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BEFORE THE PATENT TRIAL AND APPEAL BOARD IN THE

UNITED STATES PATENT AND TRADEMARK OFFICE

TRIAL NOS.: IPR 2013-00082 through 2013-00087

PATENT NOS.:   5,978,791;   6,415,280;   7,945,544;

7,945,539;   7,949,662;   8,001,096

PATENT OWNERS: PERSONALWEB TECHNOLOGIES, LLC

& LEVEL 3 COMMUNICATIONS

PETITIONER: EMC CORPORATION & VMWARE, INC.

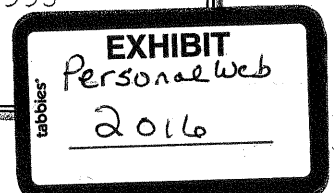INVENTOR: DAVID A. FARBER and RONALD D. LACHMAN

DEPOSITION OF

DOUGLAS W. CLARK, PH.D.

October 24, 2013

9:20 a.m.

Wilmer Cutler Pickering Hale And Dorr LLP

60 State Street

Boston, Massachusetts

Reporter: Rosemary F. Grogan, RPR, CSR No. 112993

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10   INDEX TO EXHIBITS

11   CLARK REPLY EXHIBIT

12   NUMBER   DESCRIPTION   PAGE NO.

13   Exhibit 1   Webpage Merriam-Webster   55

14   "Metadata" Definition

15   Exhibit 2   Webpage Webopedia.com   56

16   "Metadata" Definition

17   Exhibit 3   Excerpt from American   109

18   Heritage Dictionary

19   "Collection" Definition

20

21   (Original exhibits were retained by Attorney Rhoa)

22

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1   DOUGLAS W. CLARK, PH.D., having been

2   satisfactorily identified by the production of a

3   driver's license, and duly sworn by the Notary Public,

4   was examined and testified as follows:

5

6   CROSS-EXAMINATION

7   BY MR. RHOA:

8   Q.   Would you please state your name and address.

9   A.   **Douglas Clark, 2215 St. James Place,**

10   **Philadelphia --**

11   Q.   Sorry. Philadelphia?

12   A.   **Yes.**

13   Q.   Are you the same Douglas Clark who was deposed

14   earlier in these six IPR proceedings?

15   A.   **I am.**

16   Q.   And that earlier deposition was in July of

17   2013; is that right?

18   A.   **Yes.**

19   Q.   I'm going to hand you some documents, and I

20   will identify what I'm going to hand you on the record.

21   The first is your reply declaration in IPR 2013-00082;

22   then next is your reply declaration in IPR 2013-00083;

1 next is your reply declaration in IPR 2013-00084; next

2 is your reply declaration in IPR 2013-00085; next is

3 your reply declaration in IPR 2013-00086; and then we

4 have your reply declaration in IPR 2013-00087.

5   And we're not going to mark these as

6 separate exhibit numbers because each of these already

7 has an exhibit number on it. For instance, your reply

8 declaration in IPR 2013-00082 is identified as

9 Exhibit 1081.

10   Do you have your six reply declarations

11 in front of you?

12   A.   I do.

13   Q.   Are these the reply declarations that you

14 signed in these six IPRs?

15   A.   **I will refrain from checking every page, but I**

16 **believe they are.**

17   Q.   Next, I would like to hand you U.S. Patent

18 No. 5,649,196 to Woodhill, W-O-O-D-H-I-L-L, which is

19 identified as Exhibit 1005.

20   Do you have Woodhill in front of you?

21   A.   I do.

22   Q.   Is this the Woodhill document that you

1   referred to in your reply declarations?

2   A.   It is.

3   Q.   Next, I would like to hand you Exhibit 1004,

4   also known as Kantor, K-A-N-T-O-R.

5   Do you have Exhibit 1004 to Kantor in

6   front of you?

7   A.   Yes.

8   Q.   Is this the Kantor document that you referred

9   to in your reply declarations?

10   A.   It appears to be.

11   Q.   Any reason to believe that it's not?

12   A.   No.

13   Q.   Next I'm going to hand you a copy of U.S.

14   Patent No. 5,978,791 which is marked Exhibit 1001 in

15   IPR 2013-00082. Is this the '791 patent that you

16   referred to in at least one of your reply declarations?

17   A.   Yes.

18   Q.   Who drafted your six reply declarations?

19   A.   The drafting was done by me and the attorneys,

20   but the opinions represented in the drafts are all mine.

21   Q.   Who prepared the first drafts of each one?

22   A.   The very first drafts were the attorneys.

1   Q.   How many drafts did you remember exchange with

2   the attorneys?

3   A.   **The process was not so organized as that. It**

4   **was more -- there weren't like numbered drafts. There**

5   **were edits going back and forth and there were phone**

6   **conversations. And it was somewhat more haphazard then,**

7   **you know, first draft, second draft, final draft.**

8   Q.   Did the attorneys email you drafts and you

9   would redline them and email back to them?

10   A.   **Yes and vice versa.**

11   Q.   Which attorneys were emailing you drafts?

12   A.   **Mr. Dichiara, Mr. Lacey.**

13   Q.   How do you spell that?

14   A.   **L-A-C-E-Y. I am blanking on Corey's last name**

15   **but his first name is Corey. And I do not know Andrea's**

16   **last name at all, but his first name is Andreas (sic).**

17   Q.   Do you still have copies of those emails?

18   A.   **I have at least some. I'm not sure I have**

19   **all.**

20   Q.   You didn't delete any of those, did you?

21   A.   **I might have.**

22   Q.   How much time did you spend working on your

1   six reply declarations?

2   A.   So ballpark, more than 10 hours each. I would

3   say less than 30 hours each and different amounts for

4   different ones.

5   Q.   Have you been retained by any company other

6   than EMC or VMware in connection with any of the patents

7   involved in these IPR s?

8   MR. DICHIARA: Objection, outside the scope.

9   A.   I have not. Beg your pardon. Wait.

10   NetApps --

11   Q.   Anyone else?

12   MR. DICHIARA: I'm not sure if finished the

13   first answer before the second question came in.

14   A.   So NetApps, I had like a two-hour retention

15   which I think we discussed last time, and I forget when

16   that was; some time in the spring.

17   Q.   Anyone else?

18   A.   No.

19   MR. DICHIARA: Same objection.

20   BY MR. RHOA:

21   Q.   What did you do to prepare for this

22   deposition?

1   A.   I -- let's see. On my own, I reviewed the

2   declarations and the patents and the references. I had

3   phone conversations with the attorneys and the most

4   intense work has been in the last day I arrived on

5   Tuesday and we spent sometime Tuesday night and then all

6   of yesterday.

7   Q.   Who did you meet with?

8   A.   I met with -- I know what you mean.

9   Mr. Dichiara and Miss Vreeland and Mr. Lacey.

10   Q.   Are you taking any medications today that

11   could affect your testimony?

12   A.   So as I have -- may have explained last time,

13   I -- I have type one diabetes. I take insulin. And I

14   doubt that will affect my testimony. It's very unlikely

15   but it's not completely impossible.

16   Q.   So in these six IPRs, we have one IPR for the

17   '791 patent, one for the '280 patent, one for the '544

18   patent, one for the '539 patent, one for the '662

19   patent, and one for the '096 patent, right?

20   A.   Yes.

21   Q.   Is it your understanding that the

22   specifications of all six of those patents are the same?

1   A.   Yes.

2   Q.   If I refer to True Name patents, will you

3   understand that I'm talking about those patents?

4   A.   Yes.

5   Q.   In the specifications of these patents,

6   there's reference to filenames, addresses, origins,

7   things like that, right?

8   MR. DICHIARA: Objection.

9   A.   **I'm not positive about origins, but I believe**

10   **you.**

11   Q.   Do you have the '791 patent in front of you?

12   A.   **I do.**

13   Q.   Please refer to the '791 patent at column 3,

14   lines 29 through 35 in the Summary section. Are you

15   there?

16   A.   Yes.

17   Q.   Can you briefly read lines 29 through 35 and

18   tell me when you've read them?

19   (Witness doing as requested)

20   A.   **I have read them.**

21   Q.   So the specification refers to a data item,

22   correct?

1   A.   Yes.

2   Q.   The specification also refers to a name,

3 origin, location and address, correct?

4   A.   Yes.

5   Q.   Is the name part of the data item?

6   A.   No.

7   Q.   Is the origin part of the data item?

8   A.   No.

9   Q.   Is the location part of the data item?

10   A.   No.

11   Q.   Is the address part of the data item?

12   A.   No.

13   Q.   Is there a difference between determining

14 something and saving something?

15   MR. DICHIARA: Objection, outside the scope.

16   A.   **I do not understand the question.**

17   Q.   Do you have an understanding of what the word

18 "determining" means?

19   MR. DICHIARA: Same objection, outside the

20   scope.

21   A.   **In any particular context?**

22   Q.   In the context of the technology involved here

1   with these patents and the art cited?

2   MR. DICHIARA: Same objection.

3   A.   So I think at least one of the patents uses

4   the word "determining" in the claims. And "saving," the

5   word seems so ordinary and -- and not the same.

6   I'm not I'm not following the question.

7   Q.   Is there a difference between determining

8   something and saving something?

9   MR. DICHIARA: Same objection, outside the

10   scope.

11   A.   I need more context.

12   Q.   Would there be a difference between

13   determining a data item and saving a data item?

14   MR. DICHIARA: Same objection.

15   A.   Determining a data item? So first, I don't

16   understand what determining a data item might mean. So

17   I guess I'm not able to answer the question whether

18   there's a difference between determining and saving.

19   Q.   Would there be a difference --

20   MR. DICHIARA: Can he finish the answer?

21   Thanks.

22   Were you finished? Sounded like you were

1   still going. Sorry.

2 BY MR. RHOA:

3   Q.   Would there be a difference between

4 determining data and saving data?

5   MR. DICHIARA: Same objection, outside the

6   scope.

7   **A.   So again, I do not know what "determining**

8 **data" might mean. I need more context.**

9   Q.   What's your understanding of saving?

10   MR. DICHIARA: Same objection, outside the

11   scope; vague.

12   **A.   Very generally, keeping somehow.**

13   Q.   Is it safe to say the ordinary meaning of

14 saving is different than the ordinary meaning of

15 determining?

16   MR. DICHIARA: Same objection, outside the

17   scope; form.

18   **A.   So I'm sure if one opened a dictionary and**

19 **looked up "determining" and looked up "saving," you**

20 **would see different definitions, so yes.**

21   Q.   Is it safe to say the ordinary meaning of

22 copying something is different than the ordinary meaning

1   of determining something?

2   MR. DICHIARA: Same objections.

3   A.   Scoping and saving, ordinary meaning?   So I

4   may make a copy of a document by sticking it in a copy

5   machine.   Then I would have a copy.   I might save a

6   document by putting it -- it in a desk drawer.   Save it,

7   I might save it by putting it -- yeah, putting it in a

8   file, file cabinet, or something like that.

9   So I think they're different, ordinary

10   meanings.

11   Q.   Do you remember referencing the MULTIS,

12   M-U-L-T-I-S, lists from the Kantor document?

13   A.   Yes.

14   Q.   Is the MULTIS list for allowing a user to

15   choose which duplicate to save or delete?

16   A.   I think that's generally right.

17   Q.   Do you recall stating that in one of your

18   reply declarations?

19   A.   I don't recall that exact phrase, but I'm sure

20   there's something like that in there.

21   Q.   If you can refer to the -- refer to your reply

22   declaration regarding the '096 patent at page 17.

1   (Witness doing as requested)

2   BY MR. RHOA:

3   Q.   Are you there?

4   A.   Yes.

5   Q.   You see on lines 2, 3, and 4, you state that

6   "the user chooses which duplicates to save or delete

7   from the MULTIS file"?

8   A.   I see that.

9   Q.   So the MULTIS list could be used for saving or

10   deleting, right?

11   A.   Yeah. So the way it works is the MULTIS list

12   is -- presents a group of files that are -- have

13   identical content, but perhaps different names. And the

14   user has the ability to signal the deletion of -- the

15   user's intention to have deleted certain of those copies

16   and not certain others of those copies.

17   So in that sense, the ones -- the ones

18   that are deleted are deleted. And the ones that are not

19   deleted are saved. So it's saved in the sense of

20   rescued, I guess, not deleted.

21   Q.   A user can mark items on the MULTIS list with

22   a D, right?

1   A.   Yes.

2   Q.   Can one looking at the MULTIS list tell

3   whether files marked with a D have been deleted?

4   A.   **One could not tell only by looking at the**

5   **MULTIS list whether a file had -- had yet been deleted.**

6   **One learns from the MULTIS list the intention for future**

7   **deletion, but not a record of the -- of any actual**

8   **deletion.**

9   Q.   Does marking a file on the MULTIS list with a

10 D necessarily mean that that file will be automatically

11 deleted?

12   A.   **No. The file is deleted by running another**

13 **command to actually go and do the dirty work of**

14 **deletion.**

15   Q.   And that other command doesn't automatically

16 run simply by marking a file with a D, right?

17   A.   **That is right.**

18   Q.   So it's entirely possible that if a file gets

19 marked with a D in the MULTIS list, that it may, for one

20 reason or another, not end up getting deleted?

21   MR. DICHIARA: Objection.

22   A.   **It would not -- it would be peculiar for the**

1   user to mark the files for deletion and then,

2   essentially, forget to delete them. Everything is

3   possible. People can make mistakes.

4   But that's the way the system is supposed

5   to work. If you mark them with a D, then you're

6   supposed to delete them.

7   Q.   You think it would be peculiar for a user to

8   change his or her mind about something?

9   MR. DICHIARA: Objection, vague; outside the

10   scope.

11   A.   I assume you mean in the morning, mark

12   something with a D, and then an hour later, say, Oh, no,

13   I want -- I really meant that other file to be marked

14   with a D before running the actual delete command? Is

15   that a scenario you're --

16   Q.   That's one possible scenario.

17   A.   So I --

18   MR. DICHIARA: Objection, vague, outside the

19   scope.

20   A.   These are actions undertaken by humans, and I

21   assume people can change their minds in that sense,

22   sure.

1   Q.   So it's entirely possible that if a file gets

2   marked with a D on the MULTIS list, it doesn't

3   necessarily mean that that file is going to be deleted,

4   right?

5   MR. DICHIARA: Same objections.

6   A.   Under your changing-one's-mind scenario,

7   then -- then -- then that's true. The user could make

8   another decision before running the delete command. I

9   would call that, though -- actually, I would say that

10 that --

11   I'm imagining the user faced with a list

12 of -- list of files, maybe a big list of files, and

13 sticks some Ds in. And maybe goes to lunch and comes

14 back and sticks some more Ds in. And, you know,

15 reconsiders a previous decision and moves his Ds around.

16 I could see a lot of scenarios like that.

17   I would think that when the user runs the

18 actual delete command is when the user is kind of

19 committed to the Ds in the MULTIS file. It's like a

20 work in progress until that point.

21   Q.   What is the deletion command that you're

22 referring to?

1   A.   I cannot recall it exactly.   I would need to

2   search.

3   Q.   Is it on page 190 of Kantor?

4   MR. DICHIARA: Just for a break here.

5   (Interruption from door)

6   (Off Record Discussion)

7   (Record Read)

8   A.   I see the command on page 190 of Kantor.   I'm

9   not sure it's not in other places too.

