

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD

3
4 GOOGLE LLC,)
LG ELECTRONICS, INC.,) IPR2020-00845
5 LG ELECTRONICS USA, INC.,)
6) US PATENT NUMBER
Petitioners,) 9,923,995
7)
vs.)
8)
9 JENAM TECH, LLC)
Patent Owner.)
10)
11 _____)
12
13

14 REMOTE DEPOSITION OF MICHAEL SMITH, PH.D.

15 FRIDAY, APRIL 30, 2021

16 9:04 A.M.
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24 REPORTED BY: KATHERINE FERGUSON, CSR NO. 12332

25 JOB NO. 193018

Page 2 1 2 3 4 5 April 30, 2021 6 9:04 a.m. 7 8 9 Deposition of MICHAEL SMITH, PH.D., held 10 remotely, before Katherine Ferguson, Certified 11 Shorthand Reporter. 12 13 14 15 16 17 18 19 20 21 22 23 24 25	Page 3 1 APPEARANCES: 2 3 FOR PETITIONERS: 4 PAUL HASTINGS 5 BY: JOSEPH PALYS, ESQ. 6 BY: JASON HEIDEMANN, ESQ. 7 2050 M Street NW 8 Washington, DC 20036 9 10 FOR PATENT OWNER: 11 DEVLIN LAW FIRM 12 BY: DEREK DAHLGREN, ESQ. 13 BY: SRIKANT CHERUVU, ESQ. 14 1526 Gilpin Avenue 15 Wilmington, DE 19806 16 17 18 19 20 21 22 23 24 25
Page 4 1 FRIDAY, APRIL 30, 2021 2 9:04 A.M. 3 4 MICHAEL SMITH, PH.D. 5 called as a witness by and on behalf of the 6 Petitioner, and having been first duly sworn by the 7 Certified Shorthand Reporter, was examined and 8 testified as follows: 9 10 EXAMINATION 11 BY MR. PALYS: 12 Q Good morning, Dr. Smith. How are you? 13 A Good morning. 14 Q Great. Can you please state your name and 15 spell it for the record? 16 A My name is Michael Smith, M-I-C-H-A-E-L, 17 last name, S-M-I-T-H. 18 Q Thank you. 19 And you understand that you're here today 20 to provide testimony regarding the declaration that 21 was submitted in IPR2020-00845? 22 A I do. 23 Q Great. 24 So have you been deposed before? 25 A Yes.	Page 5 1 Q About how many times? 2 A Once in this format. 3 Q Once in this format. 4 How about in any other format? 5 A By format, I meant testifying, expert 6 witness. 7 Q Got it. 8 So you've only been deposed once before? 9 A That's correct. 10 Q Okay. Have you ever testified in court? 11 A No. 12 Q Okay. So as you probably learned from the 13 last time you had a deposition, what's going to 14 happen is obviously, I'm going to be asking you 15 questions and you're going to be providing your 16 responses; do you understand that? 17 A Yes. 18 Q And it's important that -- and I'm guilty 19 of this as anyone else, but we try not to talk over 20 each other. So I'll try to finish my question and 21 I'll allow you to answer without, you know, 22 interfering with each other's speak, and that helps 23 Kathy get the testimony recorded properly, okay? 24 Did you hear me, sir? 25 A Yes.

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1 Q Okay. Do you understand what my question
2 was?

3 A Yes.

4 Q Okay. On that point, if at any time I ask
5 you a question and you don't understand it or you
6 think you need clarification, please let me know in
7 your response, and I'll try to do that, okay?

8 Did you hear me, sir?

9 A Yes.

10 Q Okay. So you have to respond orally. You
11 can't nod your head; you can't do that because Kathy
12 is taking -- she's recording your answers, you know,
13 in written form.

14 A I understand that. I'm not always sure
15 when you say okay, whether that's a question or not.

16 Q It is. Assume that it is, but okay. But I
17 will try to clarify that. So at some point, your
18 counsel may object to a question that I pose to you.
19 We'll give him an opportunity to make that objection.
20 But you understand that you still have to answer the
21 question that I propose to you unless your counsel
22 instructs you not to answer that question; do you
23 understand that?

24 A Yes.

25 Q Okay. Is there any reason why you cannot

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1 A As in a Zoom meeting or a telephone
2 conference call?

3 Q Yes, it encompasses anything like that,
4 like a telephone call, Web Ex, in person, things of
5 that nature.

6 Did you meet with anyone for your
7 preparation for your deposition today?

8 A Yes, I did.

9 Q And who did you meet with?

10 A Principally Derek, and Derek's legal team
11 at Devlin Law Firm.

12 Q Did you meet with anyone who wasn't a
13 lawyer for the preparation of your deposition today?

14 A I believe I did.

15 Q And who was that?

16 A We -- I had e-mail conversations and phone
17 conversations with the inventor.

18 Q And who -- what's the name of the inventor?

19 A Paul.

20 Q Full name, please.

21 A Paul Morris.

22 Q And about -- was this -- the meetings with
23 Paul Morris, were they all through e-mail
24 communication?

25 A No, I think I explained in my last answer,

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1 testify completely and accurately today?

