the packet on its way

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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.

The VPN gateway then puts that now encrypted, entire, original packet into a new packet addressed from the VPN gateway itself to the VPN gateway on the other side. So it's from the 105 IP address to this 115 IP 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.

So if this hacker is able to grab a copy of the packet and try to inspect it, if the hacker looks inside to try to find out actually which computer sent that packet originally and which computer is the destination of the packet, all the hacker is going to be

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able to see is that encrypted contents that includes the 1 2 encrypted original IP addresses. 3 So the hacker is going to be unable to determine which two computers, the 204 computer and the 4 5 112 computer, are actually in communication with each other. 6 7 All right. Thank you, Professor Johnson. Ο. 8 What I'd like to do now is shift from that to 9 talking about Office Communicator and Office Communications Server, which are two of Microsoft 10 products that were discussed just a bit earlier. 11 12 And first of all, I wanted to make sure that as we talk about Office Communicator and Office 13 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 Α. Yes, sir, they are. 19 All right. Now, let me, first of all, ask you Q. 20 about how an Office Communicator computer communicates with the Office Communications Server, okay? 21 22 All right. Α. So the first question that I have for you is 23 Q. 24 that when those two computers communicate with each 25 other, in what form do they send information?

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They send that information in IP packets. 1 Α. 2 That's the only way to communicate between computers in 3 the internet. Now, what is in an Office Communicator to 4 Ο. 5 Office Communications Server IP packet? What are the contents of it? 6 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 Communicator to Office Communications Server. 11 The first portion of the IP packet is what is 12 known as the IP header, and that's where the source IP 13 address of the sending computer and the destination IP 14 15 address of the receiving computer are located. The next portion of the packet is the -- what 16 17 is known as the TCP header, or transmission control protocol. That's just another of the protocols that 18 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. And the PCP header is a number of things, but 23 24 most significantly is the -- what's known as the 25 destination port number that identifies the particular

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application on that destination computer. 1 2 So the IP packet sends it to that destination 3 computer, and the destination port number identifies the actual program on that destination computer that's 4 5 supposed to receive the packet. And finally, the other large portion of the 6 7 packet is the message itself that's going to be sent 8 from that source computer to that destination computer. All right. So let me break this up just a 9 0. 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 header that says source IP address and destination IP 13 14 address. 15 Now, in an OC/OCS IP packet, are those IP 16 addresses encrypted? 17 No, sir, they're not. Α. All right. In the next layer that you've 18 0. 19 shown here, this TCP layer, is the source or destination 20 or port information encrypted? 21 Α. No, sir. None of it is encrypted. 22 All right. And what about in the -- in the Q. 23 data, is that encrypted? 24 Α. It may be or it may not be. 25 In this example, it is -- it would be

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I haven't shown that here, so the text is 1 encrypted. 2 still readable, but this is a -- the port number 3 identifies that this is going to -- over an encrypted connection, but it would be only the data portion, the 4 5 bottom portion that would be encrypted. Okay. Now, in this OC/OCS IP packet that 6 Q. 7 you've illustrated here, is there any private IP address 8 and private IP address in that packet? 9 Α. 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 Ο. All right. Now, when an OC or Office 15 Communicator computer communicates with an Office 16 Communications Server, are the Office Communicator computer and the Office Communications Server computer 17 anonymous? 18 19 Α. No, they're not. 20 Why not? Q. 21 Because, again, the IP addresses are plainly Α. 22 visible in the header of the packet. This source IP address clearly identifies the sending computer. 23 The 24 destination IP address clearly identifies the 25 destination computer.

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And so an attacker who would eavesdrop on this 1 packet would easily be able to tell which two computers 2 3 are in communication with each other. Now, I understand that you've prepared an 4 0. 5 animation to illustrate that. Would you share that with us, please? 6 7 Yes. I have. Α. 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 and on the right the computer running the Office 11 Communications Server. 12 13 And, again, showing the IP addresses of the two, which I will, for simplicity, refer to the 204 14 address and the 112 IP address. 15 16 So the Office Communicator running on this 17 computer with the 204 IP address wants to send again this information about new tax laws to -- to some 18 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.

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The encrypted message is then put into an IP 1 2 packet that is addressed from the computer running 3 Office Communicator directly to the computer that is running Office Communications Server. And that message 4 5 is sent across the internet. And, again, if we have our hacker who might be 6 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 address of that source computer and the IP address of 11 12 the destination computer, allowing the hacker to easily 13 know which two computers are in communication with each other. 14 15 All right. Now, were you in Court the other Q. 16 day when Dr. Jones explained why he believed that communication between Office Communicator and the Office 17 Communications Server? 18 19 Α. Yes, I was here. 20 And what did he say about anonymity? Q. 21 Α. He said it was his opinion that the 22 communication is still anonymous, because what's known as the SIP address is -- of the source-sending person 23 24 and the SIP address of the destination person are encrypted; they would be inside that encrypted part of 25

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the message. 1 All right. Now, let's pause there, because 2 Q. 3 we've got so many initials and letters going on. So you said a SIP address. Is that SIP? 4 5 Α. Yes. SIP is the session initiation protocol, 6 sir. 7 Okay. So the IP in SIP, that means something 0. 8 different than the IP in IP packet? 9 Α. That's correct. 10 The I in IP is the internet protocol, which, again, is this basic unit of communication that all 11 12 computers on the internet use as the only way to 13 communicate with each other. And the I in SIP is the session initiation 14 15 protocol, which is essentially how you -- how, using this Office Communicator/Office Communications system, 16 that a connection to be able to send this instant 17 message from me to my colleague is initiated. 18 19 Now, tell us if you would, please, what a SIP Q. 20 address is and what it does. 21 Α. A SIP address is essentially like a person's 22 name. Say my name is David and a SIP address is -- is basically like that. It is not useful for figuring out 23 24 where the destination is. It simply identifies the 25 destination person.

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All right. And do you agree with Dr. Jones' 1 Q. 2 opinion that by encrypting SIP addresses that that 3 provides anonymity? No, it does not provide anonymity. 4 Α. 5 The anonymity that's required is preventing this hacker from being able to determine which two 6 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 the IP address. 11 12 A person might log into one computer at, you know, one day using their SIP name and log into a 13 14 different computer the another day or later the same 15 Or, in fact, a person may log into multiple day. computers at the same time using the same SIP address --16 SIP name. 17 18 And so the name does not in any way identify a 19 particular computer. 20 Now, is a SIP address a network address? Q. 21 Α. 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

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packet or yourself in a car to the courthouse, you could 1 2 use 211 West Ferguson Street to actually find this 3 location. Whereas a SIP address is sometimes called a 4 5 SIP address. It's technically a SIP uniform research identifier, which is another mouthful. So it's commonly 6 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. All right. What I'd like you to do, please, 11 0. 12 is put up on the overhead Figure 1 from the '135 patent. 13 Can you do that, sir? 14 Yes, sir, here it is. Α. 15 Now, as I understand it from what you said, Q. 16 what's depicted here is a picture of the internet; is 17 that right? 18 Α. 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 All right. Now, to get information or 0. 25 communication from that originating terminal, 100, down

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1 to this destination terminal, 110, what kind of address
2 do I need?

3 The only way to get the packet from this 100 Α. computer to the 110 computer is by sending IP packets, 4 5 which are addressed using IP addresses. That's the only thing that IP routers can use to know how to forward a 6 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, IP addresses, to know how to forward the packet towards 11 the destination. 12

Q. Just to be clear, if I use a SIP address, an S-I-P address, can I get a communication or a packet from this originating Terminal 100 over the internet to this destination Terminal 110?

A. No, sir, you can't. The IP routers, first of all, only know what IP addresses mean, not what SIP names mean. But even if they did understand exactly what a SIP name means, those routers would not have any idea how to forward a packet, hop by hop, and reach a SIP name such as -- such as David.

They know how to reach a location that's identified by an IP address but not a person by just using that person's name or the equivalent of that

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person's name, which is what a SIP address is. 1 2 All right. So in your view, does -- the RTC Q. 3 software that we discussed earlier, does that use or include a VPN? 4 5 No, sir, it does not include a VPN or use a Α. 6 VPN. 7 All right. Let's turn to the second element Q. 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 All right. The Court again, Judge Davis, has Α. given us a construction of what a website is. And that 13 14 is one or more related web pages at a location on the 15 worldwide web. Q. All right. So let's break that up and let me 16 17 ask you, first of all, to tell us briefly what the worldwide web is. 18 19 The worldwide web is the interconnected Α. 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

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mouse in your browser, it takes you from one page to 1 2 another page, and you can follow through this collection 3 of related web pages that make up one website, or, in fact, follow links from one website to another website 4 5 across this sort of web of information, which is what the web really is. 6 7 All right. Now, you were here in Court when Ο. 8 Dr. Jones testified that the RTC software does not 9 literally include a website. 10 Were you here for that? Yes, sir, I was. 11 Α. 12 Do you agree with that view? Q. 13 I agree it does not include a website Α. 14 literally. 15 All right. Now, have you evaluated whether an Q. 16 OCS, or Office Communications Server, is equivalent to a website? 17 Yes, I have done that evaluation, also. 18 Α. 19 Q. What did you conclude? 20 That it's certainly not equivalent to a Α. 21 website. 22 How did you go about evaluating whether a Q. website on the one hand is equivalent to an Office 23 Communications Server on the other? 24 25 A. So what I've shown in this next slide here is

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a chart where I looked at some of the core attributes of 1 2 really what is a website, and tried to evaluate in what 3 way does the website have those attributes and then in what way does OCS possibly have any of those attributes. 4 5 So the first attribute that I've listed here is that a website is hosted on a web server. So, for 6 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. The Court's construction is a collection of 11 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 in my browser, and I 24 would see something like this (indicates). 25 The web is designed to collect this related

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information together and to be able to present it to 1 2 users. The web was created -- the first version was 3 released by the inventor of the web, Tim Berners-Lee, in 1991, and from his very first proposal in even 1989, the 4 5 purpose of the web is to collect this information together, link it together, and make it viewable. 6 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 the mouse over and click on the word computers, my web 18 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 when you click on that piece of text, you're supposed to 23 24 then be able to view this second web page, which here lists the kinds of electronics that Wal-Mart has for 25

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1 sale. 2 So on my list of core attributes of a website, 3 I've checked, yes, that websites do have this attribute of supporting hyperlinks. That is what makes the web a 4 That's what links the pieces of the web together 5 web. from one page to another related web page. 6 7 All right. Now, did you perform this analysis 0. 8 on whether or not an Office Communications Server has 9 any of those attributes? 10 Yes, sir, I did. Α. 11 0. And can you briefly tell us what you concluded? 12 13 Certainly. Α. An Office Communications Server has none of 14 those attributes. An Office Communications Server does 15 16 not host any information that is, you know, stored on the Office Communications Server and downloaded when a 17 user wants to view that information. You can't request 18 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

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into your browser and see any information that's stored 1 2 on this OCS server. In fact, the information on the OCS 3 server is -- that instant message I showed earlier, for example, is not stored on the server. It goes from 4 5 client to client. The information that's stored on a server is 6 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. So I've marked off, no, that the Office 11 Communications Server does not have information that is 12 13 viewable through a web browser. Finally, the information does not support 14 hyperlinks. I can't follow from a piece of text that 15 has this sort of hidden link information that when I 16 17 click on that piece of text takes me to another page. There's no such kind of -- of link of anything like that 18 19 in any information that's stored on a Office 20 Communications Server. 21 So, again, I've marked off, no, that it does not have that attribute also. 22 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

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Server on the other, are those differences substantial? 1 2 They are quite substantial. Basically, it has Α. 3 none of the attributes. You can't do any of the things with an OCS server that you can do with a website. They 4 5 have really nothing in common. So let me ask you, then, to put it a little 6 Q. 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? The function is completely different. 11 Α. No. A website is a collection of related information that's 12 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 second client. 18 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

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way in which they work, and the results are completely 1 2 different. 3 The result of a website is to host those pages and to allow those pages to be viewable by viewers, 4 5 humans. And the result of a website is that the -- I'm 6 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. Now, would a person in this field consider a 11 0. 12 website on the one hand to be interchangeable with an 13 Office Communications Server on the other? 14 Α. 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 was building this -- this table, desk, whatever I'm 18 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 They simply are not interchangeable in any way. that. 3 So in your view, does the RTC software use or 0. include a website or the equivalent of a website? 4 5 No, it does not. Α. All right. Now, let's turn to the third 6 Q. 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 Α. Yes, sir. So, first of all -- and I don't know. 11 Ο. Do you 12 have the text of the --13 Yes, I've prepared that. Α. 14 Ο. 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. Can you tell us what such a computer is? 18 19 Α. Yes, sir. 20 In the context of the '135 patent, a 21 gatekeeper computer is a computer that helps set up the VPN connection. 22 Okay. Now, does the RTC software include the 23 Q. 24 gatekeeper computer? 25 A. No, it certainly does not.

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A gatekeeper computer is a kind of computer. 1 2 There's a lot of computers around the courtroom. Α 3 computer is a piece of hardware; it has a processor; it has memory; it typically has a disk drive in it; often 4 5 has a display; has a lot of wires in it. A computer is a piece of hardware. 6 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 until you load that on to some computer and try to 11 execute it. 12 13 All right. So in your view, does the RTC Q. software use or include a gatekeeper computer? 14 15 No, sir, it does not. Α. 16 So in the same way as I've done earlier, I've 17 checked off, marked off, the two portions the -- I've only shown here the last portion of Claim 10 that 18 19 includes the gatekeeper computer, and then all of Claim 12, I've also, again, marked off as not being met 20 21 by the RTC software. 22 All right. Now, let's shift gears, still Q. 23 talking about the '135 patent and the RTC software, 24 though. 25 And I wanted to ask you whether you were here

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in Court when Dr. Jones talked about what he referred to 1 as the automatic connection feature of the RTC 2 3 interface. Were you here then? 4 5 Α. Yes, sir, I was. All right. Now, do you recall his testimony 6 Q. 7 on that subject generally, first of all? 8 Α. Yes, I do. 9 All right. Now, let me ask you, whether in Q. 10 the RTC software there are anyways of forming a connection that don't use the automatic connection 11 12 feature; that is, to form a connection between an Office 13 Communicator client on the one hand and office Communications Server on the other? 14 Yes, sir. 15 Α. In my next slide, I've actually prepared a 16 17 list of -- there are, in fact, three ways of finding that Office Communications Server and thus being able to 18 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

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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 commonly used, wide-spread custom. In Office 16 17 Communicator/Office Communications Server, the protocol they use that's carried inside the IP packets that they 18 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

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that common custom of how SIP servers are named. 1 And so 2 the client program can simply assume that, hey, maybe 3 the SIP server, the Office Communications Server program for Rice University would be at a machine named 4 SIP.rice.edu. 5 6 Q. All right. Now, in that last answer, you said 7 something like to edu. 8 I'm sorry. Α. 9 That would be dot, E-D-U, sort of like dot. 0. 10 Com or dot.bill. Is that what you meant? 11 Α. 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 abbreviation for an educational institutional 14 15 organization, such as Rice University. 16 Now, in your view, do any of these three Q. 17 alternative ways of forming a connection infringe the '135 patent? 18 19 No, sir. None of them infringe it. Α. 20 All right. And in your view, are these Q. alternative ways of forming a connection to the 21 22 automatic connection feature -- are these three ways substantial, in your view? 23 24 A. Quite substantial. They are easily used. 25 They are available already in the product. They don't

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really diminish the usability of the process in any way. 1 The first two would only have to be done once when 2 3 the -- you know, a user's new computer is being configured. The first one is fairly painless for the 4 5 user. The second one could be automatically done by 6 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 the server. 11

And the last one is simply a matter of naming your server in a very natural and easy-to-do way, and then from that point on, from the point of view of the client, the actual user, it's purely automatic.

Q. All right. Now, I think that finishes up on the '135 patent, RTC software. So now what I'd like to do is again shift gears, and this time focus on the second group of software at issue and the second patent at issue.

So now what I'd like to do is ask you some questions about the '180 patent and what has been referred to sometimes in this Court as the PeerNet -the PeerNet software, okay?

25 A. All right, sir.

All right. So, first of all, I understand you 1 Q. 2 have a slide that lists the software that you 3 considered. Now, let me just ask you, sir, as I understand 4 5 it, the software you looked at included the Windows XP operating system, but only the versions with and after 6 7 the Advanced Networking Pack; is that right? 8 Α. Yes, sir, that's correct. 9 0. And for Windows Vista, you looked at all 10 the -- all of Windows Vista; is that right? Yes, that's correct, also. 11 Α. 12 All right. Now, would you please tell us --Q. 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? I'm not aware of any applications that use the 16 Α. PeerNet software in Windows XP. 17 Now, for Windows Vista, are you aware of any 18 0. 19 applications that, in your understanding, use the 20 PeerNet software? 21 I am aware there of only one application, and Α. 22 that is the Windows Meeting Space application. 23 0. 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

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as the PeerNet software, if that's all right with you. 1 That will be fine, yes. 2 Α. 3 All right. Now, do you have an opinion on 0. whether the PeerNet software infringes the '180 patent? 4 5 Α. Yes, I do. What's your opinion? 6 Q. 7 That Microsoft software, the PeerNet software, Α. 8 does not infringe the '180 patent. 9 Q. Tell us, please, how you arrived at your 10 opinion. I studied the asserted claims of the '180 11 Α. 12 patent in light of Judge Davis' claim constructions in 13 this case and compared those claims to the functionality, the features of the PeerNet software, and 14 determined that the PeerNet software does not infringe 15 16 any of the asserted claims of the '180 patent either 17 literally or under the Doctrine of Equivalents. And did you determine whether there were any 18 0. 19 elements of the claims of the '180 patent that were 20 missing from the PeerNet software? 21 Yes, sir, I did. I've prepared another slide Α. 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

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that are missing from the PeerNet software, and those 1 2 are the -- again, the VPN limitation of the claims, as 3 well as here the secure computer network address feature of the claims. 4 So, again, what I've done is crossed out all 5 the portions of the claims that include or depend from 6 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. Claim 15 requires them because it's a 11 12 dependent claim. 13 All right. Now, I noticed that you did not Q. put up a slide on Claim 17 and 20 and 31 of this patent 14 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 also missing from those claims. 18 19 The analysis on those in this sense is Α. Yes. 20 the same, and they are missing both of these elements as 21 well. 22 All right. Now, let's briefly talk about Q. 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

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using Windows Meeting Space communicate with each other, 1 2 what do they use to communicate? 3 They use IP packets to communicate. So, Α. again, IP packets are the only way that computers on the 4 5 internet can possibly speak to each other. You cannot send anything from one computer to another computer 6 7 without sending that information in an IP packet from 8 that first computer to the second computer. 9 0. Okay. Let's now turn to the element that 10 you've described as being missing here of virtual private network, and I wanted to ask you: Does the 11 PeerNet software use or include a VPN? 12 13 No, it does not use or include a VPN. Α. 14 0. Okay. Can you tell us why not? 15 Certainly. I've prepared an animation here to Α. illustrate why I believe it's not -- does not include a 16 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

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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 to see the source address of the first computer, its IP 10 address, the one ending in 7, and the destination 11 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.

The same feature was, in fact, shown both here -- and I didn't mention this in our analysis, the '135 patent discussion of that, but the same feature of these IP addresses being visible was shown in Dr. Jones' Wireshark files that he presented in his testimony here earlier this week.

The IP addresses are clearly visible, there are no private IP addresses, and the hacker can tell which two computers are in communication with each other.

25

Q. Okay. Now, in a group, as you've shown here,

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using Windows Meeting Space, using the PeerNet APIs, 1 when one computer in that group sends a packet to 2 3 another, is there any private IP address inside the packet? 4 5 Α. No, there is not. Is there any encrypted IP address in a packet 6 Q. 7 going from one computer using PeerNet software to 8 another computer using the PeerNet software? 9 Α. No, there is not. There's simply the public unencrypted IP addresses in the -- in the header of the 10 11 packet that are plainly visible. 12 Now, you heard Dr. Jones here in court express Q. his view that there was anonymity in communications from 13 14 one group member computer to another group member 15 computer. 16 Do you recall that? 17 Α. Yes, I do. Do you agree with his view? 18 0. 19 Α. No, I do not. 20 Can you explain why you disagree with him. Q. 21 What matters is -- I mean, in the -- in the --Α. 22 in the patent, anonymity is preventing the attacker from discovering which two computers are in communication 23 with each other. 24 25 These IP addresses clearly identify, in this

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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 message, inside the packet and talked about a record 6 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 itself, clearly identifies which two computers are in 10 communication with each other, and so there is no 11 12 anonymity.