10   Q.   What is that command called?

11   A.   He names everything after himself; fwkc17d,

12   all lower case.

13   Q.   So when the user hits that command, that

14   causes the files that were marked with D to be deleted,

15   right?

16   A.   Yes.

17   Q.   Does the MULTIS list itself delete files?

18   A.   No.   The MULTIS list is a record of -- well,

19   the list that is produced by the software is just a list

20   of the -- of the repeated contents signatures in the --

21   in the big database, in the CS list.   And then a person

22   annotates it with Ds to -- to instruct -- well, to give

1   input to the command that the user later runs to

2   actually do the deletion.

3   So it's not right to say the list itself

4   does any deletion.

5   Q.   After a user runs fwkc17d to delete files, is

6   the MULTIS list changed to reflect those deletions?

7   A.   I do not know. I could see it -- it going

8   either way. If you -- if there's not an automatic

9   removal of the -- I -- I guess it would be removal of

10   the filename with the D --

11   Q.   Is there any --

12   MR. DICHIARA: I'm not sure if he was finished

13   with his answer.

14   A.   And so I can see how it wouldn't be harmful to

15   leave the MULTIS list alone because after you've done

16   the round of deletion, you're kind of done with the

17   MULTIS list. That's what it was for. Next time you run

18   the program that generates the MULTIS list, you'll get a

19   fresh one.

20   So leaving it around seems harmless. I

21   can also imagine it might have been -- there might have

22   been some automatic removal of the -- of the deleted

1   **files from the MULTIS list.**

2   Q.   Does Kantor describe either of those

3   scenarios?

4   **A.   So that, I do not know.**

5   Q.   You're not aware of any description in Kantor

6   that describes modifying the MULTIS list after a

7   deletion occurs?

8   **A.   I would like just to check my declarations, if**

9   **that's all right?**

10   Q.   Sure.

11   (Witness reviewing)

12   THE WITNESS: So I'm ready for the question to

13   come again.

14   BY MR. RHOA:

15   Q.   You're not aware of any description in Kantor

16   that describes modifying the MULTIS list after a

17   deletion occurs, question mark?

18   **A.   That's correct.**

19   Q.   So as far as you're concerned, Kantor does not

20   describe that happening?

21   **A.   So I'm not aware of that happening, but it's a**

22   **big volume and -- and maybe there's something in there.**

1   Q.   As you sit here today, you're not aware of any

2   description in Kantor of modifying the MULTIS list after

3   deletion?

4   **A.   After the deletion command has been run, I'm**

5   **not aware of a description like that.**

6   MR. RHOA: Can we go off the record for a

7   second?

8   (Off Record Discussion)

9   BY MR. RHOA:

10   Q.   Is there an Exclude feature in Kantor?

11   **A.   Yes, there is.**

12   Q.   Does the Exclude feature in Kantor work

13   together with or separate from the MULTIS feature in

14   Kantor?

15   **A.   Let's see. So I would say separately. The**

16   **Exclude feature let's you mark files in the CS list, the**

17   **main database, that you wish to be permanently banned**

18   **from this system. So that anything with a matching**

19   **contents signature that anybody attempts to upload,**

20   **can't be uploaded. It's like a black list.**

21   **So that works with the CS list. I would**

22   **think the MULTIS list is a different feature allowing**

1   deletion of duplicates not banning forever of a

2   particular file.

3   Q.   With the Exclude feature, you say that allows

4   you to mark a file in the CS list, right?

5   A.   Yes.

6   Q.   In the Exclude feature, when you mark a file

7   in the CS list, what do you mark it with?

8   A.   I think it's X. Are you okay with I think --

9   Q.   Sure.

10   A.   -- because I could check?

11   Q.   Sure. That's fine.

12   In the Exclude feature of Kantor, when

13   you mark a file in the CS list with an X, that file that

14   you've marked does not get excluded, does it? It's

15   future files that would be excluded?

16   A.   No. So my understanding is that when you mark

17   a file with an X, that means you don't want any of these

18   in this list ever. You keep the entry so that future

19   attempts to upload things with the same contents

20   signature will fail.

21   But you also don't want the one you have

22   right now because it might be full of malware or

1   something. You want to exclude everybody including that

2   one.

3   Q.   So what happens to the file you marked with an

4   X, in your opinion?

5   A.   So that file is excluded also --

6   Q.   Where does Kantor say that?

7   MR. DICHIARA: Let him finish the first

8   answer.

9   A.   So it wouldn't make sense. The whole feature

10   wouldn't make sense to allow a -- a -- a file like that

11   to survive in the system.

12   What survives is the flag in the -- not

13   the flag. The line in the CS list that signals that no

14   future attempt to upload this file will be allowed.

15   Q.   Isn't the purpose of the Exclude feature to

16   prevent duplicate files from being uploaded?

17   MR. DICHIARA: Objection.

18   A.   No. It is to prevent -- it is to ban,

19   effectively, a certain -- a file -- file contents -- let

20   me back up.

21   It is to ban permanently any file that

22   has a certain contents signature.

1   Q.   Where does Kantor say that the file that you

2 marked with an X is excluded as opposed to future files

3 with the same signatures?

4   MR. DICHIARA: Objection, form.

5   A.   So I will look at my declaration and look at

6 Kantor, but it -- even -- it's got to be in there some

7 place. The system has to work like that because it just

8 wouldn't make sense otherwise.

9   Q.   Please look.

10   (Witness reviewing)

11   A.   So I was not able to find a description of

12 that. Back up and -- let's back up to the question,

13 actually.

14   Q.   Where does Kantor say that the file you marked

15 with an X in the CS list is excluded as opposed to

16 future uploaded files being excluded?

17   A.   So I'm going to -- I'm going to assume that

18 you mean actually the file in the list got deleted. I

19 don't want to say because excluded seems to be a term --

20 a -- I don't want to use -- back up.

21   I understand the issue to be whether

22 excluding a file that's in the CS list, namely which

1   exists in your system, causes the deletion of that file,

2   as well as the prohibition of uploading matching

3   contents signatures in the future.

4   And you were asking me to find support

5   for my view in the document. And my answer is, in part,

6   that I kind of don't need to because it's got to be in

7   there some place. It's got to work like that because it

8   doesn't make sense otherwise to have a file that, you

9   know, could have -- have a virus or whatever in your

10   system. That is not sensible.

11   I did find a suggestion in support of

12   that, although it does seem kind of obvious, that on

13   page 117, there's a way to send an excluded list to

14   another system. So that's contemplating putting a list

15   of -- of entries in -- a list of recommended exclusions

16   in the CS list format into a CS list in another system.

17   So that would establish the situation in

18   another system, where there was a line in the CS list

19   with an X, but no file, unless they already had a file.

20   MR. DICHIARA: Off the record.

21   (Off Record Discussion)

22   BY MR. RHOA:

1   Q.   Aren't the exclusions on page 117 referring to

2   things that were excluded when they were attempted to be

3   uploaded and there was a match found?

4   MR. DICHIARA: Objection, outside the scope,

5   form.

6   (Witness reviewing)

7   A.   So can I get the question again, please?

8   Q.   How do you know the exclusions on page 117

9   aren't future uploads that matched and were therefore

10   excluded?

11   MR. DICHIARA: Objection, outside the scope --

12   A.   So I'm interpreting the passage --

13   MR. DICHIARA: -- form.

14   A.   -- the second half of page 117, as a

15   suggestion that you can send a list of recommended --

16   essentially recommended exclusions to others. It says

17   make a file available to others. And they can load it

18   into their systems.

19   And I -- I cited that only for support

20   that it made sense to have a line that says "exclude"

21   without having the file. So that would be the

22   situation -- that would be the result of a deletion of

1   an existing file when someone decides to put the X in.

2   Q.   Let's take a look at page 81 of Kantor. The

3   Exclude feature is discussed there, right?

4   A.   Yes.

5   Q.   Doesn't page 81 of Kantor state that "future

6   uploads of the same material can then be quickly and

7   automatically recognized as redundant or duplicate"?

8   A.   I'm not seeing that. Can you just point me to

9   where on the page?

10   Q.   Bottom paragraph of page 81.

11   (Witness reviewing)

12   A.   So I interpret the bottom paragraph of page 81

13   to apply to the heading in the margin that says

14   exclamation point capital N and not to the excludes

15   thing in the margin. I think that ends in the line

16   remarking material for exclusion, C all caps exclude, et

17   cetera.

18   I think that's just describing some

19   different thing and not the Exclude feature.

20   Q.   Does Kantor ever describe deleting a file that

21   is marked with an X?

22   MR. DICHIARA: Objection, scope, form.

1   A.   So I've already said that I'm not aware of a

2   place where he describes deleting that exact file when

3   you put the X in there, as a consequence of putting the

4   X in there, although that must be what happens.

5   Is that what you meant?

6   Q.   Why do you say "that must be what happens"?

7   A.   The feature does not make sense otherwise.

8   Q.   Isn't it true that a file is excluded only if

9   a match is found?

10   A.   File is --

11   MR. DICHIARA: Objection --

12   A.   -- is --

13   MR. DICHIARA: -- form, scope.

14   A.   -- I would say that a -- I would put it this

15 way: That an attempted upload is -- is forbidden, which

16 I think is the meaning of excluded. Is forbidden if

17 it's contents signature matches a line that's marked

18 with an X in the CS list.

19   Q.   Right. So you have to, according to the

20 Exclude feature, you have to do a comparison in order to

21 exclude something that's trying to be uploaded?

22   MR. DICHIARA: Objection, scope, form.

1   A.   You -- you -- I -- I think that's about right.

2   I would say that the upload prohibition occurs because

3   your contents signature, the uploadee's contents

4   signature matched and excluded contents signature.

5   Q.   Is there any description in Kantor of deleting

6   a file under this Excludes feature without doing a

7   comparison?

8   MR. DICHIARA: Objection, scope, vague.

9   A.   So under that feature, you -- that matching is

10   required. So if by comparison you mean the comparison

11   of the two contents signatures, then that wouldn't work.

12   You would have to look at the two contents signature and

13   they have to match.

14   Q.   So if you deleted the file that had the X and

15   it wasn't in the system anymore, how could you do a

16   comparison?

17   A.   The line stays in the CS list. It's like a

18   warning. You delete the file, but you don't delete the

19   line in the CS list.

20   Q.   You can't find anything in all 225 pages of

21   Kantor that describes deleting a file when you mark it

22   with an X?

1   MR. DICHIARA: Objection, mischaracterizes.

2   If you want to look through all 225 pages to answer

3   that question, be my guest --

4   A.   I'm --

5   MR. DICHIARA: Let me just finish the

6   objection. Just for the purpose of that question

7   is mischaracterizing his testimony.

8   A.   **So I can't speak for all the pages. I didn't**

9   **look for that in particular. I don't really need to**

10   **look for that in particular because it must be in there**

11   **some place. The feature does not make sense.**

12   **Again, it does not make sense if you**

13   **leave the file around.**

14   Q.   You don't think it makes sense to have an

15   Exclude feature to prevent duplicate files from being

16   uploaded? You don't think that makes sense at all in

17   what Kantor's goal is?

18   MR. DICHIARA: Objection, mischaracterizes his

19   testimony, scope, and form.

20   A.   **So that is not my understanding of the purpose**

21   **of the Exclude feature and Kantor has other ways to**

22   **remove duplicates.**

1   Q.   What is your understanding of the purpose of

2   the Exclude feature then?

3   A.   It is, as I've said a few times now, banning

4   permanently any file whose contents signature matches

5   the excluded one including the one you now have at the

6   time -- well, sorry. Sorry. Right.

7   At the time you exclude by marking the X,

8   that file is around because it's in the CS list that

9   exists in your system. You mark the X. And not only

10   are future uploads of matching -- files with matching

11   contents signatures forbidden, but the one you have is

12   deleted.

13   Q.   And where does Kantor say this?

14   A.   So --

15   MR. DICHIARA: Same objections as before.

16   A.   -- we have been over this. I think it is

17   likely in there somewhere. On the other hand, the

18   meaning of exclude seems so clear to me that maybe it --

19   it isn't because maybe he doesn't need to be so

20   specific.

21   Q.   Where does Kantor say that you permanently ban

22   files marked with an X?

1   A.   That's -- that's my -- my, I guess, florid

2   interpretation.   I guess it's just a way of saying

3   exclude.   It's like a blacklist.

4   MR. DICHIARA: Just for the record, when you

5   said, I guess that's my?

6   THE WITNESS: Florid.

7   BY MR. RHOA:

8   Q.   This goal that you're talking about of the

9   Exclude list, where's that in Kantor?

10   A.   What do you mean "goal"?

11   Q.   What do you think the goal of the Exclude list

12   is?   I'm sorry.   What do you think the goal of the

13   Exclude feature is in Kantor?

14   A.   To make it impossible for the files with that

15   same contents signature to exist in the system.

16   Q.   Impossible?

17   A.   Impossible.

18   Q.   So if it's marked with a S, it won't stay

19   either?

20   MR. DICHIARA: I think you said S.

21   MR. RHOA: Right.

22   A.   Marked with an S?

1   Q.   What happens when there's a match found in the

2   Exclude feature?

3   A.   So I'm -- I assume you mean an attempted

4   upload of an excluded file matches -- well, you know

5   it's excluded because its content signature matches the

6   contents signature in the line marked X.

7   And while I don't know the details, I

8   know that the intent is that that file is not allowed in

9   the system.

10   Q.   Is it automatically deleted, in your opinion?

11   A.   I don't -- whatever partial remnants or copy

12 or whatever exists in the course of the attempted

13 upload, that goes away, but I don't know the details of

14 that.

15   Q.   Please go to page 103 of Kantor.

16   A.   Okay.

17   Q.   Top half, do you see the word "excluded"?

18   A.   Yes.

19   Q.   What does "if not S then zipfile deleted"

20 mean?

21   MR. DICHIARA: Objection, misstates.

22   A.   So I will need to study to give a precise

1   answer, but I assume that "if not S" means if there's

2   not an S already in the line or something like that.

3   Q.   And if there was an S in the line, would it be

4   deleted or not?

5   A.   So I need more context. I mean I don't --

6   this is a list of things, and one of things is excluded.

7   But I don't know what they're talking about actually in

8   this section, so I need to investigate.

9   Q.   Didn't you say that if there is a match, it

10   was automatically deleted?

11   (Witness reviewing)

12   A.   Yes, I did.

13   Q.   You stand by that?

14   A.   So I described the scenario of an exclude --

15   the attempted uploading of an excluded file. And when

16   you match, in the contents signature matches, you were

17   not -- you were not allowed to be uploaded.

18   And whether that involves deleting

19   some -- some data of -- involved with the attempted

20   upload, I don't know the details.

21   Q.   And if there's an S there, is it deleted or

22   not?

1   A.   So I would need to investigate. I would

2 assume the S is another line in the -- another flag in

3 the contents in the CS list, but I would need to

4 investigate to answer properly.

5   Q.   Go ahead. See if you can find the S.

6   MR. DICHIARA: For a question like that, you

7   should feel free look at the entire document, if

8   you need to.

9   (Witness reviewing)

10   A.   So progress report: I've been looking for

11 option S and not finding an explanation for it. So I'm

12 not able to answer the question at the moment.