2 A No.

3 Q Did you spend any time preparing for your
4 deposition today?

5 A I'm sorry, as you turned away, I did not
6 hear the last part of your question.

7 Q Did you spend any time preparing for
8 today's deposition?

9 A Yes.

10 Q How much time did you spend?

11 A I started last week and then this week, we
12 held several formal preparation mark meetings.

13 Q About how many hours entailed your
14 preparation for this deposition?

15 A I would say, on the order of magnitude,
16 about 50; 5-0.

17 Q Thank you.

18 Who did you -- did you meet with anyone in
19 preparation for your deposition today?

20 A I'm sorry. I don't understand what you
21 meant by "meet." Did you mean meet in person? I'm
22 not sure what you meant.

23 Q Okay. So did you -- when I say meet, I
24 mean the general sense of the word; do you know what
25 the general sense of meeting or meet means?

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1 I had e-mail exchanges that included Paul on those
2 e-mail exchanges, of course along with the Devlin Law
3 Firm team, and also I had one or more conference
4 calls that some of which included Paul Morris.

5 Q Okay. So just to clarify my understanding,
6 you didn't have a -- you didn't meet with Paul Morris
7 separately; meaning just you and Mr. Morris, correct?

8 A No, at no time.

9 Q Did you meet with anyone else other than
10 Paul Morris, who wasn't a lawyer, in preparation for
11 your deposition today?

12 A I'm sorry, that was a rushed question. I
13 didn't catch it.

14 Could you repeat it, please.

15 Q Yes. Did you meet with anyone other than
16 Paul Morris, who wasn't an attorney, in preparation
17 for your deposition today?

18 A I do not believe so. There may have been
19 some conversations with paralegals involving the
20 transmission of documents. Other than that, I
21 believe the answer is no.

22 Q Okay. Did you review any documents in
23 preparation for your deposition today?

24 A Yes, I did.

25 Q And what documents were those?

Page 10 1 A I'm trying to figure out how best to give 2 you that list without giving you a string of exhibit 3 numbers. But I think the answer to that was covered 4 in my -- both of my declarations involving this case, 5 where I explained which documents I had reviewed. 6 That would be a fairly accurate summary of the 7 documents. 8 Q Okay. So I have a couple of questions on 9 that. You mentioned both of your declarations 10 submitted in this proceeding. 11 What two declarations did you submit for 12 this proceeding? 13 A There's a document that's titled Exhibit 14 2020 and a document that's titled Exhibit 2002. Both 15 of those are my declarations. 16 Q Okay. Did you review the document labeled 17 Exhibit 2002 in preparation for your deposition 18 today? 19 MR. DAHLGREN: Objection, form. 20 THE WITNESS: Could you repeat that 21 question, please? 22 BY MR. PALYS: 23 Q Yes. Did you review Exhibit 2002 in 24 preparation for your deposition today? 25 MR. DAHLGREN: Objection, form.	Page 11 1 BY MR. PALYS: 2 Q You can answer, sir. 3 A Yes, I'm trying to understand the thrust of 4 your question. The problem I'm having is that 5 clearly, I reviewed my own declaration. I'm trying 6 to separate that review from a review of documents 7 that I may have performed contemporaneously with 8 looking at that document. But separately, because I 9 was looking at other documents in preparation for 10 this deposition. 11 So it's hard for me to answer that question 12 because I can't separate the review of one document 13 from the preparation for this deposition. 14 Q Okay. In terms of what you did review -- 15 what document you did review for your preparation for 16 this deposition, did you review any materials that 17 were not identified in your declaration labeled 18 Exhibit 2020 in this proceeding? 19 A I'm sorry, I caught the first part of your 20 question and then you tailed off and I didn't catch 21 the second part of your question. 22 Could you repeat it, please. 23 Q What documents, if at all, did you review 24 for your preparation for this deposition that -- let 25 me rephrase that.
Page 12 1 Did you review any materials in preparation 2 for your deposition today that were not identified in 3 your declaration, which is Exhibit 2020 in this 4 proceeding? 5 A I would need to turn to the materials that 6 you sent me and check first if 2020 is present there, 7 and check to see exactly what I wrote. 8 Q Okay. Let's make this -- 9 A Can you point me, please, to the place in 10 my declaration that you're discussing now? 11 Q Yeah, let's make this easy. So Exhibit 12 2020 is the document that -- well, let me make this 13 clear on the record. 14 So sir, we sent you a set of copies of 15 exhibits; did you receive those? 16 A Yes. Some of the exhibits that I reviewed 17 are in this package, but many are not. 18 Q Okay. Now, in that set of materials is an 19 Exhibit 2020; you have that in front of you? 20 A As I said previously, I would need to check 21 and I'll do that now. 22 Q Yes. Can you please pull that out? 23 A It's a rather large book. 24 Q I understand. 25 A I have the materials in front of me. Could	Page 13 1 you repeat your question now, please? 2 Q I asked you to pull out Exhibit 2020 3 because we're going to have a conversation about that 4 today. That's your declaration. I'd like you to 5 have that. 6 A Yes. 7 Q I will say, if it's easier for you, once we 8 get through and establish what Exhibit 2020 is, and 9 Derek, this is subject to you; if Dr. Smith happens 10 to have an electronic copy that he would rather look 11 at, as long as he confirms that's the same exhibit, 12 that's fine. I'm just trying to make this as 13 efficient as possible. So whatever works for you, 14 Dr. Smith. For now, let's use the hard copy and 15 we'll decide on what makes things easier for you. 16 So my question is, do you have a copy of 17 Exhibit 2020 in front of you? 18 A Yes, I do. 19 Q So on the first page of Exhibit 2020, it 20 should say Declaration of Dr. Michael Smith, correct? 21 A Yes. 22 Q All right. And that's labeled, again, 23 self -- Exhibit 2020 and that's for IPR2020-00845; 24 correct, sir? 25 A Yes.