Q. Okay. Let's turn to the second element then that you said was missing from the PeerNet software, and that was the secure computer network address, okay? So this is now the second element missing from the PeerNet software.

18 And can you first tell us what a secure 19 computer network address is?

20 A. Yes, sir.

Again, Judge Davis has given us a construction of this -- of this term. A secure computer network address is defined as a network address that requires authorization for access and is associated with a computer capable of virtual private network

1 communications. 2 All right. Now, can you please illustrate for Q. 3 us how it is that a typical VPN provides such a secure computer network address? 4 5 Α. Certainly. So this is, basically, the same picture of a 6 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 destination computer. 18 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.

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So in the first case I showed, you did not 1 2 have authorization for accessing the IP address, the 122 3 here IP address. In the second case, you did have authorization for accessing that 122 IP address. 4 5 All right. So in Windows Meeting Space for Ο. computers that are part of the group, do the group 6 7 member computers have a secure computer network address? 8 No, they do not. Α. 9 0. Can you please tell us why that's so? 10 Α. 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 that I'll show to illustrate sort of what's running on 14 15 that computer, but I also want to focus on the IP 16 address of the computer. That IP address is what Dr. Jones has 17 identified as being what, in his opinion, is the secure 18 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 reading their e-mail using Outlook Express. 23 24 The packet -- IP packets that carry the e-mail 25 messages to this computer reach the computer by being

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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.

If I run a grouping application on the computer, at the same time as I'm running the Outlook Express application, still reading my e-mail while I'm participating in some, you know, PeerNet application, the packets there are associated with the e-mail application are still able to easily reach the computer using the computer's IP address here, 182.48.17.35.

But packets associated with the grouping application, the group is enforcing a requirement of authorization for access to the group to that one application program on the computer.

Whatever the group is enforcing, in terms of that authorization-for-access requirement only applies to the group program, that one application program running on the computer. It does not in any way affect access to the computer's IP address as a whole.

And so the e-mail application still works, whereas, if you don't have authorization for access, you can't actually join the group or access the records in the group. You can still read your e-mail.

And I've just used e-mail and Outlook Express as one application, one example. There are hundreds,

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perhaps thousands or more applications that could be 1 running on that computer. 2 3 And there are even things that run on the computer in the background that are part of how the 4 5 computer operates internally that users don't typically see but still require IP packets to be able to reach the 6 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 rest of the computer itself or the computer's IP address 11 itself. 12 13 So do computers that are running this PeerNet 0. software use or include a secure computer network 14 15 address? 16 Α. 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 approach? 21 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 --

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inside the IP has to be a visible or a hidden IP 1 2 address. He's still arguing IP tunneling is part of 3 this, and he's just using different words to do it. So I object to the Markman. They were 4 told not to do it at the pretrial conference, and they 5 still did it. 6 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 whatsoever. 11 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 that from the claim construction. And he used some 15 examples of VPN to illustrate his points. There was no 16 reconstruction or different construction offered. 17 THE COURT: Okay. Well, let's try to 18 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

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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

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raised this, for you to get him to admit that that type 1 2 of IP tunneling is not part of the claim -- my claim 3 construction. MR. BOBROW: If -- if he were asked 4 5 whether tunneling is a requirement of the claim, that's fine. I don't -- you know, I think that's fine. 6 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 coming up over and over again, and they keep doing it. 13 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 to come back up here. 18 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

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statement that Mr. Powers made to the Court arguing the 1 construction of website where he said, what makes a 2 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 disagrees, I want to know if I can present that. 6 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. I think it would be fair for him to ask 12 is http part of a website, or is html part of a website, 13 but it would be unfair for him to use an argument that 14 15 counsel made pre-claim construction to impeach the witness. 16 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

60

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1
   cross-examination.
2
                  MR. CALDWELL: You will?
3
                  THE COURT: I will.
                  (Bench conference concluded.)
 4
5
                  THE COURT: How long do you anticipate
  your cross-exam will be, Counsel?
6
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
   our morning break at this time, Ladies and Gentlemen of
11
  the Jury and -- or Ladies of the Jury. Excuse me again.
12
13
                  We'll be in recess then until -- let's
   say 10:40.
14
15
                  MR. CALDWELL: Your Honor?
16
                  COURT SECURITY OFFICER: All rise.
17
                  MR. CALDWELL: Your Honor, may I ask a
   quick question?
18
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
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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

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accuracy of the slides that you've presented? 1 2 Α. Yes. 3 0. And were you involved in helping prepare Mr. Pall's slides that he presented? 4 5 No, sir. Α. Did you -- did you view those slides when they 6 Q. 7 were presented in the courtroom? 8 Α. Yes, I did, sir. 9 Ο. And is it your opinion that we can rely on 10 those as well? 11 Α. Yes, I believe so, yes. Professor Johnson, did you understand, from 12 Q . 13 the first minute that you were contacted about this matter, that you would be required to conclude that 14 15 there was no infringement? 16 Α. Not at all, no, sir. 17 Well, did Microsoft hire you because virtual Q. private networks are the focus of your research or 18 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 Well, in the past, have you been a go-to Q. 24 expert for Microsoft when they need assistance for a 25 non-infringement opinion?

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No, sir. 1 Α. 2 Q. This is the third time you've worked for 3 Microsoft in a patent case, correct? That's correct, sir. 4 Α. 5 You've never concluded that Microsoft 0. 6 infringed a patent, fair? 7 Α. That's correct. 8 Now, Professor Johnson, in your direct Q. 9 examination, I recall you saying that you had worked on about 12 other cases? 10 Α. That's correct. 11 Do you recall telling me in your deposition 12 Q. 13 that you had been named as a testifying expert in 14 14 patent infringement cases? 15 I do recall saying that, and I also recall Α. 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 -- I slightly miscounted. Α. 21 Q. Fair enough. Okay. 22 And you had your resume in front of you when I asked you that question. 23 24 Α. Yes. And as I said, the way they're 25 formatted, it was difficult to count them all.

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Q. Okay. Is it fair --1 2 I made sure before my testimony here that I Α. 3 did refresh myself and make an accurate count. And is it fair to say that you've prepared a 4 0. 5 good number of expert reports in connection with patent infringement? 6 7 Α. 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 Α. That's correct. 15 And in all those cases where you prepared a Q. report, have you ever testified that anyone infringed a 16 17 patent? 18 Α. No, sir. 19 Are you just of the mind that no patent is Q. 20 ever infringed? 21 Α. Certainly not, no, sir. 22 Professor Johnson, do you know what the odds Q. are of flipping a coin 12 times and having it always 23 24 land on tales? 25 Α. Yes.

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Q. What are they? 1 2 I can't do math in my head this morning, but Α. 3 they're not very high. I noticed that in your direct presentation, 4 Ο. 5 you mentioned, at least in passing, the Court's construction of virtual private network. 6 7 Do you recall that? 8 Α. Yes, I did. 9 And then after that, you left the topic of the Ο. 10 Court's construction of virtual private networks and referred to what you called a typical VPN. 11 12 Do you recall that? 13 I did describe what I called a typical VPN, Α. that's correct, sir. 14 15 And now, did you want the jury to believe that Q. 16 your definition of a so-called typical VPN is the definition that's at issue in this case after Judge 17 Davis' claim construction? 18 19 No. My intention was simply to describe Α. 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.

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And when you described a typical VPN, sir, 1 Q. 2 didn't you describe having a set of IP addresses inside 3 another set of IP addresses? That's correct, sir. 4 Α. 5 Ο. That has a name, doesn't it? Yes, it does. 6 Α. 7 What is that name? Ο. 8 It's generally referred to either as Α. 9 encapsulation, or the particular use of encapsulation 10 here is what's called tunneling. Is tunneling a requirement of Judge Davis' 11 0. construction of virtual private network? 12 13 Α. No, it's not. Is encapsulation a requirement of Judge Davis' 14 Ο. construction of virtual private network? 15 No, sir. 16 Α. 17 Now, when we go through your cross-examination Q. or your direct, do we need to take into account any 18 19 Wireshark files that you created or any captures of that 20 kind of IP traffic from tests that you ran? 21 No, you don't. I relied on Dr. Jones' Α. 22 Wireshark files, which clearly showed --23 Professor --Q. 24 -- the VPN products. Α. 25 Q. -- is the answer, no, we don't?

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I'm sorry. Did not. 1 Α. You didn't prepare any Wireshark, did you? 2 Q. 3 Α. No. MR. CALDWELL: Now, could we look at the 4 5 graphic that Mr. Powers used in opening and then Mr. Singh-Pall used in his direct? I believe it's 6 7 probably my Slide No. 1. 8 Q. (By Mr. Caldwell) Do you recognize this slide? 9 Α. Yes, I do. 10 Q.. Did you use this slide as well? 11 Α. I used a very similar slide. We're all using 12 the same graphics people to help us prepare slides --13 Q. Okay. 14 -- so that, you know, the graphical elements, Α. 15 the clip art is similar, yes. 16 Ο. That's what I was looking for, yes, sir. You 17 used a similar slide, fair? 18 Α. Certainly, yes. 19 Okay. Now, we see a computer on the left and Q. 20 a computer on the right. One says Sue. Is that an 21 alliteration to the fact that this is a lawsuit, sir? I have no idea. I didn't use this slide or 22 Α. prepare this slide and certainly had no input into the 23 24 decision of the name there. 25 Q. Okay. Well, you see a computer on the left

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and a computer on the right, fair? 1 2 Α. Yes. 3 0. And the one on the left has an IP address of 204.11.52.127, correct? 4 5 That's correct, sir. Α. And the one on the right has an IP address of 6 Q. 7 122.12.164.24, correct? 8 That's correct, also, yes. Α. 9 Ο. Are those public internet addresses of those 10 two machines? Α. 11 Yes, sir. 12 Q. And that's how the traffic is going to go 13 across the internet, fair? 14 Α. That's correct, yes. 15 Now, I assume that since we're talking about Q. 16 Office Communications Server and Office Communicator, 17 the computers that are represented in this slide are at least reasonably modern computers, fair? 18 19 These are just typical-looking computers. Α. 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 Okay. Well, I mean, they've got to be running Q. 24 Office Communicator and Office Communicator (sic) Server 25 at least, fair?

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Α. Yes. 1 Now, are you familiar with the kind of VPNs 2 Q. 3 that Mr. Singh-Pall talked about yesterday? Yes, I am. 4 Α. 5 PPTP? Q. 6 Α. Yes, sir. 7 Ο. Those are VPNs, are they not? 8 Α. Yes, they are. 9 Q. You don't disagree about that fact? 10 Α. They are VPNs. Could you set up a PPTP VPN between two 11 Ο. 12 computers if I stole a couple of laptops from my 13 colleagues? 14 Α. I believe I could, yes. 15 Now, if we had those two computers -- we can Q. just use the ones on your slide -- and we went to those 16 17 two computers and set up a PPTP VPN between those two computers --18 19 Α. Okay. 20 -- what IP addresses would be used across the Q . 21 internet? 22 PPTP means -- we talked before about Α. encapsulation. 23 PPTP --24 Dr. Johnson, I want to know what IP addresses 0. 25 would be used across the internet with those same

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computers that are right there. 1 2 Α. There would be a public IP address and a 3 private IP address. And the public IP address used to navigate 4 0. 5 across the internet would be the same two IP addresses we see on the slide, correct? 6 7 Α. Yes. 8 Q. So the fact -- and the hacker could see those, 9 correct? 10 Α. That's correct. That's correct. But you just told us that PPTP is a VPN. 11 Ο. 12 Α. That's correct, yes. 13 So the fact that you can see 204.11.52.127 and Q. 122.12.164.24, that fact does not negate that those two 14 15 machines can be in a VPN. That's correct. But an attacker still will 16 Α. not see which two --17 Ο. Dr. Johnson? 18 19 Α. I'm sorry. 20 The same exact two machines would be Q . 21 identified by the same exact two IP addresses, correct? 22 Α. As the outer IP addresses in the encapsulation 23 used by PPTP, that is correct. 24 0. So if Mr. Powers or Mr. Pall in opening or in 25 direct left the wrong impression with the jury that

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seeing 204.11.52.127 and 122.12.164.24 negated 1 2 anonymity, that would be incorrect, fair? 3 I disagree with you. Α. The private IP addresses are still hidden, and 4 5 you still have anonymity. The attacker can still not tell which two computers are in communication with each 6 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 Okay. Doctor, did you understand my question? Q. On, I'm sorry. I believe I did. 11 Α. 12 I asked you, if the jury was left with the Q. 13 impression that seeing the two IP addresses right there 14 in that envelope negated anonymity, that would be incorrect; isn't that true? 15 If there were no other IP addresses -- I mean, 16 Α. 17 there's multiple IP addresses in the packet. You can see two of the IP addresses, and you can't see the two 18 19 other. 20 Dr. Johnson, I asked you about the two IP Q . 21 addresses we see right there in that envelope. I've 22 read them a number of times, and I'm starting to feel sorry for Ms. Judy over there having to retype them, so 23 24 I'm not going to do it again. 25 If the hacker can see those two IP addresses

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on that envelope, that does not negate anonymity, does 1 2 it? 3 In the case of PPTP, it does not negate Α. anonymity. 4 5 Okay. And if the jury was left with the Q. impression that seeing those two IP addresses negated 6 7 anonymity necessarily, that's the wrong impression, 8 correct? 9 Α. If the jury had that impression in an example 10 of using PPTP, that would be the wrong impression. Is part of the point you're trying to make 11 0. that Office Communicator doesn't have some other IP 12 13 address besides those? I'm sorry. Can you repeat that? 14 Α. 15 Yes, sir. Q. 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 You say it's important, because -- precisely Q. which claim term or precisely which claim construction 23 or element of the claim requires another set of IP 24 25 addresses that would be in the transmission?

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The construction of privately communicate, 1 Α. 2 which is part of the construction of virtual private 3 network, requires that the attacker not be able to identify which two computers are in communication. 4 5 Hiding those private IP addresses, having those private IP addresses and thus hiding them is important. 6 7 So now, in order to protect -- in order to Q. 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 Α. That's not the only way to meet the Court's 12 construction, but as I described in my, you know, typical VPN example, that's that typical way that it's 13 14 done. 15 And, Dr. Johnson, didn't we just agree that Q. the typical VPN example you gave was IP tunneling, which 16 17 is not a requirement of the claims or the claim construction? 18 19 Α. That's correct. 20 Okay. Now, since you've prepared your report Q. 21 and you gave a deposition, have you changed your mind on 22 what anonymity means? 23 Α. No, I have not. 24 You will agree with me, sir, won't you, that 0. 25 the simple English meaning of anonymity requires an

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1 identity that remains hidden? 2 Α. Yes. I mean, it requires (pause) --3 I just want to know if --Ο. Yes. Yes. 4 Α. 5 Okay. An identity that remains hidden. Q. And my memory is not all that good, so I'm going to write 6 7 that down nor is my handwriting. So sorry. 8 That's what I've written down, okay? 9 Α. All right. 10 So, for instance, Dr. Johnson, if you have Q. sender anonymity, that would be anonymity, correct? 11 12 Could you clarify what you mean by sender? Α. 13 Sure. If you can't tell who sent the original 0. 14 message, that would be anonymity. 15 And I'm sorry. Also, can you clarify, are we Α. 16 talking about your English definition of anonymity, or 17 are you talking about the definition of anonymity in this case as described in the patents? 18 19 Oh, okay. So now you're retreating from this Q. 20 definition right here in the context of the patents; is 21 that fair? 22 I'm -- I don't believe I'm retreating from Α. anything. I just want to be clear what we're talking 23 24 about. 25 Well, I want to know if this definition right Q.

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here, an identity that remains hidden, is fair and 1 2 applicable to anonymity in these patents. 3 Α. No, it's not. 4 0. Okay. 5 Α. 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? Page 113. 11 12 THE COURT: Yes, you may. 13 MR. CALDWELL: Now, do you see where it starts at Line 22, Mr. Moreno? I want to get that, and 14 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... (By Mr. Caldwell) In your deposition, I asked 18 Ο. 19 you: And if you see somebody's outer address without 20 knowing their inner address, does that not defeat anonymity? 21 22 Your answer: If you see someone's outer address without knowing their inner address, does it not 23 24 defeat anonymity? 25 It preserves anonymity, because, as you said

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in the question, you don't know the inner address. 1 2 Anonymity requires -- I mean, just the simple English 3 meaning of anonymity requires an identity that remains hidden. 4 5 That's what you said in this answer, is it 6 not? 7 Α. That is correct, yes, sir. 8 Were you and I just generally talking about Q. 9 anonymity outside of the context in that deposition? 10 Α. I think I'm clear here that I'm talking about the simple English meaning. I was -- as I recall our 11 12 discussion at this point in the deposition, I was trying 13 to clarify, you know, what anonymity is. And after talking about it in the context of 14 15 the patent multiple times in your questions during the deposition, I was simply trying to, you know, ground the 16 17 idea of anonymity in -- in something that would be very familiar to all of us. 18 19 Okay. Well, do you -- do you agree that Q. 20 sender anonymity is a type of anonymity? 21 Α. I'm still not sure, sir, what you mean by sender. 22 23 Q. Okay. Well, we'll get back to that in a 24 minute. 25 Α. Okay.

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And I'm sure the jury has heard a lot about 1 Q. 2 senders and receivers and -- of messages, so... 3 Do you agree that receiver anonymity is a type of anonymity? 4 5 I'm still also not sure. I mean, receiver is Α. 6 a fairly broad, vague word. 7 Okay. Are there different degrees of Ο. 8 anonymity, Dr. Johnson? 9 Α. No, there are not. 10 Q.. Is there no such thing as degrees of 11 anonymity? 12 If you're referring to sort of slightly Α. 13 anonymous, you know, mostly anonymous, almost fully anonymous, no, there's no such thing as degrees of 14 15 anonymity. 16 Q. Is that even remotely legible? 17 Not to me, sir. Α. Sorry. I just wrote down: No such 18 0. Okay. 19 thing as degrees of anonymity. 20 Α. Okay. Thank you. 21 Q. Have you read the patents in this case? 22 Α. Yes, I have. 23 Did you read their file history? Q. 24 Α. Yes. 25 Is that important, to read the file history? Q.

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Yes, it is. 1 Α. Did you read them completely? 2 Q. 3 I certainly looked at all of it. Some parts Α. of it I read certainly in much more detail than other 4 5 parts, but I've read the whole thing and -- yes. Well, one of the reasons you do that is to 6 Q. 7 help understand words that are pertinent to the 8 technology or pertinent to the patent, fair? That's fair, yes, sir. 9 Α. 10 And surely you consulted the file history in Ο. order to find out what the meaning of anonymity is, 11 correct? 12 13 I'm sure I did. I don't recall specifically Α. that issue versus other issues that I read in the file 14 15 history. 16 0. I see. 17 Well, I mean, you saw when Dr. Jones presented the fact that there's the patent and the first and 18 19 second page, and they list all the references that have 20 been considered by the Patent Office. 21 Α. Yes, sir. 22 Do you recall skimming those to see, hey, are Q. 23 there any references there that relate to anonymity? 24 I recall there are -- I don't remember -- two, Α. 25 three. More than one.