13   Q.   Let's go to page 154 of Kantor.

14   A.   One what, I'm sorry?

15   Q.   154.

16   A.   Okay.

17   Q.   Is there a description on page 154 of Kantor

18 of what the X does in the Exclude feature?

19   A.   There is.

20   Q.   Where is that on page 154?

21   A.   Special Column _17 Flags. The very last thing

22 on page 154.

1   Q.   Can you read what it says?

2   A.   "X - eXclude" with a capital X, "to exclude

3   from the system any file, or any zipfile which contains

4   any file, whose contents_signature matches one marked

5   with this flag."

6   Q.   Does it say anything there about deleting the

7   file that's marked with the flag?

8   A.   While that is not stated here, it would be --

9   it would -- the feature does not make sense unless that

10 happens.

11   Q.   So you don't think that a goal or purpose of

12 the Exclude feature is to prevent duplicate files from

13 being uploaded?

14   A.   I do not. I mean duplicates, in the ordinary

15 sense. It prevents duplicates of duplicates and all

16 occurrences of excluded files.

17   Q.   Why would you want to prevent all occurrences

18 of a file?

19   A.   Simplest answer is malware.

20   Q.   Where does it say in Kantor that a purpose of

21 the Exclude feature is to address malware problems?

22   A.   I'm not sure that he says that. I don't think

1 **we had malware back then. But that's one reason to**

2 **exclude files.**

3   Q.   Is there anything in Kantor that you could

4 point to that supports your theory that the purpose of

5 the Exclude feature is for preventing files with malware

6 from being in the system?

7   MR. DICHIARA: Same objection. That type of

8   question, if you're going to ask him to review the

9   whole document, seems to be an invitation to do

10   that; otherwise it's mischaracterizing his

11   testimony.

12   **A.   So you could use the Exclude feature to**

13 **exclude files for any reason you like. I thought a file**

14 **that contained -- that you didn't care to run because it**

15 **had some evil property would be a -- a reason to exclude**

16 **that file.**

17   Q.   Does Kantor ever say that the Exclude feature

18 is for the purpose of addressing files with evil

19 properties?

20   **A.   No --**

21   MR. DICHIARA: Let me make my statement. Same

22   objection. That kind of question, does Kantor say,

1   is an invitation for him to read the whole

2   document.

3   **A.   So I'm...**

4   Q.   Are you aware of any statement in Kantor that

5 states that the Exclude feature is for the purpose of

6 addressing files with evil properties?

7   **A.   I doubt he uses --**

8   MR. DICHIARA: I object to the form of that

9 question.

10   **A.   I doubt that he uses the word "evil," but I**

11 **could not say, without looking closely, whether he**

12 **expresses a similar sentiment.**

13   Q.   When a file is marked with a --

14   **A.   Can I say, when you get to a good time for a**

15 **break, it would be fine with me but --**

16   Q.   Let's go one question and then we'll go for a

17 break.

18   **A.   Okay.**

19   Q.   When a file is marked with an X in Kantor, is

20 that file necessarily going to be deleted or not?

21   **A.   It is --**

22   MR. DICHIARA: Objection scope, form.

1   A.   -- it is going to be deleted because that's

2   the meaning of exclude. No, this file is not allowed.

3   It's excluded.

4   Q.   And it's not possible that it would end up not

5   being deleted, right?

6   MR. DICHIARA: Objection misstates, form,

7   scope.

8   A.   It's hard to say that something is not

9   absolutely possible, but I don't -- that is against the

10   idea of the feature.

11   Q.   You want to take a break now?

12   A.   I do. Thanks.

13   (Short Recess)

14   BY MR. RHOA:

15   Q.   In Kantor, if a file is deleted via the

16   exclusion process, is that file on the upload log before

17   it's deleted or only after its deleted?

18   MR. DICHIARA: Objection scope, form.

19   A.   I do not know. I could see it working either

20   way, but I do not know. I would have to do research in

21   the document to find out.

22   Q.   If a file in Kantor is deleted, is that file

1   still in the system or not?

2   A.   So that's a little bit of a tricky question,

3   not meaning to criticize you. But in computer

4   systems -- most people actually know this nowadays --

5   that when you delete a file, it's not the same as kind

6   of wiping it from the face of the earth. It's often

7   just a matter of preventing any reference to it.

8   So, for example, you might have some

9   blocks on a disk that constitute a file. And the way

10 you get to that file is because you have a directory

11 that has a way to point to the physical spot on the disk

12 where the file is. And if that directory entry is

13 deleted, then there's no way for you or anyone to refer

14 to the file as good as not bare even though the bits are

15 still lying around on the disk.

16   Q.   Is that how one of ordinary skill in the art

17 would have interpreted deleted as of 1995?

18   A.   Yes.

19   Q.   Does the CS list in Kantor list files that

20 have been deleted?

21   MR. DICHIARA: Objection, form.

22   A.   So it does, in the case of excluded files, it

1   lists a file that was deleted. In the case of --

2   Q. Could --

3   MR. DICHIARA: Let him finish his answer.

4   A. In the case of deletions, let's say, via the

5 MULTIS list, that gets reflected in the CS list. So I

6 would say no, those files are not.

7   So the regular deletion, the files leave

8 the CS list. The exclude deletion, the -- the -- sorry.

9 The entries leave the CS list, but for excluded files,

10 the entry does not leave the CS list.

11   Q. And you're assuming in your theory a file

12 marked with an X is deleted --

13   MR. DICHIARA: Objection, misstates

14   testimony --

15 BY MR. RHOA:

16   Q. -- when you answered that last question, you

17 were assuming your theory that files marked with an X

18 are deleted, right?

19   MR. DICHIARA: Objection.

20   A. I was assuming that the Exclude feature works

21 in the only sensible way.

22   Q. Other than the Exclude feature, deleted files

1   are not in the CS list, right?

2   MR. DICHIARA: Objection, scope --

3   A.   I would say --

4   MR. DICHIARA: -- form.

5   A.   -- there are times when they are. For

6   example, when you've made a MULTIS list to delete

7   duplicates -- I lost the question. I'm sorry.

8   Q.   Other than the Exclude feature, deleted files

9   are not in the CS list, right?

10   MR. DICHIARA: Objection scope and form.

11   A.   So no, that's not right because files that

12   have not yet been deleted, but are going to be deleted,

13   via the MULTIS feature, are still in the CS list.

14   Q.   The question asked you about deleted files.

15   A.   Actually deleted files?

16   Q.   That's what the question was. I'll read the

17   question a third time.

18   Other than the Exclude feature, deleted

19   files are not in the CS list, right?

20   MR. DICHIARA: Objection scope and form.

21   A.   There might be a time when the deleted file is

22   in the list, but -- but only for a short time because it

1   hasn't yet -- the CS list hasn't been brought up to

2   date, but not for long.

3   Q.   Are you aware of any statement in Kantor

4   indicating that the deleted files are in the CS list?

5   MR. DICHIARA: Objection scope and form.

6   A.   Other than the excluded ones, I'm not aware of

7   anything like that, but neither have I looked for it.

8   Q.   What's the purpose of the upload log in

9   Kantor?

10   A.   I'm going to look in my reports, if that's

11   okay?

12   Q.   Sure.

13   (Witness reviewing)

14   A.   So I believe the purpose of the upload log is

15   to keep a record of what happened when the upload was

16   attempted.

17   Q.   So the upload log reflects things that have

18   already occurred, right?

19   A.   Yes.

20   Q.   The upload log does not indicate future

21   activity, right?

22   A.   Let me back up on that a little. So it says

1   that you can...

2   (Witness reviewing)

3   A.   So I think it makes sense that the upload log

4   reflects things that happened in the past. But I think

5   it might include things that, you know, are about to

6   happen. As good as happened, but maybe haven't -- maybe

7   the entire thing hasn't happened yet.

8   I'm not sure, you know, when you write

9   the upload log compared to when you do the thing the

10   upload log reports.

11   Q.   Is the upload log the same as or different as

12   the CS list?

13   A.   It is different.

14   Q.   Are you on page 101 of Kantor?

15   A.   I am.

16   Q.   On page 101 is there an upload log?

17   A.   There is --

18   MR. DICHIARA: Objection, form --

19   BY MR. RHOA:

20   Q.   Upload log?

21   A.   There is an example of upload log, yes.

22   Q.   You see the paragraph right under that?

1   A.   Yes.

2   Q.   You see where it mentions option S?

3   A.   Yes.

4   Q.   Do you know what that means?

5   **A.   No. We talked about that before. I was**

6   **looking for what that might mean. But no, I couldn't**

7   **find it before, although I didn't look in the entire**

8   **document. I looked in the vicinity of this page.**

9   Q.   Can you tell, looking at page 101, what the S

10   does?

11   **A.   If I -- if I could, I would have said so**

12   **before. I cannot.**

13   Q.   So you saw it before, you just didn't --

14   **A.   You pointed this out before.**

15   Q.   You see where it says "option S saves rejected

16   files"?

17   **A.   Yes.**

18   MR. DICHIARA: And then it continues.

19   BY MR. RHOA:

20   Q.   You don't think this means that if there's an

21   S there, the file is saved, and if there's not an S

22   there, it's deleted or sequestered?

1   A.   I do not understand this fully. I don't --

2 rejected now seems -- I'm not sure what rejected is.

3 This -- this --

4   Q.   You don't think rejected is referring to

5 things that were excluded, do you?

6   MR. DICHIARA: Objection --

7   A.   I think it might --

8   MR. DICHIARA: -- form, scope.

9   A.   -- I think it might include things that were

10 excluded and perhaps other things, but I'm not sure.

11   Q.   So is it possible that things that are

12 excluded are saved if there's an S present?

13   A.   So that goes to your -- actually, you didn't

14 point that paragraph out before. You pointed out the

15 paragraph on page 103, which has the same language, "if

16 not S then zipfile deleted."

17   So I'm just not sure what -- what's being

18 talked about here without knowing more about what option

19 S is.

20   Q.   Is it possible that an excluded file is not

21 deleted if there's an S marking there?

22   A.   So again --

1   MR. DICHIARA: Objection, form and scope.

2   **A.   -- I don't know the purpose of S. And I**

3 **further wouldn't know the purpose of S with an excluded**

4 **file.**

5   Q.   You don't think S means save?

6   MR. DICHIARA: Objection, misstates, form and

7   scope.

8   **A.   S is -- save starts with S, but I don't know**

9 **that that's what that means. I would need to know more**

10 **about what that option S.**

11   MR. DICHIARA: And just for the record, when

12   I'm saying "scope," it's outside the scope of his

13   redirect. So I'm just using the short form for the

14   record. Outside the scope of his reply declaration

15   is what I should have said.

16 BY MR. RHOA:

17   Q.   Do you have your reply declaration regarding

18 the '096 patent in front of you?

19   **A.   Yes.**

20   Q.   Can you turn to paragraphs 12 and 13, please,

21 of that declaration?

22   **A.   Yes.**

1   Q.   Can you review paragraph 12 and 13 of this

2   reply declaration and tell me when you're done?

3   (Witness reviewing)

4   A.   Okay.

5   Q.   So are you saying here that metadata is not

6   data?

7   **A.   In the context of this document, I'm saying**

8   **that metadata is data that's -- with respect to a**

9   **particular data item, metadata is -- is, you could call**

10 **it, data because it's ones and zeros, what is data.**

11   **Metadata is about the data item and not**

12 **part of the data item.**

13   Q.   So is metadata data or not?

14   **A.   What do you mean by "data" 'cause everything**

15 **in the world is data at some level?**

16   Q.   I'm asking you, do you have an opinion about

17 whether metadata is data or not?

18   MR. DICHIARA: Objection, scope and form.

19   **A.   So in the context of this discussion, I'm**

20 **treating data as meaning the content of a file or -- or**

21 **a block or a segment, not the -- its name or owner or**

22 **path or anything like that.**

1   **In that context metadata is not data.**

2   Q.   Did you apply that context in all of your

3 reply declarations?

4   **A.   Yes.**

5   MR. DICHIARA: Objection, form. And for that

6   kind of question, you have to give him some time to

7   fairly answer that question.

8 BY MR. RHOA:

9   Q.   So would it surprise you to learn that you

10 called metadata data in another one of your reply

11 declarations?

12   MR. DICHIARA: Vague, scope.

13   **A.   Very much.**

14   Q.   Let's take a look at your reply declaration

15 for the '544 patent. Do you have it in front of you?

16   **A.   Mm-hmm. Yes, I do.**

17   Q.   Please go to paragraph 13 of your reply

18 declaration regarding the '544 patent.

19   (Witness doing as requested)

20   **A.   Okay.**

21   Q.   In the last two lines of paragraph 13, doesn't

22 it state that "extended attribute data is metadata"?

1   A.   Yes.

2   Q.   So aren't you saying there that metadata is

3 data?

4   MR. DICHIARA: Objection, misstates, scope --

5   A.   So --

6   MR. DICHIARA: -- and form.

7   A.   -- this is -- this is not exactly the same

8 context as the one that we were in on the '096

9 declaration. But still here, I'm distinguishing normal

10 data, the content one devoted -- sorry. Let me back up.

11   Normal data, as in the content of the

12 thing, and -- and extended attribute data, which is

13 about the thing, and the extended attribute thing data

14 is about it, is metadata.

15   Q.   So again, is metadata data or not?

16   MR. DICHIARA: Objection, form, scope, asked

17 and answered.

18   A.   In the context of both of these declarations,

19 I've got in the '096 declaration, I'm talking about just

20 data versus metadata. In here, I'm talking about normal

21 data versus extended attribute data.

22   And in the first context metadata isn't

1   the data that's the contents of a file. And here, the

2   metadata, extended attribute data, is not the normal

3   data that is the contents identifiers.

4   Q.   Is metadata data or not?

5   MR. DICHIARA: Same objections.

6   BY MR. RHOA:

7   Q.   Yes or no?

8   MR. DICHIARA: Same objection.

9   A.   So without -- without context, it's not a

10   yes-or-no question.

11   Q.   You have no opinion on whether metadata is

12   data, right?

13   MR. DICHIARA: Objection to form;

14   mischaracterizes the testimony.

15   A.   I haven't -- in the context of all of these

16   declarations, actually, metadata is not data.

17   Q.   So your position is that metadata is not data,

18   right?

19   MR. DICHIARA: Objection misstates, form --

20   A.   In the -- in the context of these --

21   MR. DICHIARA: -- and scope.

22   A.   -- in the context of this matter, metadata is

1   not data. And, in fact, in general, in the field, if

2   you had some data and some metadata, you wouldn't call

3   the metadata part of the data.

4   Now, you can say it's data in the sense

5   that it's made of zeros and ones, but lots of things are

6   made of zeros and ones. And lots of things could be

7   called data under that rubric in that context, I guess.

8   Q.   Would one of ordinary skill in the art

9   consider metadata to be data or not?

10   MR. DICHIARA: Objection form, outside the

11   scope, asked and answered.

12   A.   Again, it would depend on the context. If --

13   if one of skill in the art were speaking kind of

14   abstractly about zeros and ones in the world and talking

15   to freshman or something, you know, all data is made of

16   zeros and ones. And metadata is made of zeros and ones,

17   so maybe metadata is a kind of data.

18   But in the context in the matter before

19   us, metadata is not data.