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MR. CALDWELL: Can we show Slide 4, 1 2 Mr. Moreno? 3 (By Mr. Caldwell) All right. Now -- so here's Ο. the first page of the patent. And on the second page, I 4 5 want to show you an article. There's an article there titled, Crowds: 6 7 Anonymity for Web Transactions. 8 Do you see that? 9 Α. Yes, sir. 10 That would be fairly pertinent to the meaning Q. 11 of anonymity for web transactions, correct? I don't know about fairly pertinent. It's a 12 Α. reference that was before the Examiner in the Patent 13 Office in reviewing this application. 14 The Examiner considered it and -- in 15 Q. understanding what the state of the art is, right? 16 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 Crowds article? 23 24 (By Mr. Caldwell) So this is the article we Ο. 25 talked about just a second ago. Crowds: Anonymity for

1 Web Transactions. MR. CALDWELL: But what I'd really like 2 3 to do now is go to the -- skip two more pages. Go to the third page of this article. 4 5 Now, Mr. Moreno, can you zoom in on the top couple of inches of that right there? More down 6 7 the -- there you go. 8 (By Mr. Caldwell) Now, what do we see here as Q. this scale that's shown on the screen in the Anonymity 9 10 of Web Transactions article in the file history? We see a scale describing what, in the context 11 Α. 12 of this particular reference, is described as degrees of 13 anonymity. 14 I thought there was no such thing as degrees Ο. 15 of anonymity. 16 Α. Not in the context of the patent. There's 17 nothing in the specification that suggests degrees of anonymity in the context of the patent. 18 19 It's very plainly represented in the intrinsic Q. 20 record, the file history that the Patent Office 21 considered, right? 22 I don't believe the Patent Office considered Α. this as a -- as a source of a definition of anonymity. 23 24 The bulk of the specification in the patent relates to 25 this technology that's been mentioned a few times here

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this week of IP address hopping. 1 2 And the Crowds article -- the technology 3 described in this Crowds article directly relates to this IP address hopping mechanism. It doesn't relate to 4 5 the claims at issue in this case, for example, other than the general context that it has the word anonymity 6 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 this patent that we're citing the Crowds article in; it 11 12 only relates to this other part of the patent on IP 13 hopping? I considered the technical content of this 14 Α. 15 Crowds article --16 0. Did you find that in the Patent Office's record? 17 No, sir, I did not. 18 Α. 19 Q. Okay. 20 MR. CALDWELL: Can we go to Slide 3 of my 21 slides there, Mr. Moreno? 22 (By Mr. Caldwell) Now, you recall this slide. Q. We've seen it before, fair? 23 24 Α. Yes, sir. 25 Q. Now, did you help design this slide? I think

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I might have asked you that. 1 2 Α. You asked me that, and my answer was no, I did 3 not. Now, who is the user, Sue, sending a message 4 0. 5 to here? Some other Office Communicator user. 6 Α. 7 That's kind of what I figured. She's probably 0. 8 not asking the server to go to lunch or something like 9 that, fair? 10 Presumably not, no, sir. Α. All right. So, I mean, it's not very 11 0. 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 That's correct, yes, sir. Α. 16 0. All right. So let's go ahead and -- you don't 17 mind if I make this a little bit more realistic, do you? Certainly. Well, I'm not sure I agree with 18 Α. 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 Yes, sir. Α. 25 Q. That's more complete, isn't it?

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Yes, sir. 1 Α. It's more similar to what Dr. Jones presented 2 Ο. 3 for Microsoft Office Communicator, correct? Yes, sir. 4 Α. 5 Okay. Now, if we add these other users, there 0. 6 has to be a way to get messages to these other users, 7 correct? 8 Α. Yes, sir, that's correct. 9 0. So the other Office Communicator clients here 10 on the screen, they have SIP addresses, fair? Presumably. I don't know whether, you know, 11 Α. 12 these other users are using Office Communicator. It's 13 not shown in the slide, but I'll assume they are. 14 0. We'll assume they are. So they'll have a SIP 15 address, fair? 16 Α. All right. 17 Now, let's be frank. How long have you been Q. studying Office Communicator and Office Communicator 18 19 (sic) Server for this litigation ahead of both your 20 deposition that I took and the testimony today in Court? 21 Α. I've been working on this case for, basically, 22 a year and a half, and throughout that time, in various ways studying Office Communicator and Office 23 Communications Server. 24 25 Q. And you talked a lot in your direct about

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these SIP addresses that Dr. Jones had talked about and 1 2 Mr. Powers had cross-examined Dr. Jones about, fair? 3 That's correct, yes. Α. All right. Now, do you even know if the 4 0. 5 Office Communicator clients have SIP addresses, 6 Dr. Johnson? 7 Α. The technical term for what they have is SIP 8 uniform resource identifiers. 9 0. I just want to know, do you even know if Office Communicator clients have SIP addresses? 10 It is sometimes expressed that way, yes, that 11 Α. they do. 12 And for --13 Let's take a look at what --Ο. 14 -- simplicity, I have used that terminology, Α. 15 because everyone else here this week has been using that terminology. 16 17 Q. Okay. MR. CALDWELL: Well, let's take a look at 18 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 Somewhere in that timeframe. I don't Α. 24 remember. 25 Q. Do you recall that I asked you: Do Office

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Communicator clients have SIP addresses? 1 2 And your response was: I'm not sure, 3 actually. A. I was -- that is exactly what I said, yes, 4 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 with -- right there, down through the answer. 11 12 Q. (By Mr. Caldwell) I followed up there saying -- I started to talk over you at one point, and I 13 said: I'm sorry. I didn't mean to interrupt you. 14 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 Α. 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

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standard specification, the RFC, is SIP uniform resource 1 2 identifiers. 3 O. I see. Well, Dr. Johnson --4 5 And I was not sure whether the term SIP Α. address, which is not the way I would normally refer to 6 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 technical term. 11 12 I had sort of forgotten the colloquial term that -- the simplified term that is certainly to talk 13 14 about here today. 15 Okay. Professor Johnson, the protocol that's Q. 16 used to send instant messages and presence information on the Office Communicator network is the SIP protocol, 17 correct? 18 19 Α. That is correct. 20 All right. The SIP protocol carries data, Q. 21 doesn't it? 22 Yes, it does. Α. Now, if these -- if the Office Communicator 23 Q. 24 network is in the secure mode using TLS, our hacker 25 cannot see those SIP addresses as messages are sent

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across the internet, can he? 1 2 Α. That's correct. 3 You agree with Dr. Jones on that, don't you? 0. I agree that the hacker cannot see the SIP 4 Α. 5 addresses, that's correct. And you didn't show that part of the story to 6 Q. 7 the jury in your presentation, did you? 8 No, I didn't. It's not relevant to the Α. 9 definition of anonymity. 10 Dr. Johnson, did you show that part of the Q. 11 story to the jury? 12 No, I did not. Α. 13 I want to talk a little bit about the meaning 0. of the word website. I'm going to play court reporter 14 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. Website and OC, quote, have nothing in common. 18 19 Did I hear that correctly? I'm not sure it's a direct quote, and in fact, 20 Α. 21 in one way, it's certainly not, because I believe I said OCS, not OC. 22 Okay. Well, I'll change that OCS. 23 Q. 24 The second half, I can't read where your Α. 25 quotation marks are, if you have any.

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And I'll make this OCS. Is that better? Q. 1 2 Α. All right. Yes. 3 Does that reasonably represent your testimony? 0. It's a good paraphrase at least. 4 Α. 5 Okay. Well, another two words I know I got Q. 6 right were completely different. 7 Do you recall saying that? 8 Α. Yes, I do. 9 0. Let me write that one down. 10 Α. Or I believe I said something very similar. 11 Ο. SIP is a protocol, correct? 12 Yes, that's correct. Α. 13 You know lots and lots of protocols, don't Q. 14 you, Dr. Johnson? 15 Yes, sir. Α. 16 0. You listed several for me in the deposition. I didn't count, but probably in the order of 15-ish we 17 18 talked about? 19 A large number, yes, sir. Α. 20 Okay. But, I mean, how many protocols have Q. 21 you heard of? 22 Α. I have no idea. 23 Q. Ballpark, wild guess. Dozens? A hundred? 24 Many dozens, probably well over a hundred, but Α. 25 I wouldn't know.

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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 familiar with is http, right? 4 5 That's correct, sir. Α. Http is used for websites, isn't it? 6 Q. 7 Α. Yes, sir. 8 Now, will you agree with me that what makes a Q. 9 website a website is that it is running the http 10 protocol? 11 Α. 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 --I just want to very specifically --14 Ο. 15 That's not a definition, though. Α. 16 Q. Okay. I want to know very, very specifically, 17 do you agree that what makes a website a website is that it is running the http protocol? 18 19 Α. That's not a complete definition, no, sir. 20 Ο. Okay. 21 MR. CALDWELL: Now, Mr. Moreno, can you 22 do me a favor and pull up that one portion of the transcript that I identified for you? 23 24 (By Mr. Caldwell) You're familiar with the 0. 25 concept of claim construction, fair?

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Yes, sir. 1 Α. 2 And what's known amongst the patent lawyers as Q. 3 a Markman hearing where issues are argued and terms are construed? 4 5 That's correct, sir. Α. I'm asking Mr. Moreno to focus in on 6 Q. Okay. 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 I'll take your representation for that. Α. Ι have not actually read the transcript of the Markman 11 12 hearing, no. 13 O. You have not? 14 Α. Of the transcript, no. You can read this portion right here, can't 15 Q. 16 What does it say in the highlights? you? 17 It says what you just said, what makes a Α. website a website is that it is running the http 18 19 protocol. 20 Okay. So now we've heard that what makes a Q . 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 Α. I did not say that's not correct. I said

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that's not a complete definition. 1 2 Okay. So Mr. Powers' presentation to the Q. 3 Court was an incomplete definition. Is that what you're saying? 4 5 A. I -- you've shown me two lines of what I assume is a very long transcript. I don't know the 6 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 this sentence. 14 15 And what -- and let's just short circuit this a little bit. That sentence is pretty darn clear that 16 what makes a website a website is that it is running the 17 http protocol, fair? 18 19 I don't think that's fair. I think that Α. 20 sentence is simply contrasting a website versus an FTP 21 server. 22 Q. Okay. Well, you will agree that an equivalent of a website would use a protocol substantially similar 23 24 to http, right? 25 A. Yes, sir.

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Q. Okay. Is Microsoft a fairly sophisticated 1 2 company? 3 Α. They would seem to be, yes. They make some sophisticated products. 4 5 In your estimation, do they know a lot of 0. protocols? 6 7 Α. I imagine they do. 8 Q. Didn't we hear them take credit yesterday, or the day before maybe, for a whole bunch of virtual 9 10 private network protocols? They described a number of them, and some of 11 Α. which were invented by Microsoft, yes, sir. 12 13 Okay. Dr. Johnson, if you, knowing lots and Q. lots of protocols, probably north of a hundred, had to 14 15 pick one protocol to compare Office Communicator SIP to, you would pick the http website protocol, wouldn't you? 16 17 If I was going to be focusing on the protocols Α. spoken by an ht -- http or a web server versus the 18 19 protocol spoken by Office Communicator, I would 20 certainly focus on http. 21 Ο. Okay. Now, Microsoft, same thing. Knowing 22 lots and lots about protocols and having invented several themselves, if they had to pick one protocol to 23 compare Office Communicator's SIP protocol to, they 24 25 would pick the http website protocol, wouldn't they?

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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?

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(By Mr. Caldwell) Now, I was not fair to you, 1 Q. sir, but would you do me a favor and grab that --2 3 MR. CALDWELL: You know what? I may have actually told you the wrong page. So would you do me a 4 5 favor and go to the next page? Was that Page 6 of the PDF? Oh, that's 6 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)? (By Mr. Caldwell) This is a Microsoft 11 Ο. 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 hypertext transfer protocol, http, is well suited for 18 19 multimodal communications and is rapidly being adopted 20 across the industry. 21 It says that, correct? 22 That seems to be a correct reading. Α. 23 Q. Okay. 24 MR. CALDWELL: Can we go to Page 11 of 25 the PDF, sir?

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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? (By Mr. Caldwell) Just so we're convinced that 4 0. 5 first mention isn't a fluke, we'll -- I'm going to read the first sentence here (indicates). 6 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? It says it's similar to not only http 11 Α. Yes. 12 but some number of other IP-based protocols, and I don't 13 know what --I'm asking if it's similar to http, right? 14 0. 15 You read it correctly, yes, sir. Α. 16 0. All right. Had you seen that document before? I believe I haven't seen this one. 17 Α. Have you read that paragraph before? 18 0. 19 Α. I believe I have. 20 Okay. Do you think it's just a fluke that Q. 21 this old document says that? 22 Well, I don't know what you mean by fluke. Α. Ι don't think there's any surprise in the way this 23 24 document is written. 25 MR. CALDWELL: Can we pull up Plaintiff's

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Exhibit 973 and go to the second page? 1 2 I'm sorry. Let's go the first page just 3 so Dr. Johnson can see what it is. (By Mr. Caldwell) This is off Microsoft's 4 Ο. 5 website, the Microsoft real-time communications protocols and technologies page. 6 7 Do you see that? 8 Α. Yes. 9 It says last updated in 1993, although I'll 0. 10 note I printed this in February of 2010, okay? Okay. I'll take your representation, that's 11 Α. 12 fine. MR. CALDWELL: Can we go to the second 13 14 page, Mr. Moreno? 15 (By Mr. Caldwell) Now, do you see where it Q. says: Session Initiation Protocol, the big heading? 16 17 I can read that barely on the monitor. Α. All right. 18 0. 19 MR. CALDWELL: Let's pull it up. 20 (By Mr. Caldwell) This document, which is Q. still available on Microsoft's website to this very day, 21 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

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agree with your apparent conclusion from it, but you've 1 2 read it correctly, yes. 3 Well, you will agree with me that we pretty 0. much have established that the SIP and http protocols, 4 5 SIP used for OC and http used for websites, it's definitely not true they have nothing in common, 6 7 correct? 8 If you take that quote out of the context of Α. 9 the rest of my testimony, I would agree that that's not a correct interpretation of that quote. 10 Okay. And now also -- it's also not correct 11 0. 12 that http and SIP are completely different, is it, sir? 13 And again, if you take that quote out of Α. 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 been Slide 28 of Dr. Johnson's presentation. 18 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 (By Mr. Caldwell) You moved -- you showed us Q. this slide about the PeerNet software, correct? 23 24 This looks like one of my slides, yes. Α. 25 Q. Now -- and you're claiming that this slide

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shows -- or helps you demonstrate why there's no 1 2 anonymity in the PeerNet environment, correct? 3 Α. That's correct, yes. Now, I know you can't see me pointing over 4 0. 5 your head, but do you see the computer that ends in 55 over here? 6 7 Α. Yes, sir. 8 Why does that thing have to have multiple Q. 9 links? What's going on there? 10 Α. That's -- earlier this week -- I forget which 11 day -- there was -- I quess this was yesterday -- there 12 was a description of the three elements of the PeerNet software, the PNRP, graphing, and grouping. 13 14 That is an illustration of the graph that is 15 formed as part of using the PeerNet software. Okay. Well -- and part of graphing was this 16 Ο. 17 graph maintenance where you find additional addresses, and you establish different connect -- additional or 18 19 supplemental connections, correct? 20 Yes, sir. Once you establish the first Α. 21 connection, then you can find additional multiple 22 connections, yes, sir. Okay. That's all I'm asking, because I just 23 Q. 24 want to -- I want to modify your slide here, if I did 25 this right, which maybe I didn't.

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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 No. 5. 4 5 (By Mr. Caldwell) Okay. Now I'm going to Ο. modify your slide. That was just a joke earlier, 6 7 apparently. 8 Α. Okay. All right. 9 Ο. And now we've added additional links for our 10 computer on the far left, because this can happen, 11 right? 12 Α. Yes, sir. 13 All right. And now, this is a little bit Q. tough to identify the computers, so I'm going to put 14 labels on them; is that fair? 15 16 Α. All right. Yes, sir. 17 We've got the PeerNet group up here, and we Q. see computer A, B, C, and D. But we see your one 18 19 message that's going from B to D, don't we? 20 Α. That's correct, yes, sir. 21 0. If our hacker looks at that message, does our 22 hacker know which one of the computers initially sent 23 that message? 24 You're using the word message, and I used the Α. 25 word packet, so I'm not entirely sure what you're

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```
asking.
1
2
        Q.
             Okay. Let me ask that a little bit
3
  differently.
             There is -- there's payload inside that
 4
5
  particular packet, fair?
             There is data, which is technically commonly
6
        Α.
7
   called payload.
8
             And in a group, it's going to be encrypted, is
        Q.
9
   it not?
10
        Α.
             That's correct.
             Okay. So some -- somebody might be publishing
11
        0.
12
   their desktop so that the others can look at the desktop
13
   and they can work collaboratively as a group, fair?
            All right.
14
        Α.
15
            Is that fair?
        Q.
16
        Α.
             Yes, sir.
17
             I just -- I mean, I want to make sure that
        Q.
   we're at least on the same page here, that that is one
18
19
   of the key purposes of grouping, fair?
20
        Α.
            Yes, sir.
21
        0.
             Now, if the hacker looks at the message from B
22
   to D, can the hacker tell who's publishing their desktop
   to the rest of the group?
23
24
             No. The hacker can't tell that. I don't
        Α.
25
   think that changes anything about what I said about
```

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1 anonymity. 2 Q. I --3 Α. I'm sorry. -- I didn't ask you if that changes anything, 4 0. 5 Dr. Johnson. 6 Α. Excuse me. 7 I just asked you, can they tell who is Ο. 8 publishing their desktop? 9 Α. No, they cannot. 10 Ο. If the hacker intercepts that message, can they tell which one of those users is actually running 11 an application listening to that message? 12 13 Α. No, they cannot. So if I understand correctly, Dr. Johnson, you 14 0. can see evidence, of course, that there's a sent message 15 from B to D, fair? 16 17 Yes, sir. Α. 18 And that's sent from B to D, correct? 0. 19 Α. That's correct. 20 All right. But, Dr. Johnson, that Sender B is Q. 21 really no more likely to be the originator of that 22 message than any other potential sender in the graph, correct? 23 24 Α. That's correct. My slide simply illustrates 25 IP packet.

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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.		

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Okay. And that's -- that's carrying a message 1 Q. 2 in grouping, fair, of some sort? It's carrying records 3 of something? Carrying some grouping information, yes. 4 Α. 5 And then the Sender B appears no more likely Ο. 6 to be the originator of message than any other potential 7 sender in the system. 8 We've agreed to that, right? 9 Α. The payload contents --10 The payload contents, okay. Q. Yes. 11 MR. CALDWELL: Now, Mr. Moreno --12 MR. BOBROW: Your Honor, may the witness please be allowed to finish his answer? He was 13 14 interrupted there. 15 THE COURT: Fine. Did you have something 16 else to say? 17 I was simply going to say the payload contents Α. is -- is encrypted, and -- and our hacker can't tell who 18 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 Honor, because I had thought we had actually answered 22 23 the question and then retreated, and we were going back 24 to it again. 25 So I apologize, Your Honor.

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(By Mr. Caldwell) You will agree with me that 1 Q. 2 in terms of the content of the message, B is no more 3 likely to have been the sender of that message than, say, A in this layout? 4 5 In terms of the payload of the message, the --Α. the send -- the author, if you will, of the payload 6 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, though. Understood? 10 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 block of text about two-thirds of the way down? 16 17 Would you grab the first centimeter of that and blow that up real big for us? 18 19 (By Mr. Caldwell) Here's a level, one of those Q. 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

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of that message than any other potential sender in the 1 2 system. 3 Do you see that, sir? Yes, I do. 4 Α. 5 Now, were you here for the whole trial? 0. 6 Α. Almost all of it, yes. 7 Ο. You were here early on when our -- when 8 Mr. Munger and Dr. Short were on the stand, correct? 9 Α. Yes, I was. That's correct. Did you hear that they were cross-examined for 10 0. a while on the fact they were having trouble getting 11 funding? 12 13 Yes, I did hear that. Α. Now, let's just make this clear. You yourself 14 0. 15 have lost funding when the dot-com bubble burst in the early 2000 timeframe, 2000/2001 timeframe, correct? 16 17 Α. That's correct, yes, sir. That's not an uncommon phenomenon, is it? 18 Ο. I recall our discussion of that 19 No, it's not. Α. 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

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patent, PX4, actually, and go to Figure 35? 1 2 It's not going to be PDX35. Go back just 3 One more, two more. a few pages. There you go. Perfect. Thank you. 4 5 (By Mr. Caldwell) Now, Dr. Johnson, right here Q. we see in Figure 33 -- I'm sorry -- you're familiar with 6 7 this figure, are you not? 8 Α. Yes. 9 And this is representing -- it's the block 0. diagram that goes along with the '180 invention, isn't 10 11 it? 12 Yes, sir. Α. 13 Okay. So what we see over here is this notion 0. 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 Α. Yes, sir. 17 Now, the dot-com, that's the unsecure Q. connection, fair? 18 19 In this figure, that's correct, yes. Α. 20 And the dot-scom, that's the secure Q . 21 connection, fair? 22 Really, that's not quite accurate. It's the Α. insecure domain name, yes. 23 24 Okay. But that's -- it's represented in this 0. 25 patent figure as the -- where you're going to go connect

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for the secure information or unsecure information? 1 2 Α. Yes, sir, that's correct. 3 All right. Well, let me clear this just a 0. little bit. 4 5 And we see that coming into the secure side right here is one connection, so that's one IP address 6 7 into the secure side, right? 8 Α. Yes, sir. 9 0. Because the circle is the internet, your 10 connection to the internet, right? That's correct. 11 Α. 12 Q. Now, we see right here one connection into the 13 unsecure side. 14 Α. Yes, sir. 15 Now, that's sort of the point you made when Q. 16 you were talking about a secure computer network 17 address. You would have to have a separate address in order to send the secure traffic versus an address where 18 19 you would send the unsecure traffic, right? 20 Α. That's not actually what I said, no. 21 0. Well, it's very similar to what you said. Ι 22 didn't write it down verbatim, so I apologize if I got it wrong. 23 24 May -- I described two scenarios with a secure Α. 25 computer network address, one that I described as being

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in a typical VPN setup, and then I discussed, you know, 1 2 what the equivalent would be or what it would look like 3 in a, you know, PeerNet application where there is no secure network address. 4 Q. Okay. Well, Dr. Johnson, I just want to 5 direct you to another part of this figure right here. 6 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 are combined at the same address on the internet. 11 12 That's in the very figure of the patent that describes 13 the '180 patent invention, isn't it? I don't recall what the text explaining 14 Α. 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 (By Mr. Caldwell) Let's move on to my -- my Q . 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.

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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

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contend that Windows Meeting Space does not work over 1 2 the internet? 3 It -- it does not work over what we use or Α. think of as the internet today in a normal way at least. 4 5 It's designed to use what's called a version of IP called IP Version 6, which is not deployed in the -- in 6 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. So -- okay. All right. Well, let's see what 11 0. 12 you said in your report on that issue. 13 MR. CALDWELL: Can you pull up Dr. Johnson's non-infringement report on Page 76? 14 15 -- oh, Page 62. I'm sorry. 16 No, that's not it. It must be Page -no, that's not it. I'm looking -- I'm looking for his 17 Paragraph 112 out of his report. 18 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 (By Mr. Caldwell) Now, Dr. Johnson, I'm 0. 25 starting about halfway through that column right there.

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It says the word moreover. 1 2 Do you see that? 3 Yes, sir. Α. Okay. I'm going to read along. It says: 4 0. 5 Moreover, since Windows Meeting Space is only supported for link local networks -- that's saying Windows Meeting 6 7 Space is not supported for connections over the 8 internet. 9 Isn't that what that statement is saying? 10 Α. 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 Well, I apologize then, if that's true. Q. But what we're looking at right now says: Windows 14 15 Meeting Space is only supported for link local networks, 16 i.e., it's not supported for connections over the 17 internet; fair? That's what it says, whereas before you talked 18 Α. 19 about whether it works or doesn't work. 20 Okay. Now, Dr. Johnson, yesterday when Q. 21 Mr. Barton was here, Mr. Barton testified: 22 Question: Now, you mentioned in a meeting. Is Windows Meeting Space typically used in face-to-face 23 24 meetings, or is it used over the internet? 25 Answer: Windows Meeting Space is designed for

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what we call face-to-face meetings. So it's designed 1 for the situation when everybody is in the same room. 2 3 It's not designed for use on the internet. Did you hear that testimony? 4 5 I did hear that testimony. That sounds Α. probably like a direct quote. I will assume it is. 6 7 It is, and I'll be happy to show you the Q. 8 transcript. 9 Α. I don't question that. 10 Ο. Now, do you still believe in the accuracy of that statement? 11 12 Α. Yes, I do. 13 You know your way around the Microsoft website Q. fairly well, sir? 14 15 Α. Reasonably well. It's a very large website. 16 MR. CALDWELL: Can we pull up Plaintiff's Exhibit 800? 17 18 Now, in Plaintiff's Exhibit 800 on Page 19 1, I would like to pull out both this area right here, Mr. Moreno? 20 21 Q. (By Mr. Caldwell) We're looking at the Windows 22 Vista Meeting Space step-by-step guide, fair? 23 Α. Appears to be. 24 The third bullet says you can include local 0. 25 and remote attendees, doesn't it?

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Α. Yes. 1 2 Q. All right. 3 MR. CALDWELL: Now, can we lose that call-out, sir, and now, Mr. Moreno, can we grab down 4 5 here? 6 There you go. 7 (By Mr. Caldwell) Windows Meeting Space Q. 8 focuses on helping information workers and addresses 9 their needs by providing a collaborative application 10 focused on sessions that work in topologies. Topologies in this instance means like is it 11 linked local? Is it remote on the internet and things 12 13 like that, correct? 14 Α. Yes. 15 It's focused on sessions that work in all Q. 16 topologies, isn't it? I'm not -- I don't completely agree with the 17 Α. use of the word focused here. I understand that's the 18 19 word they used here. 20 Ο. That's Microsoft's words, right? 21 Α. Yes. 22 Okay. And they say you can use a computer to Q. 23 computer, an ad hoc network. You can use at home and 24 manage your corporate network, right? 25 A. Yes.

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And then, fourth, it says you can use Windows 1 Q. Meeting Space on the internet. That's one of the 2 3 topologies it's supported for, correct? 4 Α. 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 (By Mr. Caldwell) All right. Now, this is Q. what I was looking for, this middle paragraph right 13 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? (By Mr. Caldwell) Windows Meeting Space -- do 18 0. 19 you see where I'm reading along, Windows Meeting Space 20 allows you? 21 The bottom paragraph? Α. 22 Q. Yes, sir. 23 Α. Yes, sir. 24 Windows Meeting Space allows you to 0. 25 collaborate with individuals nearby and with individuals

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```
who are remote.
1
             That's what it says, isn't it?
2
3
             Yes, sir.
        Α.
             Okay. And, again, and remote, it's talking
 4
        Ο.
5
  about across the internet, fair?
             I don't know the context, but from the limited
6
        Α.
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 --
             -- seen this whole document, and I'm actually
11
        Α.
  noticing this document was only published less than --
12
13
   you know, like six weeks ago on the Microsoft website.
14
             It was published by Microsoft.
        Ο.
15
             It is published by Microsoft in the end of
        Α.
   January of 2010, after I submitted my report in this
16
   case. I have not reviewed this document before.
17
             I see.
18
        Ο.
19
             So your report may just be flat wrong on
20
   whether or not Windows Meeting Space is supported for
   the internet, correct?
21
22
             It appears that at least this document is --
        Α.
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
```

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showed the jury, correct, where the Windows Meeting 1 2 Space was used across the internet? 3 Do you recall that? I recall that, yes, sir. 4 Α. 5 Now, were you and Mr. Barton suggesting that Ο. Windows Meeting Space couldn't be used across the 6 7 internet to leave the impression that Dr. Jones' 8 graphics using the internet were inaccurate or 9 misleading? 10 Α. I don't -- that was certainly not my intention. I believe we both described accurately and 11 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 Dr. Johnson, would you agree with me right now 0. 17 that I could show you probably three more documents just off of the ones that are in my notes that would say 18 19 Windows Meeting Space works on the internet? 20 Α. 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

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```
1
   the numbers --
2
                  THE COURT: You may.
3
                  MR. CALDWELL: -- whenever?
                     REDIRECT EXAMINATION
 4
5
  BY MR. BOBROW:
             Mr. Johnson, I have a few follow-up questions
6
        Q.
7
            What I would like to start with a
   for you.
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
  you showed here earlier was a setup for communication
13
  between on the one hand an Office Communicator computer
14
   and on the other hand Office Communications Server; is
15
16
  that right?
             That's correct sir.
17
        Α.
             You've shown two computers; one on the left
18
        0.
19
   side as the source and one the destination on the right;
20
   is that right?
             That's correct.
21
        Α.
22
             This is a two-computer model as you've shown
        Q.
23
   it, correct?
24
        Α.
            Yes, sir.
25
        Q. And as I understood your testimony, both on
```

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direct examination and on cross-examination, there is no 1 2 anonymity in this scenario, because the IP addresses of 3 the source and the destination are visible to a hacker; is that right? 4 5 That's correct. And thus, an eavesdropper Α. would easily know that these two computers are in 6 7 communication with each other. 8 Now, on cross-examination, Mr. Caldwell Q. 9 posited for you a scenario where you had two computers 10 like this, and instead of having an OC/OCS connection, forget about that. Instead you create a PPTP VPN 11 12 connection between those computers. 13 Do you remember that question -- those set of 14 questions, sir? 15 Yes, sir, I do. Α. 16 Now, when you set up a PPTP VPN between those 0. 17 two computers, is there or is there not anonymity for the source computer and the destination computer? 18 19 Α. There certainly is anonymity --20 Ο. Now --21 -- if an attacker --Α. 22 -- let me -- let me ask you. Q. 23 Α. Okay. 24 Why is that? Why is there anonymity when you 0. 25 have a VPN between those two computers but not when you

1 have an OC/OCS connection?

25

A. In the case of PPTP, you have the encrypted
private IP addresses that are hidden inside the packet.
So the possible eavesdropper who's looking at that
packet only can see the outside IP addresses, the public
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 gateway and the computer shown here on the right is also 18 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.

In the case of Office Communications (sic) and

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Office Communications Server, it's -- it's different. 1 2 There's only the public IP addresses. There are no 3 private IP addresses. The attacker actually can even tell from the packet that there are no private IP 4 5 addresses. Remember, I talked about the -- the port 6 7 That port number identifies this packet as number. 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 secret, we know that the packet contains what it 11 contains. 12 13 The attacker knows that there's no private IP addresses hidden inside the packet. The attacker knows 14 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 clearly identified by the public IP addresses in the IP 18 19 packet's header. 20 Ο. 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 Yes, I do. Α. 25 Q. Now, first of all, let me ask you this just

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straight out: Does the OC and OCS Server, which 1 2 protocol is used on the OC Server? 3 Α. SIP. Does it use http protocol? Is that the 4 Ο. 5 protocol it uses? 6 Α. No, it does not use http at all. 7 Ο. 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 Α. Yes, I do. Does that change your view and opinion in any 11 0. 12 way that an OCS Server is not a website? 13 It does not change my opinion in any way. Α. 14 0. Why not? 15 The similarities are -- are superficial to Α. the -- if I can make an analogy, I guess I would say, if 16 17 we write English, we punctuate it with commas and periods. And we do that whether we're writing in -- I 18 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 --

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```
typing the languages easier.
1
             But that's really where the similarities end
2
3
  in the case of SIP versus http. You know, there's some
  of the formatting of how the protocol is -- is -- the
 4
5
  language is formatted are similar. But the
  functionality, what it does and even the pattern of
6
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,
   and it doesn't come back to the client. It goes through
11
  the SIP server -- the OCS Server to the other client.
12
13
   This structure of the protocol, the way the protocols
  work is very different.
14
15
            All right. Third topic, very briefly.
        Q.
16
                  MR. BOBROW: Can we pull up Plaintiff's
17
   Exhibit 800, please?
        Q. (By Mr. Bobrow) You were asked some questions
18
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
```

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highlight the paragraph that starts IPv6. 1 2 Ο. (By Mr. Bobrow) Do you see that, sir? 3 Α. Yes, I do. All right. Now, here towards the bottom, it's 4 0. 5 talking about Windows Meeting Space and IPv6, which I think you said is sort of the future version of the IP 6 7 protocols; is that right? 8 Yes, sir. IPv6 is sometimes called IP next Α. 9 generation. It's what the internet will become when 10 they finally someday finish changing the internet to be that protocol. 11 12 Now, in the bottom paragraph, it refers to Q. 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 It's talking about ways of being able to carry Α. IPv6 packets over the -- IPv6 is a version number of IP; 18 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 the IP Version 4 internet. 22 All right. So is it fair to say from the 23 Q. 24 portions of this article that you looked at that for 25 Windows Meeting Space operating over the internet, you

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need to take special steps to set up special servers and 1 2 have special hardware for that to work? 3 Α. That's correct. All right. I have one last topic, and that 4 Ο. 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 Yes, I do, sir. Α. 11 0. On cross-examination, Mr. Caldwell kept asking 12 you over and over about messages from one peer to another peer. 13 14 Do you recall that? 15 I do recall that, yes, sir. Α. 16 Tell us, if you would, whether there's any Q. 17 difference between IP packet on the one hand and a message on the other? 18 19 Α. Yeah, there's -- there's definitely 20 differences. 21 An IP packet, again as I've already said, really is the basic unit of communication between 22 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

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from an application program. It's data. It's not -- it 1 2 exists disembodied from a network protocol. It's just a 3 piece of information. To carry that piece of information from one 4 5 computer to another computer, you have to put that into an IP packet and transmit that IP packet from the source 6 7 computer to the destination computer. 8 And if you can see the IP packet, when one Q. 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 If you intercept that packet, you can plainly Α. see the IP address of the source computer and the IP 13 address of the destination computer. Those are public 14 15 IP addresses. They're plainly visible. And they plainly tell you that that source 16 17 computer is in communication with that destination computer. And so it simply means there's no anonymity. 18 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.)

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1	RECROSS-EXAMINATION		
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	5 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.		

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Dr. Johnson, will you look at the jury and 1 Q. 2 tell them whether or not it is a requirement of the 3 patent or the claims that there be a private IP address that is hidden? 4 It is not a requirement of the claims as was 5 Α. 6 just now stated. 7 Is it a requirement of Judge Davis' claim Q. 8 construction? Tell the jury that, if you would. 9 Α. It is not part of Judge Davis' construction as 10 just now stated. And did you understand Mr. Bobrow to say that 11 Ο. 12 in order the use Windows Meeting Space on the internet, 13 you had to buy special hardware? 14 Α. I did hear him say that, yes. 15 That's not true, is it? Q. 16 Α. You either need special hardware as was 17 described in the passage there, or special software. But that special software is -- I don't want 18 0. 19 to get too technical here -- it's something like 20 Terrado, T-E-R-R-A-D-O, correct? That's correct. 21 Α. 22 That's built right in to Windows Vista, isn't Q. 23 it? 24 And -- yes, sir. It has to be set up and Α. 25 configured. And we've all heard lots about setting up

and configuring software. 1 2 Q. Okay. So you don't have to actually go buy 3 separate hardware as Mr. Bobrow suggested, correct? That's correct. There was only a limited time 4 Α. 5 period that document -- that it talked about overhead and efficiency a little bit, I noticed. And that 6 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 Α. 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? I'm not sure of your point. I can use IPv6 in 14 Α. this room, because we're all connected to the same local 15 16 area network. 17 Dr. Johnson, my point is, it's not -- you Q. don't have to use IPv6 because you're going to use the 18 19 internet. It's just the way Windows Meeting Space is 20 configured. It always uses IPv6, correct? 21 Α. That's correct. That was not the point of 22 talking about IPv6. 23 Well, I think it was the point. Mr. Bobrow Q. 24 suggested you had to go buy special hardware to use 25 Windows Meeting Space over the internet, didn't he?

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1	2	$\cap$
L .	2	U

The issue with using IPv6 is not whether I can 1 Α. 2 use it in this room or -- the issue is whether it can go 3 across the internet and whether internet routers support forwarding those packets. 4 5 Every bit of the software you need -- I'm Q. sorry. You don't need to go buy this ISATAP hardware, 6 7 correct? 8 Α. You don't need to. 9 0. The software -- the software, Windows Vista, 10 can provide everything you need for the IPv6, correct? You have to set up and configure that 11 Α. 12 software, and it consumes memory and CPU cycles. It can 13 be done. 14 Dr. Johnson, is that, yes, Windows Vista 0. provides it all? 15 16 Α. Yes. 17 Q. All right. MR. CALDWELL: Pass the witness. 18 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

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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 true and correct transcript from the stenographic notes 12 13 of the proceedings in the above-entitled matter to the best of my ability. 14 15 16 17 18 /s/\_ SUSAN SIMMONS, CSR Date 19 Official Court Reporter State of Texas No.: 267 20 Expiration Date: 12/31/10 21 22 23 /s/\_\_ JUDITH WERLINGER, CSR Date 24 Deputy Official Court Reporter State of Texas No.: 731 25 Expiration Date: 12/31/10

EXHIBIT F10

IN THE UNITED STATES DISTRICT COURT 1 FOR THE EASTERN DISTRICT OF TEXAS 2 TYLER DIVISION 3 VIRNETX Civil Docket No. 6:07-CV-80 \* 4 VS. \* Tyler, Texas 5 \* \* March 12, 2010 \* 6 MICROSOFT CORPORATION 1:15 P.M. 7 TRANSCRIPT OF JURY TRIAL 8 BEFORE THE HONORABLE JUDGE LEONARD DAVIS UNITED STATES DISTRICT JUDGE 9 10 11 APPEARANCES: 12 FOR THE PLAINTIFFS: MR. DOUGLAS CAWLEY MR. BRADLEY CALDWELL 13 MR. JASON D. CASSADY MR. LUKE MCLEROY McKool-Smith 14 300 Crescent Court 15 Suite 1500 Dallas, TX 75201 16 MR. ROBERT M. PARKER 17 Parker, Bunt & Ainsworth 100 East Ferguson 18 Suite 1114 Tyler, TX 75702 19 20 APPEARANCES CONTINUED ON NEXT PAGE: 21 22 COURT REPORTERS: MS. SUSAN SIMMONS, CSR Ms. Judith Werlinger, CSR 23 Official Court Reporters 100 East Houston, Suite 125 24 Marshall, TX 75670 903/935-3868 25 (Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

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1	APPEARANCES CONTINUED:		
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19		Tyler, TX 75703	
20	* *	* * * *	
21		<u>ROCEEDINGS</u>	
22 23	(Jury i	ECURITY OFFICER: All rise.	
24	-	RT: Please be seated.	
25		ERS: Your Honor, before we begin,	

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can we submit our list of exhibits that were admitted 1 2 yesterday? 3 THE COURT: That would be great. MR. CALDWELL: Your Honor, for the 4 5 record, we've marked as demonstratives now our numbers. So just for the record, I would like to move into 6 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 to call its next witness, Your Honor. 14 15 THE COURT: All right. That will be fine. 16 17 MR. BOBROW: So our next witness is Stephen Wicker. 18 19 THE COURT: All right. 20 STEPHEN WICKER, Ph.D., DEFENDANT'S WITNESS, PREVIOUSLY 21 SWORN 22 DIRECT EXAMINATION 23 BY MR. BOBROW: 24 O. Good afternoon. 25 A. Good afternoon.

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Would you please introduce yourself to the 1 Q. 2 jury, please? 3 Α. My name is Steve Wicker. And, Mr. Wicker, where do you live? 4 0. 5 I live in Ithaca, New York. Α. What do you do there? 6 Q. 7 I'm a professor of electrical and computer Α. 8 engineering at Cornell University. 9 0. Okay. And how long have you been a professor 10 at Cornell University? Fourteen years. 11 Α. 12 Q. So taking us back, then, to about 1996? 13 Α. Yes. All right. And what about before that, were 14 0. 15 you a professor before that? 16 Α. I was a professor in electrical and computer 17 engineering at Georgia Tech in Atlanta. All right. Now, could you please tell us, 18 0. 19 sir, what the focus of your work has been at both 20 Georgia Tech and at Cornell? 21 Α. 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 those networks. 24 25 Q. All right. Now, I wanted to ask you, sir,

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before we get into a lot of the details in this 1 2 afternoon, if you could just give us a brief explanation 3 of why you're here today. Okay. I'm here to talk about the validity of 4 Α. 5 VirnetX's patents, and in particular, the claims that are asserted in this case. 6 7 Okay. Now, before we get into your specific Q. 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 Okay. I received a bachelor's degree in Α. electrical engineering from the University of Virginia. 14 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 California. 18 19 And while you were getting your Ph.D., did you 0. 20 work at the same time? 21 Α. Yes, I did. 22 Where did you work? Q. 23 Α. I was an engineer for the Space and 24 Communications Group of the Hughes Aircraft Company in 25 Los Angeles.

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What kind of projects were you working on at 1 Q. 2 Hughes Aircraft? 3 Α. I designed communication payloads for satellites and for deep-space probes. It's the part of 4 5 the satellite that actually talks. Okay. Now, let's jump forward to your time as 6 Q. 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 Well I, teach courses in computer networks, Α. communication networks. I've taught courses in 11 12 cryptography. Next semester, I'll be teaching a 13 freshman course on both security and privacy in information networks. So, basically, networking of 14 15 various types. 16 0. Have you taught any courses where that course 17 work has involved virtual private networks or VPNs? In fact, in both my graduate and 18 Α. Yes. 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 and privacy? 23 24 A. Yes. I've published five books and a number 25 of journal articles and conference papers that deal with

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various aspects of networks and communication links that 1 2 form those networks. 3 And a great deal or a significant amount of that work deals with reliability and security in those 4 5 networks. All right. In connection with your work as a 6 Q. 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 Α. Yes, I have. Can you please describe that for us? 11 0. Okay. Most of the work I've done for the 12 Α. 13 government was for DARPA. Now, that's the Defense Advanced Research Projects Agency. I think it's been 14 mentioned several times over the course of the past 15 16 week. A lot of the work I did for them focused on 17 sensor networks. I was very interested in creating 18 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 Ο. Okay. 25 Α. And what-not, water supplies in particular.