20   Q.   Do you think it would be reasonable or

21   unreasonable for someone to say that metadata is data?

22   MR. DICHIARA: Objection, form and outside the

1   scope.

2   A.   In the context of this matter, it would be

3 unreasonable.

4   Q.   How about in the ordinary practice of this

5 art?

6   MR. DICHIARA: Same objections, asked and

7   answered, form, outside the scope of the reply

8   declaration.

9   A.   It would be pretty much unreasonable. A

10 person of -- practitioner of this art would think that

11 metadata was about the data, not constituent of the

12 data. That's, by its name, meta about -- well, it

13 doesn't mean about, I guess.

14   Q.   You think it would be unreasonable generally

15 for someone in this art to say that metadata is data?

16   MR. DICHIARA: Misstating the testimony,

17   outside the scope, and form, and asked and

18   answered.

19   A.   In any particular context in which there is

20 data and metadata where the meta part applies to the

21 first data, it would be unreasonable to call that data.

22   MR. RHOA: I would like to introduce -- let's

1   call this Exhibit 1 to this deposition, Clark Reply

2   Exhibit 1.

3   (Exhibit 1 marked for identification)

4   BY MR. RHOA:

5   Q.   Do you have Exhibit 1 in front of you?

6   A.   I do.

7   Q.   This is a Merriam-Webster definition of

8   metadata.   Do you see that?

9   MR. DICHIARA: Objection, form, outside the

10   scope.

11   (Witness reviewing)

12   A.   So I don't know the providence of this

13   document and I don't know if this is the only -- the

14   entirety of the definition, but I see that this is

15   apparently Merriam-Webster and offers one definition.

16   Q.   And what is the definition that

17   Merriam-Webster is giving to metadata?

18   A.   Data that provides information about other

19   data.

20   Q.   Do you agree with that definition?

21   A.   Sure.   This is exactly the context I was

22   speaking of before.   If you have -- if you have data and

1   metadata that is about that data, that the metadata

2   provides information about the first data. This is --

3   that's consistent. I mean this is data in the sense

4   of --

5   Q.   So you agree that one of ordinary skill in the

6   art as of 1995 would have considered metadata to be data

7   that provides information about other data?

8   A.   Yes, that's fair. That's consistent with what

9   I was saying.

10   MR. RHOA: Let's mark this Clark Reply 2.

11   (Exhibit 2 marked for identification)

12 BY MR. RHOA:

13   Q.   Do you have Exhibit 2 in front of you?

14   A.   Yes.

15   Q.   This is a definition of metadata from

16 Webopedia. Do you see that?

17   A.   I do.

18   Q.   Have you ever heard of Webopedia before?

19   A.   I think so, but maybe not.

20   Q.   Here metadata is defined as data about data.

21 Do you see that?

22   A.   That is the first sentence. It continues,

1   "metadata describes how and why and by whom a particular

2   set of data was collected and how the data is

3   formatted," which I think that's -- needs some work,

4   but...

5   Q.   Do you agree with the definition that's given

6   here for metadata?

7   (Witness reviewing)

8   A.   I don't -- I agree with the general notion

9   that's conveyed here. I think that is too particular

10   about metadata. Metadata is a more general concept to

11   me.

12   This definition says how and when and by

13   whom a particular set of data was collected and how the

14   data is formatted. And those things could be elements

15   of metadata, but that's not the entirety of metadata.

16   For example, metadata of a file would include its name.

17   And that's not listed in this list of particulars.

18   Q.   So you're more comfortable with the definition

19   that metadata means data that provides information about

20   other data?

21   A.   Yes.

22   Q.   Is the word "metadata" used in Kantor?

58

1   MR. DICHIARA: Objection.

2   BY MR. RHOA:

3   Q.   To your knowledge, as you sit here today, are

4   you aware of the word "metadata" being used in Kantor?

5   MR. DICHIARA: Outside the scope and the form.

6   **A.   I do not know.**

7   Q.   In Kantor a Zip file includes names, dates,

8   and comments, right?

9   MR. DICHIARA: Objection, outside the scope

10   and form.

11   **A.   In Kantor, and in the world, generally, a Zip**

12 **file includes names, dates and such, yes.**

13   Q.   In Kantor are the names, dates and comments

14 part of the Zip file?

15   MR. DICHIARA: Objection, form.

16   **A.   Yes, as -- as in the rest of the world, the**

17 **metadata is part of the Zip file.**

18   Q.   Shift back to your -- another one of your

19 reply declarations. Can you grab your reply declaration

20 for the '662 patent, please?

21   (Witness doing as requested)

22   **A.   I have it.**

1   Q.   Please turn to page 9.

2   MR. DICHIARA: Just one moment.

3   (Witness doing as requested)

4   **A.   I am there.**

5   Q.   Let me ask you first: Do you have a copy of

6   the '662 patent?

7   **A.   I do not.**

8   Q.   Here is a copy of the '662 patent which is

9   marked Exhibit 1001 in IPR 2013-00086.   So now you have

10   both the '662 patent and the reply declaration regarding

11   the '662 patent in front of you, right?

12   **A.   Yes.**

13   Q.   On page 9 of your reply declaration at lines 4

14   to 5, you say that the '662 patent "obtains a copy of

15   the file's True Name from the local directory

16   extensions, LDE, table."   Do you see that?

17   **A.   I see that.**

18   Q.   I would like to ask you to show me where the

19   '662 patent describes, in your opinion, obtaining a copy

20   of the file's True Name from the local directory

21   extensions table.?

22   **A.   Okay.   We're referring to the local directory**

1   extensions table and Figures 27A and B. The directory

2   extensions table has the, among other things, the True

3   Name in it. And that, I think, helps us understand that

4   what's happening here is, among other things, is that

5   the -- you want to delete a file, you get the file's

6   True Name from that table.

7   In fact, let me back up. From the exact

8   cited passage a few lines to line -- no, I cited this.

9   So the process of deleting a file for a given pathname,

10   so as you start with the pathname, and then you go to

11   the local directory extensions table and get a true

12   file -- a True Name and that leads you to the True file.

13   Q.   So is the word -- you're citing to the '662

14   patent in column 21 lines 51 through 58, right?

15   MR. DICHIARA: I think that misstates the

16   given line numbers.

17   A.   So the citation in the declaration goes to

18   column -- from column 21, line 51, to column 22, line 6.

19   Q.   In column 21, line 59, it already has a True

20   Name, right?

21   A.   Yes.

22   Q.   So my question is: Is obtaining the True Name

1   in column 21, you're saying from lines 51 through 58; is

2   that right?

3   MR. DICHIARA: Objection, misstates.

4   (Witness reviewing)

5   A.   I think that's right.

6   Q.   And how does it obtain a True Name?

7   A.   **Walks up to the local directory extensions**

8   **table with a pathname. And presumably that is organized**

9   **so you can look up stuff by pathname. And finds the**

10   **record depicted in Figure 3 from the local directory**

11   **extensions table that has that pathname. And then in**

12   **the next field, there is the True Name. Off you go.**

13   Q.   Why are you using the word "copy" in your

14   declaration in this respect, page 9, line 4?

15   (Witness reviewing)

16   A.   **Let's see. Copy obtains -- I suppose I could**

17   **have said it obtains a -- the True Name, but there would**

18   **be -- you know, in ordinary computer processing, it**

19   **would be -- you would find that thing and make a copy of**

20   **it into some variable, or whatnot, in your software.**

21   Q.   Does this portion of '662 patent say that you

22   make a copy of it?

1   A.   I do not see the word "copy," but a person of

2   ordinary skill in the art would understand that that's

3   an ordinary process of programming.

4   Q.   Is copying and saving the same thing or not?

5   A.   No.

6   MR. DICHIARA: Objection, scope and form.

7   BY MR. RHOA:

8   Q.   The '662 patent here, is the file deleted in

9   column 21, line 66?

10   MR. DICHIARA: Objection form.

11   (Witness reviewing)

12   A.   I would say that is incomplete. I would want

13   to use what the actual deletion process -- well,

14   actually for the deletion process, I would like to use

15   line 51 on column 21 through line 6 in line 22 because

16   that's the segment of the -- of the specification that

17   describes the deletion process which is not just getting

18   rid of a file. There's some other things that happen.

19   Q.   You see on column 22, it says "add entry to

20   the Audit file 132"?

21   A.   Yes.

22   Q.   Is that entry added to the Audit file after

1   the file has been deleted or before it's been deleted?

2   **A.   A person of skill looking at that would say,**

3   **in my opinion, that it doesn't matter whether that's**

4   **before or after.   These are two things that happen and**

5   **it could work either way.**

6   Q.   Well, I'm just asking what the patent says.

7   I'm not asking if it matters.

8   Can you tell if the patent is saying that

9   the entry to the Audit file 132 is done before or after

10   the file is deleted?

11   MR. DICHIARA: Objection, form of the

12   question.

13   **A.   Reading this sentence in isolation and just**

14   **reading it for what it says, it offers deletion, and**

15   **coma, and add an entry to the Audit file suggesting an**

16   **order.   But a person of skill reading this would**

17   **understand that there is no particular order specified**

18   **and that either order would work.**

19   Q.   So take a look at 27B.

20   **A.   Okay.**

21   Q.   You see step 430 says "delete True file"?

22   **A.   I see that.**

1   Q.   And then there's an arrow going to step 428

2   that says "add entry to Audit file"?

3   A.   Yes.

4   Q.   So I'll ask again: Is the file deleted before

5   or after the entry is added to the Audit file?

6   **A.   So I will say again, I guess, that while this**

7   **float chart depicts deletion before adding entry to the**

8   **Audit file, a person of skill would see other ways to do**

9   **this including reversing that order will still work.**

10 **The order is not important.**

11   Q.   Figure 27B does show the True file was deleted

12 before the entry was made to the Audit file, right?

13   A.   Yes.

14   Q.   In Kantor -- I'll withdraw that.

15   How are you doing, Dr. Clark, okay?

16 We're going to shift --

17   **A.   I'd rather be on the beach, but I'm okay.**

18   Q.   We're going to shift topics here. You want to

19 keep going?

20   **A.   Keep going.**

21   MR. DICHIARA: Can I make a request for a very

22   short break even if it's just a couple of minutes.

1   MR. RHOA: Yeah.

2   THE WITNESS: Like right now?

3   MR. DICHIARA: Yes.

4   (Short Recess)

5   BY MR. RHOA:

6   Q.   Do you have the Kantor reference in front of

7   you, Dr. Clark?

8   A.   **Yes.**

9   Q.   Please turn to page 55.

10   A.   **I'm there.**

11   Q.   On page 55, Kantor describes a contents

12   signature for a Zip file using the y procedure, right?

13   A.   **Yes.**

14   Q.   In Kantor's y procedure, the contents

15   signature of the Zip file is based on what you were

16   calling metadata in the Zip file, right?

17   A.   **The y format makes -- pretends the Zip file**

18   **were just the file and ignores its metadata, but treats**

19   **all of its internals as the -- as the contents.**

20   Q.   So in Kantor's y procedure, the contents

21   signature of the Zip file is based on what you are

22   calling metadata in the Zip file, correct?

1   A.   I think that's basically correct. I would

2   just like to clarify that the Zip file -- so the Zip

3   file has metadata about its own inner files, but there

4   is metadata about the Zip file itself like its name, and

5   its pathname, and the last time it was changed, and so

6   on.

7   So that is not in the contents signature

8   made under the y, but everything else is.

9   Q.   Can you give me some examples of what you're

10   calling metadata that is in the Zip file in Kantor?

11   A.   Easiest would be the name of the inner file.

12   Q.   Dates?

13   A.   Last written date. There's a Zip file format

14   that specifies exactly what's in there.

15   Q.   Comments?

16   A.   Yeah, I think comments is one of the entries.

17   Q.   So names, dates, and comments would be

18   examples of metadata that is part of the Zip file in

19   Kantor, right?

20   MR. DICHIARA: Objection, form.

21   A.   In fact, part of any Zip file.

22   Q.   So in Kantor's y procedure, Kantor's content

1   signature is based on this metadata of the Zip file,

2   right?

3   MR. DICHIARA: Objection, form.

4   A.   So that's correct because the y -- the y

5   procedure is pretending that the Zip file is not a Zip

6   file. It's just a regular file. So that's all content.

7   So it -- it zips it up. Sorry. It -- it makes a

8   content signature.

9   Q.   So in the y procedure isn't Kantor indicating

10   that the names, dates, and comments are part of the Zip

11   file's content?

12   MR. DICHIARA: Objection to form, outside the

13   scope.

14   A.   So the Zip file's content does include the --

15   the metadata of the inner files. That's the meaning of

16   the Zip file. That's what a Zip file is.

17   Q.   Can you turn to page 113 of Kantor?

18   (Witness doing as requested)

19   A.   I am there.

20   Q.   You see at the bottom of page 113, it says

21   "y-list contents signatures for all the files in a Zip

22   file," et cetera? You see that?

1   A.   Yes.

2   Q.   Is that talking about just listing the

3   contents signatures or is it accessing the Zip file?

4   MR. DICHIARA: Objection, vague, outside of

5   the scope, form.

6   (Witness reviewing)

7   A.   I lost the question. Sorry.

8   Q.   In this procedure here, this y-list procedure,

9   you see that?

10   A.   Yes.

11   Q.   In that y-list procedure, is Kantor just

12 listing the contents signatures or is Kantor accessing

13 the Zip file?

14   MR. DICHIARA: Objection to form, outside of

15   the scope.

16   A.   So I don't know, but I don't see a reason that

17 it needs to access the Zip file to do this. I would

18 need to research more thoroughly in the document.

19   Q.   Does this say anything about accessing the Zip

20 file here in these two lines that we're looking at?

21   MR. DICHIARA: Objection, scope.

22   (Witness reviewing)

1   A.   It does not say anything about it right here

2   in these two lines.

3   Q.   When Kantor performs the y-list procedure on

4   page 113, does Kantor obtain the contents signatures

5   from the CS list or from some place else?

6   A.   So I don't know but the CS list makes the most

7   sense to me.

8   Q.   A Zip file includes CRC values in it, right?

9   MR. DICHIARA: Objection.

10   A.   It does.

11   Q.   Are the CRC values in a Zip file metadata or

12   not, in your opinion?

13   A.   They are metadata.   They're about the data.

14   Q.   So on page 55 of Kantor, Kantor describes the

15   z procedure where he talks about a Zip file contents

16   signature or ZCS for Zip file, right?

17   A.   Yes.

18   Q.   Is the ZCS in Kantor based on the CRC values

19   in the Zip file?

20   A.   Yes, and on their lengths also.

21   Q.   So then the ZCS in Kantor is based on metadata

22   in a Zip file?

1   MR. DICHIARA: Objection to form, outside the

2   scope.

3   A.   ZCS, interesting. Yes.

4   Q.   Do you recall mentioning compression method

5 zero in some of your reply declarations?

6   A.   Yes.

7   Q.   Does Kantor ever mention compression method

8 zero?

9   A.   I do not know if he calls out compression

10 method zero explicitly, but he does mention the Zip file

11 format which includes compression method zero.

12   Q.   Are you aware of any statement, as you sit

13 here today, in Kantor, that refers to compression method

14 zero?

15   MR. DICHIARA: Objection, form of the question

16   and -- that's it.

17   A.   I do not recall a mention of compression

18 method zero. But since he does talk about ZIP files and

19 since ZIP files have compression method zero, it is kind

20 of implicit in Kantor that compression method zero is

21 part of the story.

22   Q.   Does Kantor ever describe a compression ratio

71

1   of one to one: Yes or no answer?

2   MR. DICHIARA: Objection to form, outside the

3   scope.

4   **A.   So I would --**

5   MR. DICHIARA: And also for that kind of

6   question, I'm just going to preserve my objection

7   on that as well for that kind of question. It's

8   sort of asking him about the whole document. And

9   to be fair, he should be able to review it.

10   **A.   So I assume -- so I don't know. But to answer**

11   **correctly, I would have to look through the whole**

12   **document. And I think both of us would rather I not do**

13   **that.**

14   Q.   As you sit here today, you're not aware of any

15   statement in Kantor referring to compression ratio of

16   one to one, right?

17   **A.   I am not aware of any particular statement,**

18   **although the Zip file has that possibility, so it's**

19   **implicit.**

20   Q.   ZIP files have a lot of other possibilities

21   too, right?

22   **A.   Yes.**

72

1   MR. DICHIARA: Objection, form, vague, outside

2   the scope.

3   **A.   Yes.**

4   Q.   In fact, ZIP files have many, many other

5 possibilities, right?

6   MR. DICHIARA: Objection misstates, outside

7   the scope, form.

8   **A.   It's a famously successful idea.**

9   Q.   Does Kantor describe a Zip file with a

10 plurality of uncompressed inner files therein? Yes or

11 no answer.

12   MR. DICHIARA: Objection, form, outside of the

13   scope.

14   **A.   So the form of the question, again, to answer**

15 **that, I would need to look. But I'm not aware of that**

16 **possibility being explicitly mentioned by Kantor. On**

17 **the other hand, it's a possibility with ZIP files, so**

18 **it's -- I regard it as implicit.**

19   Q.   Does Kantor ever describe jpeg images,

20 J-P-E-G?

21   **A.   I can't answer without looking, but I'm not**

22 **aware that he does. But again, it would be -- people**

1   understood that's jpeg is just another kind of file. It

2   can be a file file or a component of a Zip file.

3   Q.   So you think jpeg files would be implicit in

4   Kantor, right?

5   A.   It just talks about files without any limits,

6   so yes.

7   Q.   Kantor reads CRC values from ZIP files, right?

8   A.   Yes.

9   Q.   Does Kantor ever say that it would be

10   difficult or problematic to read CRC values from ZIP

11   files?

12   MR. DICHIARA: Objection. Same objections as

13   before in terms of the scope of the question.

14   A.   So I can't answer the ever-say question, but I

15   can answer am-I-aware-of-an-example question. And the

16   answer to that is no.

17   Q.   Does Kantor describe a PC connected to a BBS

18   where the PC creates a Zip file while it is connected to

19   the BBS?

20   MR. DICHIARA: Objection outside of the scope.

21   A.   I do not recall that, but to answer with

22   certainty, I would, of course, need to look thoroughly.

1   Q.   Please refer to your reply declaration for the

2   '539 patent.

3   (Witness doing as requested)

4   A.   I have it.

5   Q.   What, in Kantor, do you contend to be the data

6   item recited in claim 34 of the '539 patent?

7   A.   Could I have a copy of that patent?

8   Q.   I do not have a paper copy. I can give you an

9   electronic copy or look at it on my computer screen.

10   MR. DICHIARA: I can get you copies at the

11   next break --

12   MR. RHOA: Okay.

13   MR. DICHIARA: -- or maybe sooner.

14   MR. RHOA: Just review it for notes, just so

15   we don't have to go down that road.

16   MR. DICHIARA: Why don't you review it.

17   BY MR. RHOA:

18   Q.   Dr. Clark, I'm handing you a copy of the '539

19   patent. Do you have it in front of?

20   A.   I do.

21   Q.   So please refer to claim 34 of the '539

22   patent.

1   **A.   Okay.**

2   Q.   Now, the question is: What, in Kantor, do you

3   contend to be the data item that is recited in claim 34?

4   And I note in claim 34, there is data item, and then

5   there is a second data item. And I'm talking about the

6   data item.

7   **A.   The first one.**

8   Q.   Okay.

9   **A.   Yes, understood.**

10   **(Witness reviewing)**

11   MR. RHOA: While you're looking at that, off

12   the record.

13   (Off Record Discussion)

14   THE WITNESS: I am ready.

15   BY MR. RHOA:

16   Q.   Okay.

17   **A.   So the particular data item in line 5 of**

18   **column 45 of the '539 patent is the portion of the Zip**

19   **file made up of the contents of the various inner files.**

20   Q.   Now, what do you contend to be the second data

21   item of claim 34?

22   (Witness reviewing)

1   A.   So I'll go to my declaration on that. And I'm

2 on page 23, line -- sorry. Page 23, paragraph 37. And

3 the last three lines, "In fact, there are a number of

4 instances where Kantor discloses the contents signatures

5 of the inner files of the Zip file to form a second data

6 item."

7   And then in paragraph 38, one example is

8 the general format of a contents signature list such as

9 the master contents signature list, CS list.SRT, all

10 caps.

11   Q.   So is that entire CS list on page 24 of your

12 declaration, what you're calling the second data item?

13   A.   No. It would be the concatenation of the

14 contents signatures of -- so the second data item with

15 respect to a particular ZIP file would be in this

16 example, the concatenation of the contents signatures of

17 the inner files who had that ZIP file as a parent.

18   Q.   Where would that be?

19   A.   So the contents signatures are there in

20 column -- I guess he calls this column 1. And this

21 is -- this is not a concrete example, unfortunately.

22 But the thing where it says 32 bits CRC-32 bit length is

1   the content signature of a not ZIP file name.

2   So let's go to line 3. So there's --

3   that first thing is the contents signature of a random

4   file called filename.extension. And it is declaring

5   that it is an inner file of a file called

6   zipfile.extension. So the second item would be the

7   second -- sorry. Second --

8   MR. DICHIARA: Data item.

9   A.   -- data item would be the concatenation of --

10   for a particular ZIP file would be the concatenation of

11   all of the contents signatures of filenames that had

12   that particular ZIP file's name in column 5.

13   Q.   Where are they concatenated?

14   A.   So concatenated in, I could say, I guess the

15   sequence of those. The second data item is a subset of

16   the CS list with all of those 16 character content

17   signatures strung not.

18   Q.   Does Kantor ever disclose them being next to

19   each other?

20   A.   They are not disclosed as being next to each

21   other.

22   Q.   So then in claim 34, it calls for a True Name

1   of said second data item. Do you see that?

2   **A.**   **Yes.**

3   Q.   What are you contending is the True Name of

4   the second data item?

5   (Witness reviewing)

6   **A.**   **So I'm thinking that because this is a -- that**

7   **is combination of Kantor with Langer, that Langer gives**

8   **us that second one. But alas, I do not see that**

9   **exposition in this declaration and would need to look at**

10   **the original declaration to see that that's what I**

11   **meant.**

12   Q.   As you sit here right now, can you point to

13   anything in Kantor which you allege to be the True Name

14   of said second data item as required by claim 34 of the

15   '539 patent?

16   MR. DICHIARA: Objection, outside of the scope

17   of the reply declaration.

18   **A.**   **I would be happier if I could see the original**

19   **declaration to this patent.**

20   MR. RHOA: I don't have a copy. If you have a

21   copy and want to show him, that's fine.

22   MR. DICHIARA: Yes. We would have to get it

1   over the break and then show him over the break.

2   BY MR. RHOA:

3   Q.   So as you sit here right now, can you point to

4   anything in Kantor which you allege to be the True Name

5   of said second data item as required by claim 34?

6   MR. DICHIARA: Same objection.   And also just

7   noting Dr. Clark's comment that he would prefer to

8   see the original declaration to answer that

9   question, so I don't want any misimpression on

10   that.

11   (Off Record Discussion)

12   (Witness reviewing)

13   THE WITNESS: I don't need the declaration.

14   MR. DICHIARA: You don't?

15   THE WITNESS: No.

16   A.   A little brain fog there for the last few

17   minutes.   So let me talk myself through claim 34, if I

18   could.

19   So the particular data item is the

20   sequence of contents of the inner files and those are

21   the segments.   And the segment identifiers mentioned in

22   the claim are the contents signatures of those files.

1   Those appear, as I've said, in the CS list constituting

2   the second data item.

3   And then the data item for those is just

4   the ZIP file contents signature. It's the sum modulo 32

5   of CRCs combined with the sum modulo 32 of the length.

6   I apologize for my brain fog. That's

7   what I say.

8   Q.   Clause claim 34 says, "in response to a

9   request to access said data item, said request

10   comprising said data item identifier providing at least

11   said second data item."

12   Do you see that?

13   A.   Yes.

14   Q.   Okay. Can you explain where you allege that

15   to be found in Kantor?

16   A.   There, I do think I need the other

17   declaration. Is it still en route?

18   MR. DICHIARA: I'm just going to object.

19   That's outside the scope of his reply declaration

20   or at least preserve that objection.

21   And just Joe, so I don't have to keep

22   objecting on that stuff, if there is a part that

1   you think is in the reply declaration, where he's

2   commenting on, I won't litter your record with all

3   these objections.

4   (Witness reviewing)

5   **A.**   **Actually, I don't need the declaration. I've**

6 **got it here. So I address this in paragraph 41, bottom**

7 **of page 26. So where I say, continuing on page 27, "I**

8 **disagree, as I explained above, it would have been**

9 **obvious to modify read and download commands of a BBS to**

10 **take a zipfile contents signature (data item identifier)**

11 **as input, and provide the CRC values in a sequence of**

12 **bits in response. In fact, Kantor already implemented**

13 **the functionality to provide the inner file contents**

14 **signatures in response to Lookup request including a**

15 **zipfile contents signature when using the 'y form of the**

16 **TEST function.'"**

17   Q.   So you're saying, as I understand it, that

18 clause F of the '539, claim 34, is not in Kantor, but

19 you are alleging that it would have been obvious; is

20 that right?

21   **A.**   **No --**

22   MR. DICHIARA: Objection to form.

1   A.   So not quite because the functionality is

2   largely there.   It's just, it would be obvious to make a

3   read and download command to do clause F of the claim

4   element.

5   Q.   Are you saying that clause F of claim 34 is

6   described in Kantor or not?

7   A.   I'm saying the functionality that one would

8   need is described in Kantor.   But the request to access

9   said data item, would, while not explicitly disclosed,

10   it would be obvious to add.

11   Q.   Do you contend that Kantor discloses providing

12   the second data item in response to a request to access

13   the data item?

14   A.   So --

15   MR. DICHIARA: Same objection as to form and

16   scope.

17   A.   So the modified read would do that using the

18   functionality that is already present in Kantor, would

19   provide the list of the -- provide the inner file

20   contents signatures.

21   Q.   And you're saying it would have been obvious

22   to modify Kantor to do that?

1   A.   Yes.

2   Q.   Okay. Do you have Woodhill in front of you?

3   MR. DICHIARA: Can I suggest if we're going to

4   go into a different line of questioning, it might

5   be a good time for lunch?

6   BY MR. RHOA:

7   Q.   Dr. Clark, if that's your desire, that sounds

8   good to me.

9   A.   I'm always hungry.

10   (Off Record Discussion)

11   (Lunch Recess)

12

13   BY MR. RHOA:

14   Q.   Are we ready?

15   A.   We are ready.

16   Q.   You understand you're still understood oath?

17   A.   Yes.

18   Q.   Do you have a copy of Woodhill in front of

19   you?

20   A.   Yes.

21   Q.   Woodhill has a database 25, right?

22   A.   Time database 25, I see that in Figure 2.

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1   Q.   Is database 25 stored at the remote server 12

2   or not in Woodhill?

3   MR. DICHIARA: Objection, scope.

4   (Witness reviewing)

5   A.   So a reason that it is not stored at the

6   remote because of the language describing Figure 3

7   illustrate -- wait, wait, no.   Figure, where -- what was

8   I?

9   Figure 2.   So right, sorry.   At the

10   bottom of column 2 describing Figure 2, "Figure 2

11   illustrates the manner in which the Distributed Storage

12   Manager program of the present invention allocates the

13   storage space on each of the storage devices illustrated

14   in Figure 1."

15   And if I go to Figure 1, the storage

16   devices shown are the two disks on the local computers

17   20.

18   Q.   Server 12 is not a storage device, right, in

19   Figure 1?

20   A.   It does not show a storage device attached to

21   12, but it would, of course, need storage device to be a

22   file server.

1   Q.   So would one of ordinary skill in the art have

2   thought that backup server 12 was or was not a storage

3   device?

4   **A.   One of ordinary skill in the art would have**

5   **thought that backup server 12 included a storage device.**

6   Q.   So if backup server 12 includes a storage

7   device, what is your answer about whether or not

8   database 25 is at the backup server 12?

9   MR. DICHIARA: Objection outside the scope.

10   **A.   It is the same. I do not think that thing is**

11 **at the backup server.**

12   Q.   And why not?

13   **A.   Just the reasoning I just -- I just gave you,**

14 **that the text about the figures says where that thing is**

15 **and among them is not the backup file server.**

16   Q.   So in Figure 1, can you identify everything

17 that you contend is a storage device?

18   MR. DICHIARA: Objection outside the scope.

19   **A.   So it's a little tricky. The local computer**

20 **has a disk about which one wish to speak, so they have**

21 **boxes 19. But the user workstation certainly has a**

22 **storage device and the remote backup file server**

1   certainly has a storage device and --

2   Yeah, end of answer.

3   Q.   So the Woodhill patents at column 2, lines 59

4   through 62, says that "Figure 2 illustrates the manner

5   in which the Distributed Storage Manager program of the

6   present invention allocates the storage space on each of

7   the storage devices illustrated in Figure 1," right?

8   A.   That is what it says.

9   Q.   So you've now told me twice that there are

10   storage devices at the remote backup server 12. So I'm

11   trying to understand why the database 25 is not at the

12   remote backup server 12?

13   A.   I'm just reading the language literally. And

14   it says Figure 2 is about the storage devices in

15   Figure 1. And the -- interpreted literally, I would say

16   that that would mean the two disks.

17   Q.   So it's not implicit that the backup server 12

18   has a storage device, right?

19   MR. DICHIARA: Objection, misstates his

20   testimony.

21   A.   Any person of skill in the art would

22   understand that a backup file server doesn't make sense

1   without some storage device.

2   Q.   So you're saying that server 12 does have a

3   storage device?

4   A.   **Must have a storage device to store the files.**

5   Q.   So is it possible that for database 25 to be

6   also stored at the remote backup server 12 or not in

7   Woodhill?

8   MR. DICHIARA: Objection outside of the scope.

9   (Witness reviewing)

10   A.   **So I've just been looking for some call-out of**

11   **a storage device on the backup file server. And I don't**

12   **see anything explicit. But it would be, of course,**

13   **obvious to a person of skill in the art that such a**

14   **thing has to have a storage device.**

15   **It might be if I -- it might be if I**

16   **continue to look through the specifications, I would**

17   **find some mention of storage devices at the backup file**

18   **server, but it would be obvious.**

19   Q.   What's the purpose of the backup file server?

20   A.   **That's the place that the backups are stored**

21   **and managed in this system.**

22   Q.   So would it have to have a storage device?

1   A.   Yes --

2   MR. DICHIARA: Objection, asked and

3   answered --

4   A.   -- it would have to have --

5   MR. DICHIARA: -- outside of scope.

6   A.   It would have to have a storage device. Maybe

7   not No. 19 storage device, but a storage device of some

8   kind to make sense.