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All right. Have you done any work for any 1 Q. 2 agencies of the federal government other than DARPA? 3 Α. Yes. Can you tell us about that work, please? 4 Ο. 5 Well, throughout my career, I've worked for Α. the National Science Foundation. That's a part of the 6 7 government that funds faculty and students to do 8 research of various types. 9 0. Okay. And what technologies have you 10 developed in your work for the National Science Foundation? 11 12 Well, actually quite a few. I've been doing Α. work for the NSF since the very beginning, but probably 13 14 the biggest thing I've worked on most recently has been 15 for a science and technology center called Trust. It's a large consortium of different universities, and our 16 17 main goal is to protect critical infrastructure, to protect the power grid, to protect the transportation 18 19 system, large objects like dams, and things that make 20 the economy go. 21 0. So what work have you done for Trust in the 22 area of networks and network security and the like? 23 Α. 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,

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what delivers electricity to our homes. 1 I've looked at ways of using sensors to both 2 3 control the power grid as well as to protect it against hackers and actual physical attack as well. 4 5 And has any of your work on networks involved Q. any medical applications? 6 7 Yes. One of the more recent applications Α. 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 heart rate, blood glucose, all kinds of stuff so that 11 12 someone can stay home instead of having to stay in 13 intermediate care facility of some kind. 14 All right. Now, in addition to your work for Ο. 15 the government, have you done work in private industry 16 on networks and network security? 17 Α. Yes, I have. Can you tell us about that? 18 Ο. 19 I've done work for some large companies Α. Okay. 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

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evaluating the question presented to you of whether the 1 2 VirnetX patents at issue here are valid or not. 3 And what I would like you to do, please, is describe for us the work that you did in preparing to 4 5 give your opinion. Okay. The first thing I did was to actually 6 Α. 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. I studied the file histories. That's the 10 history of everything that happened in the Patent Office 11 12 during the prosecution of the application. 13 I studied the Court's claim construction so that I would understand what the Court had determined 14 certain terms in the claims meant. 15 I also studied the various prior art documents 16 17 that were cited in that file history as well as a number of prior art documents, systems, software that was not 18 19 cited in the file history. 20 All right. Well, that's what I was going to Q . 21 ask you was whether, in the course of your preparation 22 to give opinions here today, did you study any prior art that the Patent Office did not consider when it granted 23 24 the '135 patent and the '180 patent? 25 A. Yes, I did.

What prior art did you study that the Patent 1 Q . Office did not? 2 3 Well, actually, I looked at a variety of Α. things, quite a few systems, articles, et cetera. 4 But 5 the three main things that I focused on recently were the Aventail system, which I think has been discussed; 6 7 DVPN, dynamic virtual private network; and the third one 8 was Windows NT 4 with AutoDial and PPTP. 9 Ο. All right. Now, can you tell us, please, how 10 you know that that prior art -- the Aventail, the DVPN, and Microsoft NT 4.0 with PPTP and AutoDial -- how is it 11 12 that you know that the Patent Office didn't consider 13 that when it granted the two patents to VirnetX? Well, if you look on the front of one of the 14 Α. 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. But basically, it's a listing of everything 18 19 that the Patent Office considered. The things that I just mentioned -- Aventail, Windows NT with AutoDial, 20 and DVPN -- were not listed. So that's how I know that 21 22 they weren't considered by the Patent Office. Okay. And in terms of how close -- the DVPN 23 Q. 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

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involved here in this lawsuit -- can you compare 1 2 Aventail and DVPN and the NT 4 system in terms of their 3 relevance or closeness to the patent to the prior art that the Patent Office did consider? 4 5 Okay. In my studies, I found the three Α. systems that he just listed -- Aventail, DVPN, and the 6 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 All right. Now, one thing that you've Q. mentioned here and that I think we've seen over the 14 course of the week is that Aventail and DVPN and the 15 Microsoft NT 4 system, those are not patents, right? 16 17 Α. That's right. Now, in your understanding, can things 18 0. Okay. 19 other than patents be prior art and considered for the 20 validity of other patents? 21 Α. That's my understanding. You can look at 22 things other than older patents. All right. Now, after the description of your 23 Q. 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

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the claims of the '135 patent and the '180 patent that 1 2 VirnetX is asserting here, whether or not those claims 3 are valid or invalid in light of the prior art? Through my studies, I found that they were 4 Α. 5 invalid in light of the prior art. They were both anticipated and obvious in light of DVPN and Aventail 6 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? Okay. Well, it's my understanding that 11 Α. 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 Okay. And when you said that you found the Q. claim of the '135 patent and the '180 patent to have 18 19 been anticipated, what does that mean? 20 Α. 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. All right. And did you so find that here in 23 0. 24 this matter? 25 Α. Yes.

All right. And you also mentioned that you 1 Q. 2 found the claims of the VirnetX patents to be obvious 3 and therefore invalid. Can you tell us what you meant by that? 4 5 Okay. Obviousness is different. In the case Α. of obviousness, the first thing I had to do was think 6 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 have found what was claimed obvious in light of one or 11 12 more references, references like Aventail, and the ones 13 that we've listed several times. All right. And after doing that, and putting 14 Ο. 15 yourself in the position of ordinary skill, what did you conclude? 16 I concluded that what's been asserted in this 17 Α. case, the asserted claims would have been obvious to a 18 19 person of skill at the time of the invention. 20 All right. Well, since we were talking just Q. 21 then about the state of the art at the time of the 22 invention, at the time these patents were filed, let's go back to that time period, February of 2000, and I'd 23 24 like you to tell us, generally speaking, if you could, 25 what the patents that are at issue here are about.

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In other words, what are the problems that 1 2 they're directed to? What are they about? 3 Well, put -- put simply, the problem that was Α. being addressed was the problem of finding a way to 4 5 communicate securely over an unsecure network, such as the internet. 6 7 Ο. 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 Α. No. No. What was being claimed was actually 12 quite narrow in terms of how that security was going to 13 be obtained. All right. Now, Professor Wicker, I 14 Ο. 15 understand that you have prepared some slides to assist 16 in your testimony here today; is that right? That's correct. 17 Α. And assist in your explanations? 18 0. 19 Α. Yes. 20 All right. What I'd like to do now is ask you Q . 21 to please help describe for us what the state of the art 22 was back in the year 2000, when these patents were filed, and explain generally for us what kinds of 23 24 technologies were already known in the field. 25 Okay. And it looks like my first slide is up. Α.

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What I've done here is I've listed five key technologies 1 2 that were -- were available or were well-known at the 3 time the VirnetX patents were applied for in 2000. The first of these you've heard about many 4 5 times over the past week, the domain name system. Just to remind you, the domain name system is like a phone 6 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 remember those numbers, and so that's what the DNS does 11 for us. 12 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. Ιn fact, it had been around for a long time. DNS, as we 16 17 have it now, was standardized in 1982. There have been variations since then, but, essentially, DNS, as we know 18 19 it, came about in 1982. 20 Encryption, we've also discussed over the past 21 Encryption is the process of taking something week. 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

16

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

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shoes or whatever; whatever you're buying, airline 1 2 tickets for that matter. 3 Https, again, is two parts. The first part has been around since 1991, essentially. It was 4 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 And, in fact, prominent examples at the time 10 as well. 11 the VirnetX patents were applied for included Aventail, 12 DVPN, and Windows NT using PPTP and AutoDial. 13 All right. Now, when you described https back 0. before these patents were filed in 2000, was it easy for 14 15 a user to get a secure connection using https? 16 Α. Yes, it was. And, in fact it was a big deal 17 that it was easy, because it enabled all the e-commerce. You know, all those dot-coms that are now such a big 18 19 part of our shopping experience, like Amazon, it made it 20 possible. 21 Ο. And for VPNs back before 2000, was it easy for a user of a VPN to obtain a VPN connection? 22 23 Α. 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.

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All right. What I'd like to do now, after 1 Q. 2 discussing the state of the art as of 2000, is shift and 3 ask you some questions about the patents themselves. MR. BOBROW: And, Your Honor, with your 4 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 (By Mr. Bobrow) So, Professor Wicker, what I Q. 10 wanted to ask you was, could you please describe for the jury some of the core concepts, core principles that are 11 12 involved, first of all, in the '135 patent of VirnetX? 13 All right. Well, the '135 patent -- I will Α. have to come around. I'm left-handed. 14 15 The '135 patent has three key concepts, and they're concepts that have been discussed quite a bit 16 17 already in Court. The first of the concept of a domain name 18 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.

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The second piece that I want to point to is 1 2 this idea of determination. It's determining that 3 what's been requested corresponds to a secure website. So I'll write determine secure website. I won't use 4 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. Those are the three elements, the three key 11 12 elements of the '135 patent. 13 Okay. Now, could I ask you to do the same for Q. the '180 patent and explain for the jury some of the 14 15 core concepts, the core principles underlying the '180 16 patent. 17 Α. Sure. For the '180 patent, once again, there are 18 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

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service that associates secure computer network 1 2 addresses with secure domain names. 3 And the final piece, the third piece is, once again, the virtual private network or VPN. 4 5 All right. Thank you, Professor Wicker. Q. What I would like to do, then, is actually 6 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 Aventail software. 10 11 So perhaps you could resume the witness stand, 12 please. 13 Α. (Complies.) Now, if you -- if you may, as I understand it, 14 0. you may have a slide that shows at least some of this 15 16 Aventail software guide that we've discussed. 17 Α. Yes. And I think this clicker will -- yes. MR. BOBROW: Perhaps the lights could be 18 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 was that developed this software and the accompanying 23 24 quide. 25 A. Okay. So this software is developed by a

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company called Aventail. They were based in Seattle, 1 2 Washington, and they did this development of Aventail 3 from roughly 1996. And we'll talk about the time period up through 1999. 4 5 Okay. What problem did the Aventail Connect 0. software address? 6 7 Well, the problem that they addressed is the Α. 8 same that the VirnetX patents addressed; namely, finding 9 a way to communicate securely over an unsecure network, 10 like the internet. How was the Aventail software used? 11 Ο. 12 It was used both by road warriors, folks who Α. were away from home, away from their home office, and 13 wanted to dial in and have a secure connection so they 14 could access their files at their main office. 15 16 It was also used by companies who had branch 17 offices. You'd literally have two offices that wanted to communicate using the internet, and so they'd use 18

19 Aventail to make that connection secure.

25

20 Now, in forming your opinion that the Aventail Q. 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.

A. Okay. My primary reference was this guide,

and that's what I'll be pointing to throughout my 1 2 discussion of this material. 3 But I did look at some other references to make sure I knew what was going on. So that I knew more 4 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 a request for comments. That's an internet standard. 11 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 was familiar with Aventail. 15 16 0. All right. Now, is it your understanding that 17 the Aventail user guide had been distributed in the United States prior to September of 1999? 18 19 Yes, that's correct. Α. 20 Can you please tell us what your understanding Q. of that is based on? 21 22 Well, my understanding is that this Α. administrator's guide was distributed with the software. 23 24 And, again, that understanding is based on Mr. Hopen's 25 testimony.

23

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All right. So with that background on 1 Q. Aventail, what I'd like you to do for the ladies of the 2 3 jury is to explain how Aventail works and how it created connections across the internet. 4 5 MR. BOBROW: And, Your Honor, to do that, I would like to ask the witness to have permission to 6 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. (By Mr. Bobrow) Okay. So using -- using this 11 0. 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. All right. There are a couple of pieces to 16 Α. 17 this. I want to start by noting the client, okay? This is someone who's working perhaps in an 18 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 software on the client, a SOCKS server. Again, Aventail 23 24 is basically an implementation of SOCKS. 25 And over on the far end, there will be another

SOCKS server. 1 So what's going to happen here is the Aventail 2 3 client will try to make a connection to that secure website, and the first thing we're going to see is a DNS 4 5 request. Hard to write on a moving board. 6 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 server uses to determine that this request is, in fact, 17 for a secure website. It's got its own phone book, and 18 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. So that determination is done through a 23 24 There is, then, a response that goes back in lookup. 25 this direction. And at the same time, this server will

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create a connection, an encrypted tunnel, through the 1 2 internet -- see if I can't do a little bit better than 3 that; there we go -- between those two. So we know we're going to be using the 4 unsecure resources of the internet for secure 5 communication. And then on the other end, this SOCKS 6 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 0. 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 references that I'll show, primarily the administrative 15 guide, will show that it's called a VPN. 16 17 Okay. Now, once you have created that Q. connection across the internet, once you've done that, 18 19 do you have a network of computers? 20 Yes, you do. Α. 21 As you can see right here, there are both 22 client computers, servers, and all the computers in the internet. So there's definitely a network of computers 23 24 involved in creating this connection from the client to 25 the secure web address.

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Thank you. Q. 1 Now, with that background on how the Aventail 2 3 software works --MR. BOBROW: And, again, with Your 4 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 (By Mr. Bobrow) Now, first of all, Professor Q. 13 Wicker, in your opinion, does the Aventail software quide describe all of the elements of Claim 1 of the 14 15 '135 patent? 16 Α. Yes, it does. 17 All right. Now, can you please explain why Q. that's using the materials you've described? 18 19 Okay. What I'm going to do is, I'm going to Α. show how each of these can be found in the admin guide 20 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