9   Q.   So is it possible that database 25 is also

10   stored at the remote backup server 12 in Woodhill or

11   not?

12   MR. DICHIARA: Objection outside of the scope.

13   A.   I don't think it's not possible -- sorry. I

14   think it is unlikely that that database is stored at the

15   remote backup.

16   Q.   Is it possible or not?

17   MR. DICHIARA: Same objection.

18   BY MR. RHOA:

19   Q.   You said "unlikely." Is it possible or not?

20   A.   Oh, it's possible, sure.

21   Q.   Woodhill describes a backup procedure, right?

22   A.   Yes.

1   Q.   During Woodhill's backup procedure, does

2   Woodhill compare a Binary Object Identifier with a prior

3   Binary Object Identifier for the same file or for a

4   different file?

5   MR. DICHIARA: Objection, vague.

6   A.   **The same file.**

7   Q.   So during backup, Woodhill can only tell if a

8   binary object for a given file is in that particular

9   file, correct?

10   MR. DICHIARA: Objection, form.

11   A.   **I think that's right. I understand that the**

12   **binary object is -- a binary object gets an identifier.**

13   **And if that it identifier has not changed from the last**

14   **one, then there is no need to back the new one up**

15   **because it's the same as the last one.**

16   Q.   So in Woodhill's backup procedure, Woodhill

17   cannot figure out if a given binary object exists in

18   other files that are at the remote backup server 12?

19   MR. DICHIARA: Objection, form.

20   A.   **So I -- I agree with that except for with the**

21   **following caveat: That, to me, the idea of a binary**

22   **object is that it is associated with a particular file.**

1 So it wouldn't make sense for a particular binary object

2 to be in any other file.

3   Q.   So if there are 100 files at the backup server

4 12, okay?

5   A.   Okay.

6   Q.   And during Woodhill's backup procedure,

7 Woodhill is backing up a binary object for one of those

8 files. Let's call it file No. 20, okay?

9   A.   Okay.

10   Q.   So Woodhill cannot determine if that binary

11 object is in any of the files 1 through 19 or 21 through

12 100, there at the remote backup server, right?

13   MR. DICHIARA: Objection, form.

14   A.   I wouldn't put it that way. Woodhill -- it's

15 not an inability of Woodhill. It's that that does not

16 make sense in Woodhill.

17   The binary object you're backing up

18 belongs to a certain file. So it doesn't exist in any

19 way in any of the other files.

20   Q.   Is it possible for a binary object to exist in

21 multiple files?

22   A.   No.

1   Q.   So explain that to me.

2   **A.   So that is the way --**

3   MR. DICHIARA: Objection outside of the scope.

4   **A.   So that is the way I understand Woodhill, is**

5 **it divides a file into binary objects.   And that's where**

6 **they are.   And another file gets other binary objects.**

7   **And there aren't -- there's no sharing of**

8 **binary objects between files.**

9   Q.   Let's say I'm an author and I write a book,

10 okay?

11   **A.   Okay.**

12   Q.   And, you know, it's a pretty long book with a

13 lot of pictures and stuff in it.   And at the end of

14 every day, I save my version in a different file.

15   So after day one, I have book draft one.

16 After day two, I have book draft two.   After day three,

17 I have book draft three.   After day 200, I have book

18 draft 200.   And let's say each page in that book is

19 binary object, okay?

20   **A.   Okay.**

21   Q.   The first page doesn't change through many of

22 the drafts, okay?

1   A.   I'm with you.

2   Q.   So you're saying that that first page binary

3   object cannot exist in the different files?

4   A.   **Your hypothetical was that you were not making**

5   **changes to the same file. You were starting over and**

6   **giving it a new name and having a new file on each day.**

7   **So every draft is a separate file. So**

8   **every draft's binary objects are separate from every**

9   **other draft's binary objects.**

10   Q.   Even though the first page is a binary object

11   and it's identical in all the drafts, you're saying it

12   still doesn't exist in more than one file?

13   MR. DICHIARA: Objection misstates testimony,

14   outside the scope.

15   A.   **The binary object, it does -- the way Woodhill**

16   **understands this is that the binary -- it doesn't make**

17   **sense for a binary object from one file to be in another**

18   **file despite the fact that the contents might be**

19   **identical.**

20   Q.   Can the contents of a binary object exist in

21   multiple files?

22   A.   **Oh, yes.**

1   Q.   So in Woodhill, the contents of a binary

2 object could be in 10 different files?

3   A.   Yes.

4   Q.   So in our hypothetical where there are a

5 thousand different files of book drafts, page 1 of the

6 book is always the same.

7   The contents of that page 1 binary object

8 are present in all 1,000 files, right?

9   A.   That is my understanding of Woodhill.

10   Q.   So when, if there are 100 files at the remote

11 backup server 12 and Woodhill is backing up a binary

12 object No. 20, okay?

13   A.   In some file?

14   Q.   I'm sorry. Woodhill is backing up a binary

15 object for file No. 20?

16   A.   I'm with you.

17   Q.   Woodhill cannot determine if the contents of

18 that binary object are in any of the files 1 through 19

19 or 21 through 100 at the remote backup server 12, right?

20   MR. DICHIARA: Objection outside of the scope,

21   improper hypothetical, form.

22   A.   The system does not do that.

1   Q.   So Woodhill cannot figure out if a given

2 binary object -- let me rephrase that.

3   Woodhill cannot figure out if the

4 contents of a given binary object exists in other files

5 in the system, right?

6   MR. DICHIARA: Objection, form, outside of the

7   scope.

8   **A.   That's right.**

9   Q.   Let's take a file that has 10 binary objects

10 numbered 1 through 10, okay?

11   **A.   Okay.**

12   Q.   Can Woodhill figure out if the contents of

13 binary object No. 1 exists as any of the other binary

14 object numbers 1 through 10 --

15   MR. DICHIARA: Objection.

16 BY MR. RHOA:

17   Q.   -- for that file?

18   MR. DICHIARA: I'm sorry. Objection, form,

19   outside of the scope.

20   **A.   That is not how Woodhill works in my**

21 **understanding.**

22   Q.   Why not? Why can't Woodhill figure that out?

1   MR. DICHIARA: Same objections.

2   A.   I don't like to phrase it, he can't figure it

3 out, but that's not what the system does.

4   Q.   Why doesn't Woodhill figure that out?

5   A.   It wasn't --

6   MR. DICHIARA: Asked and answered.

7   A.   Not the way the system was designed. He could

8 have figured that out, I guess, but that's not his

9 system.

10   Q.   So Woodhill cannot figure out if the contents

11 of a given binary object exists in other files in the

12 system or in other binary objects of the same file; is

13 that right?

14   MR. DICHIARA: Objection misstates, outside of

15   the scope, and object to the form of the question.

16   A.   So I would say -- I would not say he can't do

17 something. I would say his system doesn't do that.

18   Q.   But his system does not do that, right?

19   A.   Yes.

20   Q.   It does not do that?

21   A.   It does not do that.

22   Q.   So Woodhill cannot figure out if the content

1   of a given binary object exists only at the remote

2   backup server 12 because Woodhill cannot figure out if

3   the content of that binary object exists in other files

4   at the local computers, correct?

5   MR. DICHIARA: Objection outside of the scope,

6   form of the question.

7   A.   **I actually lost the scenario there.**

8   Q.   I'll read it back.

9   A.   **Okay.**

10   Q.   So Woodhill cannot figure out if the contents

11   of a given binary object exists only at the remote

12   backup server 12 because Woodhill cannot figure out if

13   the contents of that binary object exists in other files

14   at the local computers, correct?

15   MR. DICHIARA: Same objections, outside of the

16   scope and form of the question.

17   A.   **I didn't lose it this time. I think that is**

18   **correct. But again, I would say, I wouldn't say cannot.**

19   **That's not the way the system works.**

20   Q.   Woodhill does not do that?

21   A.   **Does not do that with respect to the contents,**

22   **the stream of bits that constitutes the binary object.**

1   Q.   Do you have Woodhill in front of you?

2   **A.   I do.**

3   Q.   Can you turn to claim 3 of Woodhill?

4   (Witness doing as requested)

5   **A.   Okay.**

6   Q.   Before I go down that road, let me ask one

7   other question.   I'm shifting backwards here, okay?

8   **A.   Okay.**

9   Q.   So similarly, Woodhill cannot figure out if

10   the contents of a given binary object exists only at a

11   local computer because Woodhill cannot figure out if the

12   contents of that binary object exists in other files

13   that are at the remote server 12, correct?

14   MR. DICHIARA: Same objections, outside of the

15   scope and form of the question.

16   **A.   So I think that's right with the proviso that**

17   **I still would rather not say that something can't**

18   **happen.   But rather that's not the way the system works**

19   **in my understanding.   And further that we are talking**

20   **about the sequence of bits and not about the binary**

21   **object, which Woodhill does establish as present here**

22   **and there because he's organized around binary objects**

1   **as pieces of particular files.**

2   Q.   Woodhill does not do that?

3   **A.   Does not do --**

4   MR. DICHIARA: Objection, vague, outside of

5   the scope.

6   BY MR. RHOA:

7   Q.   Does not do what we -- I'll withdraw it. I

8   understand what you're saying.

9   Back to claim 3 of Woodhill. Do you have

10   it in front of you?

11   **A.   I do.**

12   Q.   In claim 3 of Woodhill is in column 22; is

13   that right?

14   **A.   Yes.**

15   Q.   Above claim 3 is the bottom of claim 1. Do

16   you see that, the continuation of claim 1 that goes into

17   column 22?

18   **A.   Yes.**

19   Q.   At column 22, lines 3 and 4, it says "said

20   calculated Binary Object Identifier being saved as the

21   name of the associated binary object."

22   Do you see that?

1   A.   Yes.

2   Q.   Do you understand what the claims section of

3 Woodhill is and where that is?

4   MR. DICHIARA: Objection vague, outside of the

5   scope.

6   **A.   I understand where claims appear normally in a**

7 **patent and here they are.**

8   Q.   So you understand that the claims in Woodhill

9 are from column 21, line 56 up to column 24, line 47,

10 right?

11   **A.   Yes.**

12   Q.   Does Woodhill, other than in the claims,

13 describe saving a binary object identifier as the name

14 of the associated binary object?

15   MR. DICHIARA: Objection outside of the scope,

16   form.

17   **A.   I am not positive. I think not.**

18   Q.   Do you recall stating in several of your reply

19 declarations about Woodhill dividing something? Let me

20 rephrase that. I'll take you to something directly

21 here.

22   Do you have your reply declaration for

1   the '791 patent in front of you?

2   A.   Not on top yet. Yes.

3   Q.   On page 3 of that declaration, you state

4   "Woodhill's" --

5   MR. DICHIARA: Sorry.

6   BY MR. RHOA:

7   Q.   Do you have page 3 in front of you?

8   A.   I do. He doesn't.

9   MR. RHOA: Tell me when you're ready, Pete.

10   MR. DICHIARA: Okay.

11   BY MR. RHOA:

12   Q.   At the beginning of paragraph 5 on page 3, you

13   state: "Woodhill's backup procedure creates backup

14   copies of files by dividing each file into one or more

15   data streams."

16   Do you see that?

17   A.   Yes.

18   Q.   Can you identify where Woodhill discloses

19   that?

20   (Witness reviewing)

21   A.   Yes. Starting in column 7, line 40, I want to

22   go to the picture also. "Program control then continues

1   with step 132 where the Distributed Storage Manager

2   program 24 separates the file identified by the backup

3   queue record 75 currently being processed into its

4   component data streams."

5   And then I just want to check the -- what

6   the flowchart is 132.

7   (Witness reviewing)

8   A.   It's flowchart in Figure 5A and 132 is a box

9   that is labeled separate file info data streams --

10   sorry. Separate file into data streams.

11   Q.   Doesn't box 132 in Figure 5A of Woodhill

12   disclose separating a file into data streams where

13   streams is in the plural?

14   MR. DICHIARA: Objection outside the scope,

15   form of the question.

16   A.   It uses the plural of streams. But a person

17   of skill in the art looking at this would understand it

18   could be just one stream.

19   Q.   Please refer to column 7, where you cited in

20   Woodhill, column 7, lines 40 - 44. Are you there?

21   A.   I am there.

22   MR. DICHIARA: I am not.

1   (Interruption from court reporter)

2   THE WITNESS: I just now said, in answer to

3   Mr. Rhoa's question, I was reading from column 7,

4   line 40 through 44.

5   BY MR. RHOA:

6   Q.   Similarly, doesn't Woodhill, at columns

7   line 40 through 44, disclose separating the file into

8   multiple data streams, again, where streams is in the

9   plural?

10   **A.   I would give the same answer. That the word**

11   **"streams" is definitely in the plural, but a person of**

12   **ordinary skill in the art reading this would understand**

13   **that a file might have just one data stream.**

14   Q.   The letter S at the end of stream means that

15   streams is plural, right? You don't dispute that?

16   **A.   Well, looking at the word "streams" in**

17   **isolation, I would expect two streams.**

18   Q.   Two or more?

19   **A.   Two or more, right. But the phrase "process**

20   **into its component data streams" would mean to a person**

21   **of skill, you would separate the file into as many**

22   **streams as it has.**

1   Q.   Does Woodhill ever describe dividing a file

2   into one data stream?

3   **A.   Well --**

4   MR. DICHIARA: I'm going to object to that

5   form of the question. That form of the question

6   invites him to review the document. It's unfair to

7   ask the question without giving him an opportunity

8   to do that.

9   **A.   So I would say yes because this very sentence**

10 **disclose -- what was the question? Says? Discloses?**

11   Q.   Does Woodhill ever describe dividing a file

12 into one data stream?

13   **A.   So I would say this very passage describes**

14 **that with the understanding of a person of skill in the**

15 **art.**

16   Q.   Which passage are you referring to?

17   **A.   The same one, 740 to 43, essentially.**

18   Q.   And you would say that even though streams is

19 in the plural there?

20   **A.   Yes.**

21   MR. DICHIARA: Objection, asked and answered;

22   form of the question.

```
 1    BY MR. RHOA:

 2        Q.    Is there any place else in Woodhill where you

 3    would contend that that is disclosed?

 4              MR. DICHIARA:  Same objections as to form of

 5        the question and unfair to ask that question

 6        without giving him an opportunity to review it.

 7        A.    I would say at least at the figure where we

 8    just were.  The -- I forget what it was -- 5A.  Yeah, 5A

 9    box 132 separate file into data streams.

10        Q.    And again, that says "streams" in the plural,

11    right?

12        A.    Yes.

13              MR. DICHIARA:  Same objections as before.

14    BY MR. RHOA:

15        Q.    But you're alleging that means singular?

16        A.    I didn't understand.  Say --

17        Q.    Even though Box 132 in Figure 5A of Woodhill

18    says "separating into data streams," plural --

19        A.    Yes.

20        Q.    -- your opinion is that that means a single

21    stream?

22        A.    No.  My opinion is that means as many streams
```

1   as that thing has. The text at column 7 was a little

2   clearer about separating the file into its component

3   data streams; that is however make up the file.