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```
the lights, please?
1
2
        Α.
             This is a diagram that actually comes from the
3
  administrator's guide. And you can see it's basically
  what I've -- it's trying to draw -- actually, it's hard
 4
5
  to see with the ink on the board.
             But what I tried to do was recreate this
6
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
   security that's required for VPN. So that's a VPN right
13
         And then we've got additional connection to the
14
  there.
   destination server. So the client talks to the
15
16
  destination server through a VPN.
17
             So we know we're in the right ballpark.
             The next requirement, the next -- the first
18
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
  on that part that says generating from the client
23
24
   computer a DNS request.
25
             Now, what I did was I went through the
```

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administrator's guide, and I found lots of language like 1 The application does a DNS lookup to convert the 2 this. 3 host name to an IP address. 4 So clearly, we have the client computer 5 generating a DNS request. Well, the next step is to determine whether or 6 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 piece. 18 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

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Aventail has explicitly considered web pages, both 1 secure web pages and web pages that aren't secure. 2 3 And so one more step: Automatically initiating the VPN. 4 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 automatic creation of a VPN. 12 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 that each and every one of these elements can be found 18 19 in that one administrator's guide. 20 (By Mr. Bobrow) So in your opinion, then, the Q. 21 Aventail guide anticipates Claim 1 of the '135 patent? 22 Yes, sir; that's correct. Α. 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

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Aventail guide and give us your opinion on whether those 1 2 claims are also disclosed by the Aventail guide. 3 Okay. What this shows is Claim 10. And Claim Α. 10 has a lot of similar language, but it does require 4 some definite differences. 5 Claim 10 calls for a DNS proxy server that 6 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 found that it did. In fact, I've already pointed it 10 11 out. 12 This server is acting in this configuration as a DNS proxy for this client. So it can resolve DNS 13 14 requests through that client. 15 The next question is dealing with the language 16 further on down this particular claim element. Does it return the IP address if access to a 17 non-secure website is requested? 18 19 So the question is -- here, is it only for 20 secure websites, or can it deal with websites that are not secure? 21 22 Well, what I found was that when Aventail receives a host name that is not associated with a 23 24 secure website that does not match a redirection rule, 25 Aventail lets it just go through the stack as if

31

Aventail wasn't there. 1 The TCP/IP stack performs the lookup as if 2 3 Aventail Connect were not running. So it treats Amazon.com just as your system would at home. It just 4 5 goes ahead and connects you to Amazon.com without 6 redirecting you to a server. 7 All right. And so with that and with that Ο. 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 Α. 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 to somehow provide what's needed to establish a VPN. 16 17 Well, as I've shown you already, this server helps establish this authenticated and encrypted tunnel. 18 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.

Let's see. Then, I had one more for 12. 1 12 2 is a dependent claim that requires everything that's in 3 this earlier claim, but it's got an added limitation. The gatekeeper computer also has to determine whether 4 5 there are sufficient security privileges, whether the person who's talking to it is on the list allowed 6 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 server, does provide authentication services. 11 Ιt determines whether or not you're allowed to go to that 12 13 website or whatever the case may be. And then there's a lot more detail here as to 14 15 the kinds of authentication that can be provided. So that box needs to be checked as well. 16 17 So, again, using the guide, I've shown you that this element is present; this element is present 18 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 12. 22 23 So I've read Claims 10 and 12 on the Aventail. 24 And you reviewed the Aventail administrator's 0. 25 guide, Claims 10 and 12 of the '135 patent?

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Α. Yes. 1 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 please walk us through those claims and compare them to 4 5 the Aventail guide. All right. I just remembered before they take 6 Α. 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 computer network address. 11 12 Well, as we've seen, the administrator's guide talks about accessing sites that require user 13 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. Well, there's the discussion of the 18 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

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name service, and then receiving from a secure domain
 service a response message containing the secure
 computer network address.

Okay. So receiving and sending, I've already shown that if the destination host name matches a redirection rule, there's a redirection of that request. So the secure computer network address is received here, recognized as requiring a secure connection, and then right here we see that the Aventail Connect forwards the host name to the SOCKS server.

So we have receipt, processing, and forwarding, receiving, and sending a secure domain name. The next requirement for receiving was receiving a response message. So what's required here is receiving a response message containing the secure network address.

All right. So what happens here is that Aventail sends the domain name. That's what that means -- fully qualified host name; that's another way we talk about domain name -- to the SOCKS server with the SOCKS connection request.

Now, I've highlighted the SOCKS connection request, because that is an official standardized request. And so to know what the response is, we simply have to know what the standard says. And the standard

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says in reply to a connect, we send a response that 1 2 includes the associated IP address. 3 So that associated IP address right there is exactly the address that's being called for right here, 4 5 okay? And then finally, the last piece is sending an 6 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 this claim limitation. And that access, outbound 13 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. And what about for Claims 4 and 15? 17 Q. Well, we go to Claim 4 and, once again, it's a 18 Α. 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 contains provisioning information. So there's got to be 23 24 something else besides just that IP address. 25 Well, the SOCKS standard tells us that not

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only does the response include the IP address, but it 1 2 includes a port number. 3 Okay. A port number is basically an identifier. It says when you receive this packet, you 4 5 should pass it on to this particular software process. It's additional information besides the IP address that 6 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. It faded on me. 11 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 this is saying is that Server 1 is a client to Server 2. 18 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 All right. And would you do so, please? Q. 23 Α. All right. So I showed in the Aventail guide 24 that that element is satisfied. That element is 25 satisfied (indicates), receiving, sending.

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All of Claim 1, the provisioning information 1 2 for Claim 4, and the client computer requirement for 3 Claim 15. Once again, I'll try to write Aventail on 4 5 this, if I can. So in your view, Professor Wicker, does the 6 Q. 7 Aventail guide disclose all of the elements of Claims 1, 8 4, and 15 of the '180 patent and anticipate it? 9 Α. Yes, it does. 10 All right. Now, we know from the week's Ο. 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 Α. Yes. Claim -- Claims 17, 20, and 31 are associated 18 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 it's on the computer, it's stored on a hard disk, and 23 24 that hard disk is certainly a computer-readable storage 25 medium, because it's the hard disk in your computer that

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stores all of your programs. It has to be readable or 1 2 you couldn't open your web browsers or open your Word 3 documents or whatever. Now, do you need to go through and show the 4 Q. 5 jury all the remaining language there in Claim 17, 20, and 31 after the discussion you've already had? 6 7 No, because if you look at all of this claim Α. 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. And similarly, Claim 20 looks like Claim 4, 12 and Claim 31 looks like Claim 10. 13 So in your opinion, does the Aventail guide 14 Ο. 15 disclose all the elements of Claims 17, 20, and 31 of 16 the '180 patent and anticipate them? 17 Α. Yes, it does. Now, please turn to Claims 33 and 35. 18 And Ο. 19 please explain for us whether Aventail anticipates these 20 claims. 21 Α. Okay. Well, these are, again, a different type of claim, different flavor. 22 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

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storing executable instructions and so forth. 1 2 Well, reading all that, basically what it's 3 calling for is a computer. It's saying, well, you need a computer that does these things. And, of course, 4 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. And then 35 has the additional requirement 11 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 So in your opinion, does the Aventail guide Q. 16 disclose all of those elements of Claims 33 and 35 and 17 therefore anticipate them? Α. Yes. 18 19 All right. Professor Wicker, at this point, Q. 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 week. 23 24 (Complies.) Thank you. Α. 25 So if I may ask you, Professor Wicker, to show Q.

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a picture, and I believe you may have one, of some 1 2 information about DVPN. 3 Now, who was it that developed DVPN? DVPN was developed by TIS, Trusted Network --4 Α. 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 0. And who was it that was funding the 10 development by TIS of DVPN? Α. DARPA. 11 12 Q. What was it that DVPN was designed to do? 13 It was designed to provide secure access over Α. an unsecure network, like the internet. 14 15 And can you provide for us some scenarios that Q. 16 were envisioned for DVPN to provide those connections? 17 Yes. In fact, it would be the same scenarios Α. we talked about with regard to Aventail. 18 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 connect with each other. 22 Now, in the development of DVPN, was DARPA 23 Q. interested in applications for DVPN that involves 24 something that is sometimes called crisis management? 25

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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

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source code that actually showed how it worked. 1 2 And I also studied the deposition transcripts 3 of three people who were involved in DVPN. And from your review of that material, when 4 0. 5 was it that DVPN was demonstrated for DARPA? It was demonstrated for DARPA in March of 6 Α. 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 exhibit of this type, is to explain for the jury how the 11 DVPN demonstration worked back in 1998. 12 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. MR. BOBROW: Thank you. 17 18 THE WITNESS: Thank you, Your Honor. 19 (By Mr. Bobrow) Okay. Professor Wicker, if Q. 20 you could, explain for us how the DVPN system worked back in 1998. 21 22 Okay. DVPN, once more, means Dynamic VPN. Α. 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

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someone or communicate with a database or see a secure 1 2 website on the FEMA local area network. 3 Just to remind you, FEMA is the Federal Emergency Management Agency. They are the folks that 4 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 secure communication over the internet. 11 12 So the first thing that happens, let's suppose the Red Cross client computer wants to see a secure FEMA 13 14 website. A DNS request -- a secure DNS request will be sent to the firewall. 15 16 The firewall will then send a message to a 17 coalition manager to determine whether or not this connection request is involved with something called a 18 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

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1 internet. So let's see if I -- as you see there. 2 3 And then the connection will be completed on the far side of the firewall with the FEMA secure 4 5 website. And so now the Red Cross client can speak with 6 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 were, through the internet. What do you intend to 11 12 depict with that thick arrow? 13 This is the VPN; it's a secure connection. Α. 14 Ο. 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 house, but can you please explain for us in this context 18 19 what a firewall is? 20 Okay. The name firewall actually comes from Α. 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

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protects the people on the Red Cross network from 1 2 hackers who might be coming in over the internet. 3 So it's a firewall that's designed to protect Basically, a firewall limits traffic in both 4 them. 5 directions. Only authorized traffic can come through 6 this way or go through that way. 7 Okay. Now, sir, earlier, you had testified Ο. 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 it is a DVPN discloses the elements of the '135 and '180 12 13 patents. 14 MR. BOBROW: Your Honor, may the witness 15 approach the other easel? 16 THE COURT: Yes, he may. MR. BOBROW: Thank you. 17 18 Okay. So, once again, going through the Α. 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.

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This is a diagram that's from the literature I looked at 1 2 that describes the demonstration from March of 1998. 3 Okay. So looking into the actual claim elements, the first claim element requires generating 4 5 from the client computer a DNS request. Well, when I looked at the documents, I found 6 7 that the firewall, F-W, for the Red Cross system, the 8 Red Cross firewall performs a lookup of the host name on the FEMA network and receives the IP address. That's a 9 description of the DNS lookup in the response. 10 The next element, determining whether the DNS 11 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 VPN -- DVPN -- excuse me -- and he talked a lot about 23 24 web browsers and so forth. 25 Finally, the automatic initiation of a VPN,

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well, that was referenced in a number of places. I'll 1 2 simply point to this one as part of this demonstration, 3 they showed the automatic activation of a VPN link. So all the elements were there. 4 5 (By Mr. Bobrow) So in your opinion, were all Q. elements of Claim 1 through -- I'm sorry -- Claim 1 of 6 7 the '135 patent matched by VPN and therefore 8 anticipated? 9 Α. They were. I showed the generation of a 10 domain name request. I showed the determination of whether or not that request is associated with a secure 11 12 website. And I showed a response on which VPN is 13 automatically created. 14 I think you have written Aventail on the top Ο. 15 of that board. 16 Α. Yes, that's a mistake. Of course, I'm 17 referring to -- whoops, it's not coming off either. So let me get this correct. I'm sorry. I've, obviously, 18 19 been referring to DVPN throughout. I was trying to 20 write it neatly and forgot what I was writing. There we 21 qo. 22 All right. Well, thank you, Professor Wicker. Q. Let's turn to the next set of claims in the 23 '135 patent. That's Claims 10 and 12. And I'd like you 24 25 to explain for us how it is that DVPN describes all of

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these elements of those two claims. 1 2 Α. Okay. Once again, there's a lot of the 3 material here, but a lot of it we've already discussed. So when we come to Claim 10, the first thing to look at 4 5 or look for that's different from Claim 1 is the presence of a proxy server, one that provides the DNS 6 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? This is code -- actual code from the DVPN 12 system, and it's a little hard to see, but right here --13 14 THE WITNESS: Can we blow it up a teeny 15 bit? Is that possible? Maybe not. 16 But I'll read it to you. It says: Send back Α. 17 the response to the computer. That's the -- that's the piece of code that 18 19 returns that IP address if it's a non-secure address. 20 THE WITNESS: Thank you. Yeah. Now you can see it very nicely. Send 21 Α. 22 back the response to the requester. 23 THE WITNESS: Thanks. 24 Okay. Claim 10 also requires a gatekeeper Α. 25 computer. The gatekeeper computer allocates resources

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for setting up the VPN. That's what the firewall's 1 2 doing here. It's establishing a VPN between this 3 firewall and this firewall (indicates). And this is a little hard to see, but it says 4 5 encrypted traffic, if I remember correctly. All right. So then, finally, for Claim 12, 6 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 whether the site itself are members of the same 11 12 coalition, whether you and the site you're trying to 13 access are part of a secure association. And so that claim element is met as well. 14 15 (By Mr. Bobrow) Okay. So, Professor Wicker, Q. 16 would you then -- in your opinion, does the DVPN system disclose all the elements of Claims 10 and 12 of the 17 '135 patent and thus anticipate it? 18 19 Α. 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 Let's now turn to the '180 patent and go Q.

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through, to begin with, Claims 1, 4, and 15 of that 1 2 patent. 3 And would you please compare those claims to the DVPN demonstration and tell us your opinion about 4 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 method embodied in all of these various steps that 11 result in the establishment of a VPN. 12 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. Now, once again, I've combined the two, so you 18 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 resolves it, as we've discussed here, returning an IP 23 24 address. 25 The firewall, FW, performs a lookup and

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receives the IP address as a response. So the firewall 1 2 receives it, sends it, and obtains the response. 3 And a little more detail here. Sending a query message to a secure domain name service and 4 5 receiving a response. Well, the secure domain name service in this 6 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 secure DNS. 11 12 Now, how do I know it's a secure DNS? Well, 13 it associates domain names with addresses that require 14 secure connections. Then finally, sending an access request 15 16 message using a VPN. Well, as I've already noted, 17 there's rapid automated VPN, and it provides special access rights for community members. 18 19 So there's the access that's being talked 20 about in Claim 1 through that automated VPN. Then what about Claims 4 and 15? 21 Ο. 22 All right. Well, Claim 4, once again, Α. requires provisioning information. 23 24 Now, at least for my eyes, this is a little 25 hard to see, but the provisioning information you can

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see down here (indicates). 1 THE WITNESS: Can you blow that up right 2 3 Well, I can tell you what it says. I've seen it there? before. There we go. 4 5 It says: Key or certificate. Actually, it's Α. still kind of hard to read, but basically what that is, 6 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 back up to the firewall. And the firewall can then 13 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 firewall is acting as a client both to the coalition 18 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 Α. Okay.

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And I think you may have a slide on that. 1 Q. Let's get my checkmarks in. 2 Α. 3 And then I do have slides for the remaining claims. 4 5 This particular set of claims, 17, 20, and 31, once again, deals with computer-readable storage medium. 6 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 demonstration. 14 15 And what about Claims 33 and 35? Q. Okay. And 33 and 35 -- lost my pointer --16 Α. 17 once again, a data processing apparatus containing all these things. It's a computer or a set of computers 18 19 that do the things -- the steps in Claim 1. 20 And of course, the DVPN demonstration involved a lot of computers that were talking to each other to 21 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

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Wicker, does the DVPN demonstration from 1998 disclose 1 all of the elements of the claims of the '180 patent and 2 3 thus anticipate them? A. All the asserted claims of the '180 and the 4 5 '135, yes. All right. Thank you. 6 Q. 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 AutoDial. 11 12 Α. (Complies.) 13 Now, can you please begin by telling us what Q. the NT 4 software was. 14 15 Okay. NT 4 was an operating system. It was Α. sold by Microsoft in the '90s. 16 17 All right. And was the NT 4 system broadly Q. available in the United States before 1998? 18 19 Α. 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 Yes, it did. Α. 24 What networking software did it include that Ο. pertains to VPNs? 25

Well, as has been discussed, it included 1 Α. 2 AutoDial and the point-to-point tunneling protocol. 3 All right. And tell us, please, what PPTP 0. was, and essentially, what it did. 4 5 Okay. PPTP, again, is the point-to-point Α. tunneling protocol. What it did was provide a secure 6 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. All right. And what about AutoDial that was 11 Ο. 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 1996 and forward. 14 That's correct. 15 Α. 16 What AutoDial was, it was a way of getting 17 automatic connections. In the really olden days, you had to actually tell your modem to connect. 18 19 Well, AutoDial made that automatic, and it 20 also made automatic connections to other kinds of networks besides modem connections. 21 22 Now, I know that you've had a chance to review Q. some materials about NT 4 and PPTP and AutoDial. 23 Can 24 you briefly tell the jury what materials you had a 25 chance to review?

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Sure. I made a list, and there's actually a 1 Α. 2 fair amount. 3 I looked at the software, and I also looked at a number of documents that told me how it worked, 4 5 focusing on AutoDial and PPTP. So you see a technical support for hands-on, 6 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 Discolo. 13 14 All right. Now, with the Court's permission, Ο. 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 (Complies.) Okay. So this is, again, Α. Microsoft NT 4 operating system point-to-point tunneling 23 24 protocol, VPN, with AutoDial. 25 All right. So, once again, we'll start with

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our client. And the client wants to obtain access to a 1 secure website. So the client will send a DNS request 2 3 to a tunnel client in this case -- excuse me. I skipped 4 a step. 5 Let's start with the client simply assuming he's connected. And so the first thing the client will 6 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, and it didn't work. 11 12 So what happens in NT 4 is that when things don't work, it keeps looking for other solutions, 13 14 looking for other ways to connect. 15 So the next step in my scenario here would be to send that DNS request -- and I'm assuming it's 16 17 secure -- send that DNS request to this server here (indicates). It's a tunnel client that's running NT 4. 18 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 a tunnel through the internet to another server, and 23 24 then this tunnel server will provide the access to the 25 secured website.

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So what we'll then have is a connection from 1 2 the client to the tunnel server, a tunnel through the 3 internet, a tunnel that constitutes a VPN, because it provides anonymity, and it provides security. 4 5 At the other end, the tunnel server will pass on the traffic, the request for information, to this 6 7 secure website, and this secure website can then respond 8 with a web page to the client through the VPN. 9 Ο. (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 There are a number of ways that can happen. Α. 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 that's not yet hooked up to the internet. What happens 18 19 then is, when the client tries to resolve a DNS -- a 20 domain name through a DNS request, it can't get there. So this failure could be because there's no connection. 21 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

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underneath -- and above it, it says AutoDial. 1 2 Could you please tell us what is depicted in 3 that portion of this illustrative exhibit? Okay. Well, this is a page from the phone 4 Α. 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. And so what happens in this case is the tunnel 11 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? The tunnel client finds that name and then 15 16 uses this information to see how it's supposed to 17 connect. Well, in this case, it says, you have to 18 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 through the claims of the '135 patent and the '180 25

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patents and explain for us how -- explain for us your 1 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.) MR. McLEROY: This isn't in his 8 9 description, Windows NT 4 and AutoDial. His report was like Mr. Pall's deposition -- or excuse me -- Mr. Pall's 10 11 demonstration where there are four computers. 12 Dr. Wicker has never disclosed a system that has the five computers that are demonstrated on 13 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. MR. BOBROW: Well, that's not correct, 19 20 In his report, there is a picture that has Your Honor. 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.

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MR. BOBROW: Okay. 1 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 going to take just a minute, so I think we'll go ahead 6 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. All right. Y'all find what you need. 14 15 I'll be back in shortly before the recess. COURT SECURITY OFFICER: All rise. 16 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.

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1 MR. McLEROY: And we have two specific 2 problems with the --3 THE COURT: Can you turn that a little more to where I can see it? 4 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 presume he's going to do every claim of the '135 patent 18 19 and '180 patents like he's done for the past prior art. 20 THE COURT: It's only addressed to Claim 12. 21 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

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description of the prior art, which is actually referred 1 to, I believe, as the ISP/FEP tunnel arrangement. 2 It's 3 a separate internet service provider I don't believe that's even part of Windows. 4 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 figure that shows client and what's called a tunnel 13 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.

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```
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
   and talked about how it works, and this is simply one
 4
5
   way to do it.
                  It would be very difficult to have the
6
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
   the claims that have been asserted.
13
14
                  MR. McLEROY: I guess two points, Your
15
  Honor.
                  First of all, I didn't hear him disagree
16
17
   that this tunnel client/tunnel server was only disclosed
   in the context of Claim 12, which I believe to be the
18
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
```

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illustrate this point. Again, he's not saying that, all
1
2
  right, this is something that is the only way to do
3
  something. He's giving an example of how AutoDial and
   the NT 4 system worked.
 4
5
                  That's all he's doing. He will show
  specific evidence for specific claims.
6
 7
                  THE COURT: Well, can he do it without
8
  using that chart?
9
                  MR. BOBROW: Well, I think that he can.
  We would certainly want to have it marked as an
10
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
   the tunnel client/tunnel server embodiment that's shown
20
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.
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MR. McLEROY: Your Honor, I remember my 1 other point, if you're still interested. 2 3 THE COURT: All right. MR. BOBROW: I'm sorry, Your Honor. 4 Ι 5 thought you asked to approach. THE COURT: All right. Let's see. 6 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? THE COURT: Yes. 11 12 MR. McLEROY: So, Your Honor, this is the 13 entire discussion of Claim 12 of the '135 patent. This is the only place in Dr. Wicker's report where a 14 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

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1 jury. 2 (Jury in.) 3 THE COURT: Please be seated. All right. Counsel, you may proceed. 4 5 MR. BOBROW: Thank you, Your Honor. 6 (By Mr. Bobrow) I believe before the break, Q. 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 us what your opinion is on whether or not the NT 4 11 system with AutoDial and PPTP discloses the elements of 12 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 All right. So back to Claim 1 of the '135, a Α. method for transparently creating a VPN. 21 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 including point-to-point tunneling protocol as you see 25

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there. So it does indeed provide for the creation of a 1 2 VPN. 3 Now, diving into the claim elements, the first element involves generating from a client a DNS 4 request. Well, what I've got here is an AutoDial 5 segment from one of the references. 6 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. But for our point of view, for our interest, 11 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 entries, and I think here -- by the way, this is 18 19 precisely -- this is one entry in the phone book, and 20 that's a little hard to read, but it's a particular secure website name. 21 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.

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So what this phone book entry says is, if 1 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 request is for a secure website. 6 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. Finally, automatically initiating the VPN in 18 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 that automatic in the demo that was done in the 23 24 courtroom yesterday. 25 And that's Claim 1.

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(By Mr. Bobrow) So, in your opinion, does a 1 Q. 2 Windows NT 4 system with PPTP and AutoDial disclose all 3 of the claims of the '135 patent and, therefore, it anticipates? 4 5 A. Yes, it does. So I'll write NT 4 up here. I'm not going to 6 7 write PPTP above, though. 8 I talked about generating the DNS request, 9 determining that it was secure and the automatic reconnects and showed that it was --10 0. Let's turn then to Claim 10 and 12 of the '135 11 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 Α. Okay. Claim 10. Once again, it's got a lot 17 of the elements that we've already talked about. What I want to focus on is the DNS proxy server. 18 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.

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Here's an example. This is a phone book
entry, domain name, and there's the IP address that's
returned.

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. And it says the database 10 can include IP addresses, and there is one for unsecure 11 websites as well.

And then finally the gatekeeper computer portion of 10. This is a diagram that shows connecting through a tunnel client running NT 4 to a tunnel server, and that tunnel client is acting as the gatekeeper for information coming into the dial-up client as well as information going out.

And then, finally, the gatekeeper must 18 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 -must verify the user's identity and restrict VPN access 23 24 to authorized user's only. 25 And so that's Claim 10.

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All right. So in your opinion, Professor 1 Q. 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, therefore, anticipate those claims? 4 5 Α. Yes. And, once again, I'll write NT 4 up here. 6 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 that's what I showed on the previous slide. That slide 11 says Claim 10; it should say Claim 12. So I'll just 12 note that so that we won't be confused. 13 14 But the sufficient security privileges is associated with Claim 12. 15 16 Q. All right. Let's now turn the '180 patent and, again, Claims 1, 4, and 15. 17 Please walk us through this claim and let us 18 19 know whether NT 4 with PPTP and AutoDial anticipates 20 these claims. 21 Okay. So Claim 1 of the '180 patent, we've Α. 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

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accessing a secure computer network address. It talks 1 about PPTP, uses Microsoft's implementation of RAS and a 2 3 point-to-point tunneling protocol to establish connections. It's a method for accessing secure 4 5 addresses. Getting into the claim elements, receiving a 6 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. Well, in this particular instance, this domain 10 11 name is associated with a secure adapter, the PPTP 12 adapter. So this is a secure domain name, because it requires the use of a secure connection in order to get 13 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 name service. Well, we've talked about that. The 18 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

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the response from AutoDial. It's saying this is how 1 2 you're going to connect. 3 And then sending an access request message. What we see here is if dial-up networking is configured 4 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. Claim 4 calls for provisioning information. 11 12 In this case, the provisioning information is the PPTP 13 It's saying, all right, this is the secure adapter. domain name that you've sent me. Here's the associated 14 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. Then finally Claim 15 calls for this to be 18 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. Okay. So does the NT 4 system with PPTP and 23 Q. 24 AutoDial disclose all the elements of Claims 1, 4, and 25 15 of the '180 patent and therefore anticipate?

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Α. Yes, it does. 1 2 So, once again, NT 4. 3 And I just demonstrated of Claim 1 as well as the provisioning information for 4 and the fact that the 4 5 client computer can do this in Claim 15. Now, in a similar fashion to the fashion 6 Q. 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. Α. Sure. 11 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 copies of NT 4. And, of course, the hard drive is a 18 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.

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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

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domain name. I believe it was -- I can't remember the 1 2 name, but it was something like secure domain name.com, 3 and the system went to the phone book, found the entry in the phone book, thus performing the determination 4 5 step. And in response to that determination, set up a VPN automatically. 6 7 All right. And did you also watch the Ο. 8 demonstration when Mr. Cawley asked that a different 9 domain name be entered? I believe it was eBay.com. Do you recall that? 10 Yes. 11 Α. 12 Q. And were you watching the demonstration when 13 that occurred? 14 Α. Yes, I was. 15 And did that demonstration change any of your Q. opinions about whether NT 4 with PPTP and AutoDial 16 17 anticipates the claim of these asserted -- I'm sorry -the asserted claims of these patents? 18 19 Α. No, it didn't change my opinion. 20 Can you explain why not? Q. 21 Α. Okay. So what would happen in that case, and I think as it was described -- I couldn't see it too 22 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.

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But there really wasn't an internet
connection. So there was no access to an outside domain
name service.

So when eBay.com, I think it was, was entered, the system couldn't find it. It couldn't resolve that domain name, because there was no access to a DNS server. And so what the system kept doing was trying everything it could to get through, as I've mentioned before.

10 Eventually, it tried the one connection it had It tried the VPN and that failed. 11 left, the VPN. Ι 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 square said something like our attempt to contact 14 15 failed. So there was no connection to eBay at all. And what we saw was really the system doing everything 16 17 it could to try and get there, and it couldn't, because there was no external connection from the courtroom. 18 19 All right. Now, let me shift gears. Q. 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

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of ordinary skill in the field in light of the prior 1 2 art. 3 So if we could begin, then, with -- and I believe earlier you had expressed the opinion that the 4 5 asserted claims are obvious; is that right? That's correct. 6 Α. 7 So can you please tell us what work you did Q . 8 and what you did in forming your opinions on 9 obviousness? 10 Yes. And I wrote it down on a slide. I think Α. 11 it -- yes, here it is. 12 Okay. There were a couple of steps to what I did. As I mentioned, obviousness is different from 13 14 anticipation. 15 What I did was first to determine the scope and content of the prior art, to figure out what was in 16 17 the prior art when the VirnetX folks came up with their invention. 18 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.

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So there was no difference there. 1 2 And then finally, I determined the level of 3 ordinary skill in the relevant art -- shouldn't say finally -- but I did determine, you know, the person 4 5 that I thought that these patents were targeted at, and I concluded that it was someone with a bachelor's degree 6 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 considerations that indicate to me or would have 11 12 indicated to me that it actually wasn't obviousness, the 13 things that I have to consider that would move me towards non-obvious. 14 15 Now, one thing I wanted to ask you had to do Q. with the level of ordinary skill. I believe that we've 16 17 heard from Dr. Jones that the level of ordinary skill would have been a bit higher than what you just 18 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 -first of all, does that level of ordinary skill in the 23 24 art change your opinions at all and where you do apply 25 it?

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Well, as you mentioned, it is a slight -- it's 1 Α. 2 another degree, basically more course work. It actually 3 doesn't change my opinions. I think to someone with a little more course 4 5 work and a little more experience, the claims would have been more obvious. But simply with the experience that 6 7 I'm relying on, as my person of skill, the claims are 8 still obvious. 9 0. And when you say that the claims would have 10 been obvious to a person of ordinary skill, what is the date that you're applying there? Is that the date that 11 12 the patent applications were filed? 13 Α. That's correct. So back in that 1999/2000 timeframe, right in 14 0. 15 there? 16 Α. That's exactly right. 17 All right. Now, let's shift to your actual Q. 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 Α. Yes, they would have been. 24 And can you explain why, please? 0. 25 Α. Yes.

Basically, as I've already shown, the Aventail 1 2 guide describes everything that's in the claims. But if 3 we were thinking about obviousness, we could not only look at the Aventail quide, we could also consider, for 4 5 example, the standard that it embodies, the SOCKS standard, consider all the other things that I looked at 6 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 Why would a person of ordinary skill have Q. 13 reason to combine the SOCKS protocol standard with Aventail? 14 15 Well, the SOCKS protocol is embedded in Α. 16 Aventail. If you look through, in fact, just the 17 excerpts that we saw here in Court, there are references to SOCKS all over the place. Aventail is basically a 18 19 system for implementing SOCKS. 20 Now, have you formed an opinion on whether the Q. 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 Yes. And, again, it would be the same answer. Α. 25 A person of skill being aware of Windows NT 4 with PPTP

and AutoDial would have realized that these asserted 1 2 claims are obvious. 3 Now, you've described in the course of your 0. testimony a number of different references, and I think 4 5 you walked through some of those on that PowerPoint There was an installer's guide and some other 6 slide. 7 different materials like that. 8 Would a person of ordinary skill back in 1999 or 2000 have been motivated to combine all of those 9 10 different papers about NT 4 together? Α. 11 Yes. 12 Q. Why? 13 Because they're all about NT 4. They all Α. literally have NT 4 in the title, or at least I think 14 most of them do. 15 16 So a person of skill would have known they 17 were all talking about NT 4. In fact, some of them are explicitly talking about AutoDial and PPTP, so they 18 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 obvious -- or were obvious at the time of the 23 24 application of the patents. 25 Q. Now, let me ask you about DVPN.

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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.

Basically, it's a list of things that I'm 1 2 supposed to consider that would move me away from a 3 conclusion of obviousness. And they include things like as you see here: Long-felt need, commercial success, 4 5 et cetera. All right. So working your way through the 6 Q. 7 list, could you please explain for us how you evaluated 8 those different criteria and tell us what impact that had on your obviousness opinion? 9 10 Okay. Well, I start with long-felt need. Α. 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 for a long time. This satisfies something we've needed 14 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, as I understand it, everywhere they went, they were 18 19 turned down. 20 Q. Commercial success? 21 Α. That sort of ties in. They had no commercial 22 I'm not aware that they were ever able to sell success. 23 a product. So I would say no to that as well. 24 Failure by others? 0. 25 Okay. Failure by others. The consideration Α.

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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 you how great your invention is. I'd say it's more the 11 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 not see praise for the invention. 16

Contrary to accepted wisdom. Now, in this element, what I'm supposed to consider is, did they do something that was different from what everyone else was doing and sort of go against the wisdom to achieve a really good result?

And I'd say the answer's no. People knew how to do this, and what is claimed in the VirnetX patent in the asserted claims was just right in line with what others were doing. So it was not contrary.

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Unexpected results. Did they get a unique 1 2 result, something unexpected, by combining various 3 things like the DNS server and creation of a VPN? They combined some things that were 4 No. No. 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 was new and whether it was -- whether they were just 11 12 moving the complexity around. And the final one is lack of simultaneous 13 invention. At least I think that's the final one. 14 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 this invention independently? 18 19 If that happened, if they were the only ones, that would tend to indicate that it wasn't obvious, to 20 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

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objective considerations and all the other 1 2 considerations that you've described here today, in your 3 opinion, would a person having ordinary skill, back in 1999 or 2000, considered all the asserted claims of the 4 5 '180 patent and the '135 patents obvious? 6 Α. Yes. 7 Thank you, Professor Wicker. Q. 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 illustratives as illustrative exhibits. 14 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 BY MR. McLEROY: 21 22 Q. Good afternoon, Dr. Wicker. 23 Good afternoon. Α. 24 One thing I'd like to cover right off the bat, Ο. 25 like the other experts in this case, you have testified

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in a patent infringement case before, haven't you? 1 Yes, sir, I have. 2 Α. 3 Approximately how many times have you Ο. testified? 4 I actually testified in court -- I think it's 5 Α. on the order of 10 times, 12 times. 6 7 And approximately how many times have you Ο. 8 given a deposition? 9 Α. I don't know the exact number, but I'd say it's 25 to 30. 10 All right. Now, I believe you started 11 0. testifying at about 1:15 this afternoon after a lunch 12 13 break; is that right? Yes, I think that's right. 14 Α. And we just finished up a couple of minutes 15 Q. 16 ago, and there was a 20-minute break involved, right? I believe so. 17 Α. So about two hours of testimony? 18 0. 19 Α. 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 checked this list off right -- you explained how 23 Aventail relates and invalidates the '135 patent. 24 25 A. Yes.

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Q. You compared Aventail to the '180 patent. 1 2 Α. Yes. 3 0. DVPN to the '135 patent. 4 Yes. Α. 5 DVPN to the '180 patent. Q. 6 Α. Yes. 7 Windows to the '135 patent. That's Windows NT 0. 8 4. 9 Α. Yes. 10 Q.. And Windows NT 4, you compared that to the '180 patent; is that right? 11 12 Α. Yes. 13 If you divide the two hours by the six 0. different combinations we just talked about, that's 14 15 about 20 minutes per combination; is that right? 16 Α. Sounds right. 17 Now, you were in the courtroom when Dr. Jones Q. testified about the infringement of the VirnetX patents, 18 19 weren't you? 20 Α. Yes, I was. And he testified, I think, for more than three 21 Q. 22 hours. Does that sound about right? 23 Yeah, I think so. Α. 24 It felt like it lasted forever at times, 0. 25 didn't it?

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Well, I won't answer that. 1 Α. 2 Q. Now, he proved that the RTC APIs -- or excuse 3 me. He explained, in his opinion, how the RTC APIs 4 5 infringe the '135 patent, right? Yes, that's right. 6 Α. 7 And he explained how the PeerNet APIs -- it's Q. 8 his opinion they infringe the '180 patent; is that 9 right? 10 Yes, I think that's right. Α. So if you split three hours in half, that's 11 0. about an hour and a half combination, isn't it? 12 13 Yes. That sounds right. Α. So you covered a lot more information in your 14 Ο. 15 direct testimony than Dr. Jones did, right? 16 Α. I think so. 17 Now, to get all that information covered, you Q. had to skip a few things that Dr. Jones did; isn't that 18 19 right? 20 Well, I wouldn't say I skipped a few things Α. 21 that he did. We did different things. It's my 22 understanding, from what I heard, that he was talking about infringement. 23 24 That's a particular kind of analysis, and he 25 was looking at a rather detailed system indicating where

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things were within that system. 1 2 I was pointing to references and 3 demonstrations simply showing that in three specific instances, the asserted claims were already being 4 5 practiced or had already been discussed before the 6 patents were applied for. 7 You covered the same claims, didn't you? Ο. 8 Α. We did. 9 Ο. 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? That's right. 13 Α. And so of the things you didn't do, you didn't 14 Ο. 15 show any of the Court's claim constructions during your 16 presentation, did you? 17 Α. I didn't show them. I did reference them many times. 18 19 Q. You didn't show any of the Court's claim 20 constructions, did you? 21 Α. I didn't put them on the screen, no. 22 And when you checked off the boxes on your Q. 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 Yeah. I probably could have checked them off Α.

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as we discussed each element, but then I would have been 1 2 going back and forth between my PowerPoints and the 3 charts, and so I just did it as efficiently as I could to not take up the Court's time. 4 5 Dr. Wicker, you checked them off one, two, 0. three, four, in rapid fire, didn't you? 6 7 Α. Yes. 8 Dr. Jones, on the other hand, went through, Q. 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 Now, let's talk about the legal standards that Q. 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 Yes, I was. Α. All right. And he discussed the legal 23 Q. 24 standards for evaluating the validity of a patent, 25 didn't he?

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Yes, he did. 1 Α. 2 MR. McLEROY: Would you put up Slide 3? 3 (By Mr. McLeroy) He told us a couple of times, 0. actually, that the granting of a patent by the U.S. 4 5 Patent & Trademark Office, however, carries with it the presumption that the patent is valid. 6 7 Do you see that? 8 Α. Yes, I do. 9 0. And then a little bit later on, he said that 10 same thing again, didn't he? Α. Yes. 11 12 Q. All right. He also told us --13 MR. McLEROY: If we could go to the next 14 slide. 15 (By Mr. McLeroy) -- that Microsoft has the Q. 16 burden of proving some of its invalidity defenses by a heavier burden called the clear and convincing evidence 17 18 standard. 19 Do you see that? 20 Yes, I do. Α. 21 Q. Did you reference the clear and convincing 22 evidence standard in your direct testimony? 23 I did in my analysis. I don't think I Α. 24 mentioned it in my testimony. 25 Q. You didn't mention it to the jury, did you?

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No, I didn't. 1 Α. 2 All right. Did you apply the clear and Q. 3 convincing evidence standard? Yes, I did. 4 Α. 5 Okay. Just making sure. Q. And the clear and convincing evidence standard 6 7 applies to every invalidity argument that you just made; 8 is that right? 9 Α. Yes. Yes. It's for both anticipation and 10 obviousness. Q. And Judge Davis --11 12 MR. McLEROY: If we look at the next slide. 13 (By Mr. McLeroy) -- also explained exactly 14 Ο. 15 what the clear and convincing evidence standard meant, didn't he? 16 17 Yes, he did. Α. He said, when a party has a burden of proof by 18 Ο. 19 clear and convincing evidence, it means that the evidence must produce in your minds a firm belief or 20 21 conviction as to the matter sought to be established. 22 Did I read that right? Yes, that's exactly right. 23 Α. 24 Now, that's a higher burden of proof than 0. 25 preponderance of the evidence, isn't it?

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Α. That's right. 1 2 Preponderance of the evidence is what the jury Q. 3 will be asked to apply when they evaluate Dr. Jones' opinions on infringement; is that right? 4 That's correct. 5 Α. And clear and convincing evidence, which is 6 Q. 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 Α. That's right. And despite your higher burden of proof, you 11 0. 12 spent approximately 20 minutes talking about each 13 reference, whereas Dr. Jones spent about an hour and a half talking about each accused product; isn't that 14 15 right? The timing you mentioned is correct. 16 Α. 17 Now, one thing you said in your direct Q. examination really, really caught my attention. 18 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 remember that? 22 23 Α. Yes, I do. 24 You testified -- and then, I guess, you talked 0. 25 about the sequence of steps that Mr. Cawley asked

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Mr. Pall to take with the system, right? 1 2 Α. Yes. 3 And you referenced the time that Mr. Cawley 0. asked Mr. Pall to type in www.ebay.com into the browser. 4 5 Do you remember that? That's correct, yes. 6 Α. 7 And when Mr. Cawley typed www.ebay.com into 0. 8 his browser, the VPN wasn't connected, was it? 9 Α. 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 Yes, that's fine. Α. 16 MR. McLEROY: Can the jury see it? 17 Is that better? (By Mr. McLeroy) Mr. Pall, he told us three 18 0. 19 things to look for when a VPN connection was 20 established. 21 Do you remember that? 22 Yes, I do. Α. 23 The first thing he told us to look for, if I Q. 24 remember correctly, was that you would hear a beep, 25 right?

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I can't remember the order, but I know that a 1 Α. 2 beep was involved, yes. 3 0. The second thing he told us to look for would be the ICON of a telephone down at the bottom right 4 5 corner of the screen next to the time display. Do you remember that? 6 7 Yes, I do. Α. 8 And the third thing he told us to look for, if Q. 9 I remember correctly, was he told us to look for the 10 ping connection that he tried. 11 Do you remember that? 12 Α. Yes. 13 He didn't tell us to look for a box on the Q. screen, did he? 14 15 No. The box are for --Α. 16 0. He didn't tell us to look for a box on the 17 screen, did he? 18 Α. Oh, no. And when Mr. Pall typed in -- and I believe 19 Q. 20 the address he typed in, domain name, was www.securewebsite.test.com. 21 Does that sound familiar? 22 23 Α. It sounds right. 24 Okay. And when he typed that in, you heard a 0. beep, didn't you? 25

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Α. I did. 1 2 Q. You were -- how far back in the gallery were 3 you; do you remember? I think I was on the second row, but I was 4 Α. 5 back there a ways. So close enough to hear the beep? 6 Q.. 7 I did hear the beep, yes. Α. 8 Q. And did you have a decent view of the screen? 9 Α. I did. 10 Q.. Okay. So you heard a beep. You saw the ICON show up in the bottom right corner of the screen, didn't 11 you? 12 13 Yes, I did. Α. And then finally, you saw him when he 14 Okay. Ο. pulled up the new window that had the ping command in 15 16 it. 17 Do you recall that? Yes. 18 Α. 19 He typed in ping, and after that, I believe it Q. showed where the echo response was received, right? 20 21 That's right. Α. 22 And he told us that that echo response would Q. 23 be an indication that a VPN had been established. That's correct. 24 Α. 25 Okay. Then if you recall, I think on Q.

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cross-examination, Mr. Cawley asked Mr. Pall to 1 2 disconnect the VPN again. 3 Α. That's right. So it was disconnected. And then he asked him 4 0. 5 to type in www.ebay.com; is that right? That's correct. 6 Α. 7 Ο. eBay.com is not a secure website, is it? 8 Α. No, it's not. 9 Q. When he typed it in, you heard a beep, didn't 10 you? 11 Α. 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 there was a telephone ICON. 14 15 Did you see the telephone ICON? 16 Α. No. But I'm pretty sure it did come on. 17 Were you too far in the back to see the Q. telephone ICON? 18 19 Α. 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 Α. Yes. 23 Q. And echo responses were received, right? 24 Α. That's correct. 25 And that's the indication Mr. Pall told us to Q.

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look for to see if the VPN connection had been 1 2 established. 3 Α. That's correct. I believe after that, Mr. Pall disconnected 4 0. 5 the VPN again; is that right? Yes. I think that's right. 6 Α. 7 And this time Mr. Cawley asked him to type in 0. 8 www.thisisnotasecurewebsite.com. 9 Do you recall that? 10 Α. Yes, I do remember that. Okay. And we heard the beep again, didn't we? 11 Ο. 12 We did. Α. 13 All right. We saw the ICON again, didn't we? 0. I'll assume it came on since we did beep and 14 Α. 15 ping. I don't recall seeing the ICON. 16 0. So we did the ping, also? 17 Α. Yes. Okay. After that happened, do you recall the 18 0. 19 question that Mr. Cawley asked Mr. Pall? 20 Α. No. You'd have to remind me. 21 MR. McLEROY: Could you put up Slide 14, 22 please, my slide? 23 (By Mr. McLeroy) This is the testimony from in Q. 24 the courtroom yesterday, and we took it from the Court's 25 transcript.

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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 is requesting access to a secure website? 4 5 Do you see that? 6 Α. 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. MR. McLEROY: Hopefully, I don't knock 11 12 this one over. 13 (By Mr. McLeroy) The question tracks the Q. 14 language -- I'm not sure you can see this. 15 I can see it. Thank you. Α. 16 -- of the second step of Claim 1 of the '135 0. 17 patent, doesn't it? Α. It does. 18 19 Q. Mr. Pall's answer was: The system is not 20 determining that specifically, sir. 21 Do you see that? That's correct. 22 Α. 23 Mr. Pall admitted that his demonstration did 0. 24 not meet this claim element of the '135 patent that you 25 checked off; isn't that right?

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That's incorrect, no. 1 Α. He said no, didn't he? 2 Q. 3 He said no, that the demonstration involving Α. eBay and this is not a secure website --4 5 Dr. Wicker, he said no --Q. MR. BOBROW: Excuse me, Your Honor. 6 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 (By Mr. McLeroy) Did you need to finish your Q. 13 answer, Dr. Wicker? Yes, I would like to finish my answer. 14 Α. The demonstration to the first secure 15 16 website --17 THE COURT: Excuse me, Doctor. Re-ask the question, if you would. 18 19 MR. MCLEROY: Oh, I'm sorry, Your Honor. 20 (By Mr. McLeroy) Dr. Wicker, Mr. Pall Q . 21 testified that his demonstration system did not 22 determine when the VPN DNS request transmitted is requesting access to a secure website; isn't that right? 23 24 I don't agree with that for the following Α. 25 reason. First --

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Dr. Wicker, was that his testimony? That's 1 Q. 2 all the question is. 3 Α. He's saying the system is not determining that specifically, sir. 4 5 Okay. Now, on your direct examination -- and Ο. this is the point that I wanted to get to originally 6 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? I believe what I said was that he was unable 12 Α. to contact eBay.com through a VPN connection --13 Dr. Wicker --14 0. 15 -- because eBay.com could not be reached Α. 16 through what was here in the Court. 17 Well, I'm sure the jury heard your testimony. Q. Did you or did you not say that the VPN connection 18 19 failed --20 Α. Yes. 21 0. -- when Dr. -- when Mr. Pall typed in 22 eBay.com? 23 It failed to reach eBay, absolutely. Α. 24 Dr. Wicker, my question is, did you or did you 0. not say that the VPN connection failed when Mr. Pall 25

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typed in www.eBay.come? 1 2 Α. I can't tell you exactly what I said. I can 3 tell you what I meant. There was a VPN connection to the server. There was no connection to eBay. You can't 4 5 reach eBay just through wires in this courtroom. You have to have access to the internet. 6 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 connection failed? 10 The VPN connection to the server was 11 Α. 12 successful. It did not fail. The attempt to connect to 13 eBay did fail. Sounds like a different answer than you gave 14 Ο. earlier, Dr. Wicker. I guess we'll figure out what the 15 transcript has to say. 16 17 You agree with me now, though, that the VPN connection did not fail. 18 19 It was successful in reaching a server, yes. Α. 20 Dr. Wicker, yes or no. Did the VPN connection Q. 21 fail? 22 It did not fail in reaching the server. Α. Dr. Wicker, please answer the question asked, 23 Q. 24 and give me a yes or no answer. Did the VPN connection 25 fail?

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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

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1 it either. This is the sticker. It says Windows 2000 2 Professional, doesn't it? 3 Α. Yes, it does. And then after we -- well, after we -- after 4 0. 5 Mr. Cawley and Mr. Pall went down underneath the table to look at the sticker, there was some confusion about 6 7 the date that Windows 2000 Professional was released. 8 Do you remember that? 9 Α. I don't remember confusion. There was a 10 discussion -- I think it was betas versus the regular release. I don't remember the details, no. 11 Let me see if I can refresh your recollection. 12 Q. 13 MR. McLEROY: Your Honor, could I approach the easel and find the timeline from yesterday? 14 15 THE COURT: Yes, you may. 16 (By Mr. McLeroy) Dr. Wicker, do you remember Q. 17 seeing this timeline? Yes, I do. 18 Α. 19 All right. And I think the February 15th, 0. 20 2000 date, that reflects the filing date of the '135 21 patent; is that right? That's correct. 22 Α. Then there was the July 2000 date, and 23 Q. Okay. I think that was the date that we found for the BIOS 24 25 software inside the client computer; is that right?