4   Q.   Are there any other places in Woodhill where

5   you believe Woodhill describes separating a file into a

6   single data stream?

7   MR. DICHIARA: Same objections as before.

8   A.   So that would require me to go through every

9   column to make sure.

10   Q.   Are you aware of any other places in Woodhill,

11 as you sit here right now?

12   A.   I am not.

13   Q.   Please refer in Woodhill to column 4, lines --

14 let me back up. Different question:

15   Program 24 in Woodhill is the program

16 that handles the backup processes, right?

17   A.   Program 24? Is that from a figure?

18 Distributed storage management program.

19   (Witness reviewing)

20   A.   So that would -- I don't think that's all of

21 the program that does the backup function. I would

22 expect something at the backup -- what did they call it?

1   **The remote backup server.**

2   Q.   Refer to column 4 in Woodhill line 62 to 64.

3   Do you see that?

4   **A.   Yes.**

5   Q.   So the backup procedures of Figures 5A through

6   5L in Woodhill are all handled by program 24, right?

7   MR. DICHIARA: Objection misstates the

8   document.   You might want to look at the question.

9   MR. RHOA: I'll ask the question again because

10   it's a little weird on the screen here.

11 BY MR. RHOA:

12   Q.   Referring to Woodhill column 4 lines 62

13 through 64, Woodhill discloses that the program 24

14 handles the procedures of Figures 5A through 5L, right?

15   **A.   Is illustrated through by way of flowcharts in**

16 **5A and 5L.   That's what it says.**

17   Q.   Are there any backup procedures in Woodhill

18 that are not controlled by program 24, to your

19 knowledge?

20   **A.   Controlled?   To my knowledge, no.**

21   Q.   So let's go to column 4 of Woodhill now, lines

22 14 to 15, okay?   Are you there?

1   A.   Yes.

2   Q.   Woodhill states that "program 24 views a file

3   as a collection of data streams." You see that?

4   A.   Yes.

5   Q.   Does that indicate to you that a file is

6   separated into multiple data streams?

7   **A.   It does not -- that passage does not suggest**

8   **to me it must be separated in multiple data streams. I**

9   **continue to say that one date stream is fine.**

10   Q.   Does it indicate to you that a file is

11 separated into multiple data streams, that sentence?

12   MR. DICHIARA: Asked and answered.

13 BY MR. RHOA:

14   Q.   You didn't answer the question.

15   MR. DICHIARA: I --

16   **A.   So if you mean by multiple more than one, then**

17 **I would say that is not telling me that.**

18   Q.   So you think the phrase "collection of data

19 streams," where "streams" is in the plural, you think

20 that covers a single data stream?

21   **A.   Certainly, yes.**

22   Q.   And what's your basis of that allegation?

1   A.   That --

2   MR. DICHIARA: Objection.

3   A.   Two bases, really.   One is that is what a

4   person of ordinary skill in the art would understand

5   about this context.   And second, a collection doesn't

6   mean plural.

7   I can have -- you know, I can be a stamp

8   collector of triangular stamps with upside down

9   airplanes.   And I only own one of those in my collection

10 of one stamp.

11   Q.   One of ordinary skill in the art would

12 understand that streams with an S at the end means

13 multiple streams, right?

14   A.   Well --

15   MR. DICHIARA: Objection, asked and answered;

16   misstates testimony.

17   A.   So separated from the context, if you put the

18 word "streams" on a flashcard in front of a person of

19 ordinary skill in the art without telling the person

20 what sort of streams or any context at all, a person

21 would say that's plural.   That means more than one.

22   Q.   Is there any place in Woodhill where Woodhill

1   describes a file going into a single data stream?

2   MR. DICHIARA: Same objection as before, form

3   of the question is unfair to ask without giving an

4   opportunity to review.

5   A.   **So we've been to a few places like that where**

6   **I've said that a person of ordinary skill would say that**

7   **showing this file of being divided into its component**

8   **data streams which could be just one data stream.**

9   Q.   And all three of those places in Woodhill use

10   stream with an S on the end to be plural, right?

11   A.   **That is right.**

12   MR. DICHIARA: Objection, form.

13   BY MR. RHOA:

14   Q.   What's your understanding of the meaning of

15   the word "collection"?

16   A.   **Collection is not particularly a term of art.**

17   **I would say it's a set. I think it has the ordinary**

18   **colloquial meaning here.**

19   MR. RHOA: I would like to introduce an

20   exhibit Clark Reply Exhibit 3.

21   (Exhibit 3 marked for identification)

22   BY MR. RHOA:

1   Q.   Do you have Clark Exhibit 3 in front of you?

2   **A.   I do.**

3   Q.   Does this appear to be the excerpt from the

4   American Heritage Dictionary?

5   **A.   A very old one, yes.**

6   Q.   Is the word "collection" defined in Exhibit 3

7   in this dictionary?

8   (Witness reviewing)

9   **A.   Yes, it is.**

10   Q.   Are there any definitions of collection in

11   Exhibit 3 that you disagree with?

12   (Witness reviewing)

13   MR. DICHIARA: Objection to form, outside the

14   scope.

15   **A.   No, I don't disagree with any of them.**

16   Q.   So the definition that collection "means a

17   group of objects or works to be seen, studied or kept

18   together," do you think that's a reasonable definition

19   of collection?

20   **A.   Yes. And I further interpret that to mean**

21   **that the group of objects could have one object. My**

22   **stamp collection isn't not -- doesn't fail to be a**

1   collection just because I only have one thing.

2   Q.   Your testimony is that group can be one?

3   A.   Yes.

4   Q.   Don't you think that's a little strange?

5   MR. DICHIARA: Objection, argumentative; form

6   of the question.

7   A.   I don't find it strange, no, I don't.

8   Q.   So at Woodhill column 4, line 15, it says

9   "collection of data streams," right?

10   A.   Yes.

11   Q.   If we replace collection with group, it would

12   say "group of data streams," right?

13   A.   Yes.

14   Q.   And your testimony is that group of data

15   streams means one data stream?

16   A.   No.

17   MR. DICHIARA: Objection misstates.

18   A.   No. I would say it -- it includes the

19   possibility of one as interpreted in this context by a

20   person of ordinary skill in the art.

21   Q.   You don't think that the phrase, group of data

22   streams, requires multiple data streams?

1   MR. DICHIARA: Objection, asked and answered.

2   A.   So the hypothetical is the word "collection"

3 is replaced by the word "group." And then I put this in

4 front of a person of skill in the art. And what does

5 that person think about the possibility of one data

6 stream in that group.

7   And that person would say Fine with me.

8   Q.   Do you think Woodhill is actually describing

9 one data stream here?

10   MR. DICHIARA: Asked and answered multiple

11   times already.

12   A.   So he includes the possibility of one and all

13 of the algorithms that work with one.

14   Q.   Woodhill describes a granularization

15 procedure, right?

16   A.   Yes.

17   Q.   Is Woodhill's granularization procedure used

18 for large database files with multiple binary objects?

19   A.   Yes.

20   Q.   There are granules in Woodhill's

21 granularization procedure, right?

22   A.   Yes.

1   Q.   Are the granules in Woodhill named files?

2   MR. DICHIARA: Outside of the scope of reply

3   declaration; form of the question.

4   A.   **Can I be reminded of whether the named file is**

5   **something that somebody construed?   I don't remember.**

6   Q.   Use your ordinary meaning in the art of named

7   file, are the granules in Woodhill's granularization

8   procedure named files?

9   (Witness reviewing)

10   A.   **I think not.**

11   Q.   Do the granules have filenames?

12   A.   **I think not.**

13   Q.   Is a hash ever applied to multiple granules in

14   Woodhill?

15   A.   **Yes.**

16   MR. DICHIARA: Objection, form.

17   BY MR. RHOA:

18   Q.   So your testimony is that a hash is applied to

19   multiple granules in Woodhill?

20   A.   **Yes.**

21   Q.   Where?

22   A.   **When the shadow file that -- the shadow file**

1   of a binary object consisting of a sequence of granules,

2   when that shadow file is backed up, that shadow file

3   gets its own -- becomes it's own BOB. And gets its own

4   BOB ID. And there's a hash of that set of granules.

5   Q.   Is the shadow file a granule?

6   MR. DICHIARA: Objection, form.

7   A.   The shadow file is not a granule.

8   Q.   So let me ask the question again. Try to

9   listen to it and answer the question --

10   MR. DICHIARA: I don't like that tone. He

11   answered the question you asked. Maybe you didn't

12   ask the question --

13   BY MR. RHOA:

14   Q.   Is a hash ever applied to multiple granules in

15   Woodhill?

16   MR. DICHIARA: Objection to the form.

17   A.   Yes. And when that happens, the reason that

18   happens is that a shadow file, collection of granules,

19   is backed up by the ordinary file backup process. And a

20   hash is taken to compute the BOB ID for the BOB that

21   consists of the granules.

22   Q.   What's a shadow file made up of?

1   A.   Granules.

2   Q.   Really? Can you show me where in Woodhill it

3   says a shadow file is made up of granules?

4   MR. DICHIARA: I'm going to object as

5   argumentative.

6   (Witness reviewing)

7   A.   Oh, yes. I see where you are and I see your

8   frustration with me. So I'm not right.

9   So the shadow file is a collection of

10   granule hashes of content identifiers. I -- I beg your

11   pardon. More brain lock.

12   So a number of things I've said in the

13   last 5 or 10 minutes are, with that misunderstanding,

14   are not right.

15   Q.   Let me ask the question again. Let me know if

16   you don't understand it this time.

17   Is a hash ever applied to multiple

18   granules in Woodhill?

19   A.   You mean a single hash applied to multiple

20   granules?

21   Q.   That's what I mean.

22   (Witness reviewing)

1   MR. DICHIARA: Outside of the scope.

2   **A.   I think not.**

3   Q.   Is a hash ever applied to multiple binary

4 objects in Woodhill?

5   MR. DICHIARA: Same objection outside the

6 scope.

7   **A.   No, it isn't.**

8   Q.   Can you pull up your reply declaration for the

9 '544 patent, please?

10   (Witness doing as requested)

11

12   **A.   Yes.**

13   Q.   Turn to page 5. Are you there?

14   **A.   I am there.**

15   Q.   Last four lines of paragraph 7, you state "One

16 of ordinary skill in the art would understand that the

17 only logical place for shadow files to be stored is on

18 the disk drives of the local computer that stores and

19 processes the binary objects being backed up using the

20 granularization technique."

21   Do you see that?

22   **A.   Yes.**

1   Q.   Does Woodhill ever expressly state that?

2   MR. DICHIARA: Objection, form of the

3   question.

4   A.   I do not know whether he ever expressly states

5   that, but that would be the understanding of a person of

6   skill reading this. Not reading my declaration but

7   reading Woodhill.

8   Q.   Is it possible that shadow files are stored

9   somewhere else in Woodhill?

10   MR. DICHIARA: Objection form of the question.

11   A.   I don't know what other candidate there would

12   be. I'm finished.

13   Q.   Is it possible that shadow files could be

14   stored somewhere else in Woodhill?

15   MR. DICHIARA: Asked and answered; form of the

16   question.

17   A.   So I would say --

18   MR. DICHIARA: Outside of the scope.

19   A.   -- that is not what a person of skill would

20   think happens in Woodhill. There's always ways you can

21   redesign the system in different ways. But that's not

22   my understanding of what happens in Woodhill.

1   Q.   Is it possible?

2   MR. DICHIARA: Same objections, outside the

3   scope, form, asked and answered.

4   A.   I -- you can do things in a lot of ways, but I

5   think if you did that, you wouldn't be Woodhill.

6   Q.   Does Woodhill describe the format in which

7   shadow files are stored?

8   MR. DICHIARA: Objection form of the question.

9   A.   I don't believe so. On the other hand, a file

10   is a file and there's no particular format for this one.

11   Q.   Could Woodhill's shadow files be stored as ZIP

12   files?

13   A.   Oh --

14   MR. DICHIARA: Objection, improper

15   hypothetical, form of the question, outside of the

16   scope of the reply declaration.

17   A.   But intriguing. Could a shadow file -- you

18   can zip anything, so you can zip a shadow file, sure.

19   Q.   And Zip files existed at the time of Woodhill,

20   right?

21   MR. DICHIARA: Same set of objections; outside

22   the scope.

1   **A.   Yes.**

2   Q.   So multiple shadow files could be stored in

3 one ZIP file with Woodhill, right?

4   MR. DICHIARA: Same objection, improper

5 hypothetical.

6   **A.   You can zip anything, sure.**

7   MR. RHOA: No further questions on cross.

8 Reserve the right to recross if appropriate.

9   MR. DICHIARA: Short break?

10   MR. RHOA: Sure.

11   (Short Recess)

12

13   REDIRECT EXAMINATION

14 BY MR. DICHIARA:

15   Q.   Dr. Clark, do you recall a little bit earlier

16 that Mr. Rhoa was asking you some questions about

17 Woodhill and specifically asked you about the phrase

18 "collection of streams" and particularly just the word

19 "stream"?

20   **A.   Yes.**

21   Q.   All right.   Do you have Woodhill patent in

22 front of you?

1   A.   Yes.

2   Q.   I'm going to ask you to turn to column 2,

3   line 3. And you can actually start at the bottom of

4   column 1 through whatever, the preceding paragraph on

5   column 2, but I'm going to eventually direct your

6   attention to line 3.

7   (Witness reviewing)

8   THE WITNESS: Okay.

9   BY MR. DICHIARA:

10   Q.   And Mr. Rhoa didn't ask you any specific

11   questions about this passage, right?

12   A.   **He did hot.**

13   Q.   Line 3 refers to storing data files comprised

14   of one or more binary objects, right?

15   A.   **Yes.**

16   Q.   Do you have an opinion about how a person of

17   skill in the art would interpret Woodhill in connection

18   with a file comprised of one binary object?

19   MR. RHOA: Objection, form.

20   A.   **My opinion would be that it would not be**

21   **different from files comprised of more than one binary**

22   **object.**

1   Q.   Do you have an opinion whether a file

2   comprised of one binary object would have zero, one,

3   two, three, any number of streams? Do you have any

4   sense of how many streams would be involved for a file

5   with one binary object?

6   **A.   I think with one binary object, you would have**

7   **one stream.**

8   Q.   And you're certain about that; is that right?

9   **A.   I am not certain. It's just that makes sense.**

10   Q.   And then I'm going to also ask you to turn to

11   column 4. And specifically starting around line 15 and

12   extending down to about line 19, you see there that

13   there is a sentence that says "The data stream is

14   defined as distinct collection of data within the file

15   that may be changed independently from other distinct

16   data within the file," right?

17   So far so good?

18   **A.   Yes.**

19   Q.   And it says, "For example, a file may contain

20   its normal data and may also contain extended attribute

21   data."

22   Do you have an opinion about how a person

1   of skill in the art would interpret that second

2   sentence, where it says a file may contain its normal

3   data and may also contain extended attribute data, as it

4   relates to the number of streams that may be in a file?

5   **A.   So may contain this and may also contain that**

6   **suggests to me that a file may contain one or the other**

7   **or both or neither.**

8   Q.   And I believe that there were points where

9   Mr. Rhoa was asking you about directories. Do you

10   remember that?

11   MR. RHOA: Objection, beyond the scope.

12   **A.   I don't remember directories.**

13   Q.   Do you have an understanding about what a file

14   directory is?

15   **A.   Yes.**

16   MR. RHOA: Objection, beyond the scope of

17   cross.

18   BY MR. DICHIARA:

19   Q.   And do you have an opinion about whether a

20   directory is a collection of files --

21   MR. RHOA: Objection.

22   BY MR. DICHIARA:

1   Q.   -- or a group of files?

2   MR. RHOA: Objection, beyond the scope of

3   cross. It's also leading.

4   A.   **Do I have an opinion about whether a**

5   **directory --**

6   Q.   First, I'm going to ask if you have an

7   opinion, and then I'm going to ask you what that is.

8   MR. RHOA: Same objections.

9   A.   **I lost the question now.**

10   Q.   Do you have an opinion about whether a

11   directory is a collection of files?

12   MR. RHOA: Objection beyond the scope of the

13   cross.

14   A.   **In the computer biz, I do have an opinion.**

15   Q.   And what is that opinion?

16   MR. RHOA: Objection beyond the scope of

17   cross.

18   A.   **A directory can be a collection of files. It**

19   **can be a collection of other directories. It can be a**

20   **collection involving some files and some directories.**

21   Q.   Do you have any --

22   A.   **I think that's it.**

1   Q.   -- opinion about whether there's a limitation

2   on a minimum number of files in a directory?

3   MR. RHOA: Objection beyond the scope of the

4   cross.

5   BY MR. DICHIARA:

6   Q.   And if so, what is that?

7   MR. RHOA: It's also leading.   Same

8   objections.

9   **A.   I also have -- I lost the question again.**

10   Q.   Do you have an opinion about whether there is

11 a minimum number of files in a directory?   And if, so

12 what is that?

13   MR. RHOA: Objection beyond the scope of

14   cross.

15   **A.   Yes, zero.**

16   Q.   Even though it says "files"?

17   **A.   I've had directories with nothing in them.   I**

18 **have plenty of those.**

19   Q.   And do you have the exhibit Mr. Rhoa handed

20 you earlier, Clark Reply Exhibit 3?   It's the

21 dictionary.

22   **A.   Now I do.**

1   Q.   And he asked you about the definition of

2   collections in connection with this dictionary, right?

3   A.   Yes.

4   Q.   And there's several definitions there, right?

5   A.   Yes.

6   Q.   And if you take a look at some that say things

7   like a collection of monies as in church with a sum

8   collected, do you have an opinion about whether there's

9   any minimum amount of money that must be collected for

10   that definition?

11   MR. RHOA: Objection, leading.

12   BY MR. DICHIARA:

13   Q.   And if so, what is that?

14   MR. RHOA: Objection, leading.

15   A.   I hope that churches always collect some

16   money, but I don't see any limit to -- lower limit to

17   the amount they could collect.

18   Q.   Okay. So I'm going to move on to Kantor, the

19   Kantor exhibit behind you?

20   A.   I left him on the floor.

21   Q.   Okay. So that's the one that's marked EMC

22   1004 in the lower right-hand corner?

1   A.   Yes.

2   Q.   And I'm going to ask you to turn to pages --

3   bottom of 2 to 3. And that's the real 2 and 3, not the

4   preface 2 and 3?

5   A.   **Where there are little Roman numerals ii and**

6   **iii?**

7   Q.   Right, which should say in the upper right

8   corner "page 2." Just like that. (Indicating)

9   The Overview and Introduction section, if

10   that helps you?

11   A.   **I'm on page 2.**

12   Q.   You see at the bottom where it says "purpose"?

13   I would like you to review that and the bridging

14   paragraph on the top of page 3.

15   (Witness reviewing)

16   THE WITNESS: Okay. I've read that.

17   BY MR. DICHIARA:

18   Q.   All right. And when Mr. Rhoa was asking you

19   questions before about compression, he didn't direct to

20   you that passage, did he?

21   A.   **No.**

22   Q.   And in that passage, it says "FWKCS can

1 produce a kind of contents signature," quote/unquote,

2 "which does not depend on filenames, dates, order of

3 collection, nor method nor amount of compression." And

4 then it continues on, right?

5   A.   Yes.

6   Q.   Would a person of skill in the art have an

7 understanding about what Kantor was saying when he was

8 saying "nor method nor amount of compression?

9   **A.   I think it's pretty clear on its face, but**

10 **clearer still, when you realize he's talking about Zip**

11 **files which will shortly be, I guess --**

12   Q.   What is that understanding that someone would

13 know from reading that passage?

14   **A.   Knowing that it's a Zip file, it's -- there's**

15 **various methods of compression, and -- and they achieve**

16 **various amounts of compression. And one of the methods**

17 **that achieves no amount of compression.**

18   Q.   And that would be method zero; is that

19 correct.

20   **A.   That's correct.**

21   Q.   And do you recall that Mr. Rhoa was asking you

22 about the Exclude feature earlier?

1   **A.   Yes.**

2   Q.   I would like you to turn to page 205 and 206

3   of Kantor.

4   (Witness doing as requested)

5   BY MR. DICHIARA:

6   Q.   And just to point you, there's a Section 6

7   that says "protecting against abuse."

8   Now, Mr. Rhoa didn't point you to that

9   section when he was asking you about exclude, right?

10   **A.   Nor I him.**

11   Q.   So I'm going to ask you to review that and I'm

12   going to ask you about the exclude mentioned there. So

13   that would be the particular area of emphasis.

14   (Witness reviewing)

15   THE WITNESS: Okay.

16   BY MR. DICHIARA:

17   Q.   Okay. Do you see the sentence there where he

18   says -- It says "exclude". And then it says "To exclude

19   specific files from your BBS after you run this on a

20   specific file or run it on a zipfile which contains one

21   or more files, every one of those files is automatically

22   rejected. Even if its name has been changed and even if

1   it's inside a zipfile, "right?

2   A.   That's what it says.

3   Q.   Would a person of skill in the art reading

4   that have some understanding what Kantor was saying or

5   meaning with that sentence? And if so, what is that?

6   A.   I think that the meaning that a person of

7   skill in the art would already have about the Exclude

8   feature, that it causes the deletion of all files with

9   the matching contents signatures.

10   Q.   I'm going to ask you to turn to page 82.

11   (Witness doing as requested)

12   BY MR. DICHIARA:

13   Q.   And Mr. Rhoa didn't ask you any questions

14   about page 82 when he was asking you to comment on the

15   Exclude feature, did he?

16   A.   I don't think he did.

17   Q.   So do you see there, maybe two paragraphs up,

18   there's one that starts off saying "virus testing"?

19   A.   Yes.

20   Q.   "File integrity testing, testing for x_flag,

21   for example, to exclude known commercial files and known

22   trojans, and the like are treated the same whether

1   UPLOAD or ATTACH," right?

2   A.   Yes.

3   Q.   Would a person skilled in the art have an

4   understanding about what that passage was meaning in

5   terms of the X flag? If so, what is that?

6   A.   I didn't -- I actually don't understand your

7   question.

8   Q.   Okay. Let me back up. Let me just ask you

9   about the paragraph in general.

10   Would a person of skill in the art have

11   an understanding about what that paragraph was saying?

12   A.   I think a person of skill in the art would

13   have to read back in the document, to figure out what

14   upload and attach were about.

15   Q.   Okay. But earlier, Mr. Rhoa was asking you

16   about the upload log file, for example. Do you recall

17   that?

18   A.   Yes.

19   Q.   And he was asking you about the X flag that's

20   used in the Exclude feature?

21   A.   Yes.

22   Q.   If I remember correctly, you had some mention

1 whether this would be used to ban files for all kind

2 because they might have malware or viruses, but there

3 was some difficulty when he was asking you, can you

4 point to a spot in a 200-page document that referred to

5 that.

6   Do you remember that?

7   MR. RHOA: Objection, leading.

8 A.   I do remember.

9 Q.   And he didn't point you to page 82, did he?

10 A.   No, nor I him.

11 Q.   Is this referring to the testimony you had

12 earlier about what a person of skill in the art would

13 understand in connection with viruses?

14   MR. RHOA: Objection, leading.

15 A.   So it is an example of a thing of which I did

16 not produce in my cross; namely that an application of

17 the X -- the Exclude feature of the X flag would be

18 excluding known bad files, namely Trojans is a name for

19 a certain kind of attacking file.

20 Q.   And I'm going to shift gears from the Exclude

21 feature.

22   Do you recall Mr. Rhoa asking you about

1   how Kantor formed a Zip file contents signatures, the

2   ZCS procedure in --

3   **A.   Oh, we talked about the y and the z procedure.**

4   Q.   Right.   How does Kantor perform a Zip file

5   contents signature?

6   **A.   So the Zip file contents signature, the Z**

7   **kind, that's what the Zip file contents signature, is**

8   **the Z variety, composes the modulo 2 to the 32 sum of**

9   **the CRCs of the component files. And the mod 2 to the**

10   **32 sum of the lengths of the uncompressed, if they're**

11   **uncompressed, just the lengths, the lengths of the inner**

12   **files. And those two things constitute the Zip file**

13   **contents signature.**

14   Q.   Okay.   And then I'm going to ask you in

15   connection with the True Name patents that Mr. Rhoa was

16   asking you about, '791 patent, '544, '539, and so forth,

17   right?

18   They have a notion of a compound data

19   item, right?

20   **A.   Yes.**

21   Q.   How do the True Name patents form -- how do

22   those patents form a True Name for a compound data item?

1   A.   True Name of a compound data item is a True

2   Name of -- is the -- is the -- just say hash function of

3   the -- hash functions of the components.

4   Q.   Of the components meaning the segment?

5   A.   The pieces into which a file was divided, a

6   compound file, the pieces of the compound file.

7   Q.   Okay. True Name of the segment True Names?

8   A.   It's the hash of the hashes of the segments or

9   the True Name of the -- I guess that would be the True

10 Name of the set of True Names.

11   Q.   And in terms of just focusing on that how

12 Kantor formed a Zip file contents signature in

13 comparison to the way the True Name patents formed a

14 True Name of the compound data item, are those processes

15 the same or different?

16   A.   They are different in that the -- oh, no. I

17 think Kantor has a length also. Not Kantor. The True

18 Name patents, I think, also have a length, but I think

19 that's optional.

20   So if you have a True Name that does not

21 include a length, then at least in that respect the True

22 Name computation would be different from the Kantor Zip

1   file contents signature calculation.

2   Q.   But if it had the length, would they be

3   similar or different?

4   MR. RHOA: Objection, form.

5   A.   If it had the length, they would be -- if we

6   had the length, they would be more similar.

7   Q.   And do you recall that Mr. Rhoa was asking you

8   some questions about the second data item in the

9   patents?

10   A.   Yes.

11   Q.   Okay. And in terms of Kantor, he asked you

12   some questions about where does Kantor have in this

13   second data item. Do you remember that?

14   A.   Yes.

15   Q.   And he was asking you whether the second data

16   item, whether it contains or not the contents signatures

17   for the inner file. Do you recall that?

18   A.   I don't remember the questions, but I remember

19   the subject.

20   Q.   Was that a fair characterization of the

21   questions. Maybe not verbatim but the line of

22   questioning he was asking you?

1   MR. RHOA: Objection leading.

2   **A.   As I recall, it was.**

3   Q.   So in that second data item, what is the data

4 of the second data item?

5   **A.   The data of the second data item is the**

6 **contents signatures of the inner files.**

7   Q.   And in turning to the patent, the patent is

8 the second data item, right? The True Names have a

9 second data item, right?

10   **A.   Yes.**

11   Q.   And what is the data of the second data item

12 in the patent?

13   **A.   Those are the True Names of the segments of**

14 **the compound file.**

15   Q.   Are those second data items in the patent and

16 the second data item in Kantor similar or different?

17   **A.   They are very similar.**

18   MR. DICHIARA: I have no further questions.

19   MR. RHOA: Is he going to read and sign?

20   MR. DICHIARA: Yeah, I think. Do we have a

21   choice? In terms of the read and sign, we can go

22   off the record on this.

1   (Off Record Discussion)

2   (Deposition concluded at 3:15 p.m.)

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1   ACKNOWLEDGMENT OF DEPONENT

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3   I, _Douglas Clark, Ph.D_, do hereby

4   acknowledge that I have read and examined the

5   foregoing testimony, and the same is a true, correct

6   and complete transcription of the testimony given by

7   me, and any corrections appear on the attached Errata

8   Sheet signed by me.

9

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11   _10/29/13_   _/Douglas Clark/_

12   (DATE)   (SIGNATURE)

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1   C E R T I F I C A T E

2   COMMONWEALTH OF MASSACHUSETTS

3   COUNTY OF PLYMOUTH

         I, Rosemary F. Grogan, a Registered

4   Professional Reporter and Notary Public duly
commissioned and qualified in and for the Commonwealth

5   of Massachusetts, do hereby certify:

         That DOUGLAS W. CLARK, PH.D., the witness

6   whose deposition is hereinbefore set forth, was duly
identified and sworn by me, at the office of Wilmer

7   Cutler Pickering Hale And Dorr LLP, 60 State Street,
Boston, Massachusetts, on October 24, 2013, between the

8   hours of 9:20 a.m. and 3:15 p.m., and that the foregoing
transcript is a true record of the testimony given by

9   such witness to the best of my ability.

         I further certify that this was the

10   Cross-Examination deposition of Douglas W. Clark, Ph.D.,
taken on behalf of Patent Owner, and that counsel for

11   EMC/VMWARE were present, and also had Redirect
Examination of Douglas W. Clark, Ph.D.

12   I further certify that I am not related to any
of the parties in this matter by blood or marriage, and

13   that I am in no way interested in the outcome of this
matter.

14   IN WITNESS WHEREOF, I have hereunto set my
hand and affixed my notarial seal this 24th day of

15   October, 2013.

16

17

18   Rosemary F. Grogan, RPR

19   CSR No. 112993

20

21

22   My Commission Expires: December 15, 2017

ERRATA SHEET

Deponent: Douglas W. Clark, Ph.D.

Date: October 24, 2013

Page/Line	Correction
9:9	"Miss Vreeland" to "Ms. Vreeland"
14:3	"Scoping" to "Copying"
28:16	"remarking material for exclusion, C" to " 're marking material for exclusion, see' "
30:4	"and" to "an"
35:16	"in" to "if"
41:14	"bare" to "there"
64:7	"float" to "flow"
103:17	"740" to "7:40"
105:3	"make" to "many make"
112:13	"that" to "would"
120:12	"hot" to "not"

__10/29/13_____   ___/Douglas W. Clark/_____

Date   Douglas W. Clark, Ph.D.

IPR2013-00082 (U.S. Patent No. 5,978,791)
IPR2013-00083 (U.S. Patent No. 6,415,280)
IPR2013-00084 (U.S. Patent No. 7,945,544)
IPR2013-00085 (U.S. Patent No. 7,945,539)
IPR2013-00086 (U.S. Patent No. 7,949,662)
IPR2013-00087 (U.S. Patent No. 8,001,096)