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Α. That's correct. 1 Now, then there's this other date here, 2 Q. 3 February 17, 2000, with a question mark. Do you remember when Mr. Cawley put that up on 4 5 the board? Yes. Now I do recall that. 6 Α. 7 Okay. And I believe the issue was, Mr. Cawley Ο. 8 thought that Windows 2000 Professional had been released 9 on February 17th; is that right? I -- I believe that's what he believed. 10 Α. And -- and two days after, that's two days 11 Ο. after the patent was filed; is that right? 12 13 Α. That's right. Now, Mr. Pall disagreed with him; is that 14 Ο. 15 right? 16 Α. I think there was a question as to whether that was the actual release date. 17 Mr. Pall didn't agree that that was the 18 0. 19 release date, right? 20 Α. 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 (By Mr. McLeroy) I searched on the internet Q.

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last night, and I wanted to find an answer to our 1 2 question. This was a press release from the Microsoft 3 website. Do you see that? It's pretty small, but I've 4 5 blown up part of it. It's got it on my screen so I can see it. 6 Α. 7 The title of this is: Gates ushers in next Ο. 8 generation of PC computing with launch of Windows 2000. 9 Do you see that? 10 Α. Yes, I do. All right. And then the very first sentence 11 0. 12 in this press release says: Microsoft chairman and 13 chief software architect, Bill Gates, officially announced today the worldwide availability of the 14 15 Windows 2000 Professional, and he listed some other operating systems. 16 17 Do you see that? Yes, I do. 18 Α. 19 Ο. This press release is dated February 17th, 20 2000, right? 21 Α. Yes, it is. 22 You would trust Mr. Bill Gates on things Q. related to Microsoft, wouldn't you? 23 24 Α. Yes, I would. 25 So you think it's pretty safe to say we can Q.

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take away that question mark now? 1 Yes, that was the official release date. 2 Α. 3 0. Thank you. All right. You covered three prior art 4 5 references during your direct examination, right? That's correct. 6 Α. 7 All right. I'd like to talk a little bit more Ο. 8 about Windows, and hopefully, if time permits, we'll get to talk about the other two. 9 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 case; is that right? 13 14 Α. That's correct. 15 And you understand, Dr. Wicker, that the law Q. 16 doesn't allow you to combine two or more items of prior 17 art to make out an anticipation; is that right? Α. That's correct. 18 19 And actually, the Judge gave us an instruction Q. 20 on this point the first day of trial, also. 21 MR. McLEROY: Could you pull up Slide 6? 22 (By Mr. McLeroy) He said: To prove that a Q. claim is anticipated by the prior art, Microsoft must 23 24 prove by clear and convincing evidence that each and 25 every limitation of the claim was present in a single

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1 item of prior art. 2 Do you see that? 3 Yes, I do. Α. So to make out an anticipation with respect to 4 0. 5 Windows NT 4, you need to show that all of the elements of the VirnetX's patents can be found in that version of 6 7 Windows; is that right? 8 Α. That's correct. 9 0. You can't combine that version of Windows 10 with, say, a later version of Windows to make out an anticipation, can you? 11 12 Α. No. You have to focus on a single version of 13 Windows. And in light of that, it's still your opinion 14 0. that Windows NT 4 anticipates VirnetX's patents; is that 15 16 right? 17 Α. That's correct. Now, to arrive at that conclusion, one thing 18 Ο. 19 you reviewed was the source code for the Windows 20 software system; is that right? 21 Α. That's correct. 22 And actually, I'd like you --Q. 23 MR. McLEROY: And if you could bring up 24 Plaintiff's Exhibit 864. 25 Q. (By Mr. McLeroy) And, Dr. Wicker, I believe

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there's a copy of that in your binder. 1 2 Α. Yes, I've got it. 3 MR. McLEROY: And if you could pull down to the bold text, the first two or three paragraphs. 4 5 Perfect. That's good right there. 6 Q.. (By Mr. McLeroy) This is a document you 7 prepared, isn't it? 8 Α. Yes, it is. 9 0. 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 That's correct, yes. Α. 13 And although the jury cannot tell from the Q. screen -- I'm going to hold it up -- it's 245 pages. 14 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? Yes. It's exemplary samples from the source 18 Α. 19 code. The source code is actually --20 That's right. This isn't all the source code, Q. 21 is it? 22 No, it's not. Α. 23 Q. No. 24 And what you did was you sort of picked and 25 choosed (sic) the portions of the source code you

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thought were important to your analysis; is that right? 1 2 Α. Yes. Well, I chose selections that were 3 exemplary of what I was saying how the system worked. And you prepared this? 4 0. 5 Actually, I had some help preparing it, but I Α. 6 directed what I wanted in it. 7 Okay. So you directed the content of this. Ο. That's correct. 8 Α. 9 0. The files -- every file that's in here, you 10 selected to put in there, right? Α. Yes. 11 12 Okay. And at the very top here, you explain Q. 13 exactly what this is. It's what we've been talking This exhibit contains key source code relating 14 about. 15 to Microsoft Windows NT 4 VPN functionality and AutoDial. 16 17 Do you see that? Yes, I do. 18 Α. 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 Α. Yes.

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And then if you look here, there's -- do you 1 Q. 2 see the line that says from colon? 3 Α. Yes, I did. Okay. And below that is sort of the location 4 0. 5 where you found this file in the source code files; is that right? 6 7 Α. That's right. 8 All right. And this one -- the part I want Q. 9 you to focus in, do you see about halfway into the first 10 line, it says winNT\_4.0\_build. Do you see that? 11 12 Yes, I do. Α. 13 And so that indicated to you that this came 0. from the Windows NT 4 system; is that right? 14 15 That's correct. Α. 16 0. Now, Dr. Wicker, I'd like you to turn to Page 17 174 of this document to see the file that you selected to include on that page. 18 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 Yes, I do. Α. 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.

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1 Do you see that? 2 Α. Yes, I do. 3 All right. It doesn't say that this file came 0. from Windows NT 4 like the other one did, does it? 4 No. This is beta 3 --5 Α. It doesn't say it, does it? 6 Q. 7 This is beta 3 for Windows 2000. You can see Α. 8 that right here. 9 THE REPORTER: Can you pull the 10 microphone down? THE WITNESS: Yes, ma'am. I'm sorry. 11 12 As you can see right here, it says Windows Α. 13 2000 beta 3. It's an early version of Windows 2000. (By Mr. McLeroy) It is. Windows 2000 -- let's 14 Ο. be clear on this -- in the beta 3, that was released in 15 16 1999; is that right? 17 If you'll look at the copyright right here, if Α. I can get it an arrow to appear. 18 19 THE WITNESS: Can you bring it down a 20 little bit and expand this copyright date for me? 21 Α. I think you'll find it says 1997. 22 (By Mr. McLeroy) Dr. Wicker, that wasn't my Q. Windows 2000 beta 3 was released in April 23 question. 1999, right? 24 25 A. Yes, I think that's correct.

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And even if we can't agree on the date, you 1 Q. 2 will agree with me that Windows 2000 beta 3 is a 3 different version of Windows than Windows NT 4, right? That's right. 4 Α. 5 Windows beta 3 was a test version, Yeah. 0. It wasn't the final version of Windows 2000. 6 right? 7 That's right. It was an earlier version. Α. 8 It had functionality and features that Windows Q. 9 NT 4 did not have; is that right? 10 Yes, that's correct. Α. 11 0. 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, Page 245, this portion of the document, a substantial 14 15 portion of the document, the last 70 pages, all comes from Windows 2000 beta 3. 16 17 That's right. Α. Do you have any reason to disagree with that? 18 Ο. 19 Α. No. No. That's correct. 20 Dr. Wicker, I thought you just told me that to Q. make out anticipation, you had to use a single prior art 21 22 reference; isn't that right? 23 Α. Yes, it is right. 24 But what you did is, you mixed and matched 0. 25 source code from different versions of Windows; isn't

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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

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put into this content -- into this document, didn't you? 1 2 Α. Yes. 3 But the last 71 pages are from a different 0. version of Windows other than Windows NT 4; isn't that 4 5 right? That's correct. 6 Α. 7 The next thing I'd like to talk about is Q. 8 regarding AutoDial. 9 AutoDial only reconnects a user. Do you agree with that? 10 Reconnect -- yes. I would say it reconnects 11 Α. 12 in the sense that you have to have connected once before 13 at some point in time. And its only function is to reconnect to a 14 0. 15 user, right? 16 Α. Yes, that's correct. 17 And you remember there was some disagreement Q. yesterday between Mr. Pall and Mr. Cawley about whether 18 19 AutoDial's only function was to reconnect a user. 20 Do you remember that discussion? 21 Α. Yes. 22 And I think it centered around the testimony Q. of a Microsoft engineer named Mr. Discolo? 23 24 Α. Yes. Now I recall what you're talking about. 25 Now, it sounds like you agree with Q.

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Mr. Discolo, right, that AutoDial only reconnects the 1 2 user, right? 3 Α. Okay. I have to be careful and make sure I understand your question. 4 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 No, no. Dr. Wicker, I'm referring to what you Q. referred to earlier, which is --11 12 Α. Okay. 13 -- you can't make the connection for the first 0. 14 time, right? It can only reconnect a user. 15 So when -- I understood --Α. Okay. Those were your words, weren't they? 16 0. 17 What I just said about the Amazon example --Α. the reconnection means I've been there once before, and 18 19 now I'm going to go there again. That's what I thought 20 you meant by reconnection. 21 And I'll stick with that definition. Ο. 22 Auto -- you want to stick with that? Α. Okay. I'll stick with that definition. You've been 23 0. 24 there once before, and if you want to do it for a second 25 or third or fourth time, that's a reconnection.

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Yes. That's fine. Α. 1 2 Q. So you agree with Mr. Discolo and Mr. Pall 3 that that -- and that definition of reconnection is the only use of AutoDial, right? 4 5 I wouldn't say it's the only use. It's Α. certainly a predominant use. 6 7 All right. Not the only use. Ο. 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 prepare your opinions, didn't you? 11 Yes, I did. 12 Α. 13 And you found him to be a credible source of 0. information on Windows AutoDial? 14 15 For the most part, yes. Α. For the most part. Well, I mean, let's see. 16 0. 17 The question was asked: What prior art VPN functionality in Windows do you have knowledge of? 18 19 Do you see that? 20 Yes, I do. Α. 21 Q. He said: I implemented the AutoDial feature 22 for Windows NT 4 shell release. 23 Do you see that? 24 Α. Yes, I do. 25 All right. Q.

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1 MR. McLEROY: Could you go to the next 2 slide? 3 (By Mr. McLeroy) He said: Do you know of 0. anybody else at Microsoft with as much knowledge about 4 AutoDial as you have? 5 6 Do you see that? 7 Yes, I do. Α. 8 Q. His answer was: No. 9 Α. Yes, that's right. 10 Q.. And then finally, he said -- was asked on the next slide: Would you say that you have full knowledge 11 of how AutoDial works and functions? 12 13 Do you see that? 14 Α. Yes. 15 And the answer was: Yes. Q. That's correct. 16 Α. 17 MR. McLEROY: Now, let's go to the next -- go to the next slide, please. 18 19 (By Mr. McLeroy) Here he was asked about what Q. 20 the functions for the AutoDial were, and he was asked: And AutoDial stores this database of connections 21 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.

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1 Q. Next question: Is that the only purpose that 2 AutoDial serves? 3 Do you see that? Yes. 4 Α. 5 Answer: That was the purpose that -- my Q. 6 implementation, that was the purpose. 7 Do you see that? 8 Α. Yes, I do. 9 Q. All right. 10 MR. McLEROY: Now, if you go to the next 11 slide. 12 (By Mr. McLeroy) We followed up on this. Q. We 13 asked him: Mr. Discolo, do you know if any -- or excuse me -- do you know if AutoDial has any other 14 functionality apart from reconnecting a user that has 15 become disconnected? 16 17 Do you see that? Yes, I do. 18 Α. 19 Ο. He said: Not that I'm aware of. 20 That's right. Α. 21 Q. And that's coming from the guy who actually 22 designed AutoDial in Windows NT 4; is that right? 23 That's right. Α. 24 Now, if AutoDial only reconnects a user, that 0. 25 means that the first time the connection is made, it has

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to be created another way, right? 1 2 Α. Yes. In that scenario, that's true. 3 Did you hear Mr. Pall explain exactly what 0. steps he had to do to create the VPN connection for the 4 first time in his demonstration? 5 When I saw the demonstration, he simply was 6 Α. 7 able to connect automatically right away. I --8 Q. That was the reconnection, right? 9 Α. There was no link failure, but he had 10 connected once before. And he didn't tell you what he had to do to 11 Ο. 12 connect the first time, did he? He didn't explain that 13 in Court yesterday in Court, did he? I don't believe he was asked. 14 Α. 15 He wasn't asked by his own attorney, was he? Q. He wasn't asked by anybody. 16 Α. 17 He wasn't asked -- he wasn't asked by his own Q. 18 attorney. 19 Α. No, he was not. 20 So we don't have any idea what had to happen Q. 21 to connect -- make that connection the first time; is 22 that right? 23 We don't know how the first connection was Α. 24 made. 25 Can you tell us how the first connection was Q.

```
made?
1
2
        Α.
             Actually, I don't know. I presume that the
3
  configuration table was set up for demonstration, and
  the first connection was made to test the configuration,
 4
5
  and then we're done.
            Dr. Wicker, the claim language over here in
6
        Q.
7
   the '135 patent says: Automatically initiating the VPN,
8
   right?
9
        Α.
             That's correct.
10
        Ο.
             We don't know how that VPN was initiated for
  the first time, do we?
11
12
        Α.
             No.
13
             All right. We're on a time limit, so let's
        Q.
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?
            Yes, that's correct.
18
        Α.
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
        Α.
            That's correct.
23
            What Mr. Saydjari testified about in Court
        Q.
24
   yesterday?
25
        A. Yes.
```

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Okay. Now, do you believe with absolute 1 Q. 2 certainty that you know what was demonstrated 12 years 3 ago, March of 1998, at that DARPA meeting? Well, I think the evidence is clear and 4 Α. 5 convincing as to what was presented. All right. So not absolute certainty, but you 6 Q. 7 do believe it meets the clear and convincing evidence 8 standard. 9 Α. Yes, it certainly does. 10 0. You didn't attend those meetings, did you? Oh, that's -- that's why I can't be absolutely 11 Α. certain. I wasn't there. I didn't see it and take 12 13 notes, but I've seen other people's notes, other people's testimony; I've read e-mail. 14 15 We'll talk about that. Q. I saw a lot of evidence. 16 Α. We'll talk about that. 17 Q. So you used the DVPN software, I assume, to 18 19 figure out what was shown at that demonstration? 20 Α. I didn't use it. I did study it. You didn't use it. 21 Ο. 22 Well, I guess you said you're relying on the testimony of some of the guys who actually created DVPN? 23 24 Α. That's correct. 25 Q. All right. One of those guys was a Dan

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1 Sterne; is that right? 2 Α. That's correct. 3 0. He was the team leader of the DVPN project? I can't remember his exact title, but I think 4 Α. 5 you're right. Okay. But he admitted that he didn't remember 6 Q. 7 the details of that demonstration very well; isn't that 8 right? 9 Α. That's correct. And he told us that he didn't do the 10 Ο. programming for that DVPN product, right? 11 12 That's correct. Α. 13 But -- but that's why you talked to Ο. Mr. Kindred; is that right? 14 15 One of the people that I referenced, yes. Α. You talked to Mr. Kindred. 16 0. 17 But Mr. Kindred -- do you remember when he started working at Trusted Information Systems, the 18 19 company that did that DVPN technology? 20 Α. I believe it was actually after the demonstration. 21 22 Q. It was a year and a half afterwards, wasn't 23 it? 24 Α. That's right. 25 Now, he wasn't even one working at the company Q.

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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.

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Well, does the name Domenic Turchi ring a 1 Q. bell? 2 3 Yes. He read several e-mails that I did read Α. that provided detailed technical information. 4 5 He didn't just write e-mails, though, right? Ο. I believe he had some responsibilities with 6 Α. 7 regard to the code and the demonstration itself. 8 I mean, Domenic Turchi was the only guy who Q. wrote the source code for that project, right? 9 10 Α. I recall that he was the main source code writer. I'm not sure he was the only one. But he 11 12 certainly was --13 Q. Let's look at the deposition, and we'll see what it says. 14 15 MR. McLEROY: Could you go to Slide 18, 16 please? 17 Q. (By Mr. McLeroy) This is Mr. Sterne's testimony. He said: Who was the individual, to the 18 19 best of your recollection --20 MR. McLEROY: Or actually, Slide 19. I'm 21 sorry. 22 (By Mr. McLeroy) This is question of Q. 23 Mr. Kindred. 24 He said: Mr. Kindred, do you have an 25 understanding of who -- of who wrote that code, that

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1 Dynamic VPN code? 2 Do you see that? 3 Α. Yes. Answer: My understanding was that Domenic 4 0. 5 Turchi had written most, if not all, of the code that existed at that time point that I was given. 6 7 Do you see that? 8 Α. Right. That's what I was refer --9 0. No one testified that anyone else, other than 10 Mr. Turchi, ever wrote that code; is that right? Α. No. 11 Now, who actually conducted the demonstration 12 Q. 13 at that March 1998 meeting? I believe it was Mr. Turchi. 14 Α. 15 That's right. Q. Now, you didn't speak to Mr. Turchi at any 16 17 point in the two years this lawsuit has been pending; is that right? 18 19 Α. I didn't know that he was available or I would 20 have. 21 Q. Did you ever try to look? 22 Personally, me? No. Α. 23 Do you know if your attorneys -- or excuse Q. 24 me -- Microsoft attorneys ever tried to look? 25 It's my understanding that they did. Α.

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```
They didn't find him?
        Q.
1
2
        Α.
             Apparently not.
3
             Well, Dr. Wicker, did you ever think to look
        0.
   him up on Google?
 4
5
             Nope. I didn't try that.
        Α.
             You've found people using the internet before,
6
        Q.
7
   haven't you?
8
        Α.
             Yes, I have.
9
        Ο.
             You use the internet and computers in your
   office, right?
10
11
        Α.
             Yes.
12
             And you've used Google before, right?
        Q .
13
        Α.
             Yes.
             All right. Do you remember from the
14
        Ο.
15
   deposition transcripts that you read that Trusted
   Information Systems was located in Maryland?
16
17
        A. Yes, that's correct.
18
        0.
             Okay.
19
                  MR. McLEROY: If you could go to Slide 20
20
   now.
21
             (By Mr. McLeroy) This is actually a Google
        Q.
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.
```

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And look, Google has a neat feature that gives 1 Q. 2 you phone book results for Domenic Turchi, Jr., in 3 Maryland. Do you see that? 4 5 Yes, I do. Α. His phone number is right up there? 6 Q. 7 Α. Yes. 8 Q. His address is right there? 9 Α. Yes, it is. 10 Q.. The city? Well, we assume it's him, but yes. 11 Α. 12 Q. And we'll assume it's him. I mean, let's talk 13 about that. Domenic Turchi, Jr. 14 15 You wouldn't expect a lot of them in Maryland, Α. that's true. 16 17 All right. You never did this search, did Q. 18 you? 19 No, I didn't. Α. 20 You know what I also thought to do -- do you Q. 21 use Facebook? 22 A. Yes, I do. 23 Q. Do you have an account? 24 Α. Yes, I do. 25 Q. So you know how that works.

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Facebook is another way to find people, right? 1 2 Α. Yes, it is. 3 I ran a search through Facebook, and you know 0. what? He's got a page. Did you think to do that? 4 5 No. I wasn't searching for people to talk to. Α. You didn't search for the person to talk to 6 Q. 7 that actually wrote the code and actually demonstrated 8 DVPN at this March 1998 meeting? 9 Α. There was a lot of evidence to go through 10 already. But wouldn't that have been the best evidence, 11 Ο. 12 the guy who actually wrote it and demonstrated it? 13 Α. I don't know. I don't know. Because you didn't talk to him, right? 14 0. 15 I did not talk to him, so I have no idea. Α. 16 Now, another piece of evidence you relied Q. 17 on -- so we've talked about the people you talked to. You did rely on the source code, right? 18 19 Α. Yes, I did. 20 But there were multiple versions of the code Q. 21 that were produced in this case; isn't that right? That's correct. 22 Α. 23 And that's because the operation and the 0. 24 functionality and the way DVPN worked changed over time; 25 is that right?