Page 14 1 Q Okay. And is this a copy of the 2 declaration that you submitted for this proceeding, 3 and when I say this proceeding, I mean IPR2020-00845? 4 A I usually check by looking at the page 5 numbers to make sure all the page -- the correct page 6 count is there, and quickly flipping through to make 7 sure I don't see any obvious pages missing, and I 8 don't. To the best of my knowledge and belief, 9 sitting here right now, this is a true copy of the 10 declaration. 11 Q Thank you. And I'll represent to you that 12 we obtained this copy through the submission from 13 patent owner, who provided this into the record. So 14 this is the same. 15 Can you look at page -- the last page of 16 your declaration, Exhibit 2020? It's page 77. 17 A I'm sorry, I'm confused. I thought we were 18 talking about materials considered. Are we going to 19 a different issue now or -- 20 Q All right. So it would be helpful if we 21 can stay focused on the questions that I have. We're 22 talking about Exhibit 2020 now. 23 A Yes, and you asked me about materials that 24 I considered. I think I mentioned that that was 25 materials I considered was contained in this	Page 15 1 document, and we were going to look at that section. 2 Q I understand that sir. But again, just for 3 efficiency purposes, if you stick to the questions 4 that I'm asking, if I want to ask you more questions 5 about materials considered, I'll get back to that, 6 and I might. 7 But for now, can you please turn to page 77 8 of your Exhibit 2020? 9 A Yes. 10 Q And on page 77 of Exhibit 2020, there's an 11 electronic signature for Michael Smith, correct? 12 A Yes. 13 Q Is that your name, sir? 14 A Yes. 15 Q Did you add that electronic signature? 16 A I cannot remember whether at this point I 17 actually added that "S" with Michael Smith or I 18 authorized the legal team to do so. It was, I 19 believe, very late on New Year's Eve and I can't 20 remember at this point. 21 But I do remember that I authorized this 22 document. I was very careful to do so. I'm always 23 very careful to do so. And by doing so, certified 24 that this document represented my opinion correctly. 25 Q Thank you. When were you first retained to
Page 16 1 work on -- as an expert in this proceeding with 2 respect to the U.S. Patent Number 9,923,995? 3 A I do not recall the exact date, but it 4 would probably have been in the second or third 5 quarter of last year. 6 Q The second or third quarter of 2020; is 7 that right? 8 A Yes, that's correct. 9 Q Okay. By the way, just so we're using the 10 same labels, your declaration, Exhibit 2020, provides 11 your opinions regarding U.S. Patent Number 9,923,995, 12 correct? And you can look at the first page of the 13 document to help you with the number. 14 A Yes, that is correct. 15 Q Okay. So today I may refer to that patent, 16 sir, as the 995 patent. 17 If I do so, will you understand that I'm 18 referring to U.S. Patent Number 9,923,995? 19 A Yes, generally. If there's any 20 uncertainty, I will ask, but I generally accept that 21 convention. 22 Q I appreciate that. So another document 23 we're going to talk about today is one of the 24 documents that we sent to you, and that is the 995 25 patent. And that's Exhibit 1001. So if you want to	Page 17 1 get that document that we sent you available to you 2 and let me know when it's in front of you. 3 A Unfortunately, it's at the other end of 4 this rather large book. 5 Q You can pull it out if you want. 6 A I actually do have an electronic copy of 7 that patent. If it's okay, I will keep one finger on 8 the -- on the large book at my declaration and 9 perhaps look at the patent at the same time. 10 Q That's fine. I just -- I think that's 11 fine. That will actually help things move along, if 12 it's easier for you. I just want to confirm that 13 what you will be looking at, in terms of an 14 electronic copy, will be a copy of -- a clean copy of 15 U.S. Patent Number 9,923,995, okay? 16 A Yes. 17 Q Okay. Great. There's no mark ups on the 18 version that you're -- 19 A I have not marked up any of my documents. 20 Q I appreciate that. Thank you, sir. So 21 looking at the 995 patent at Exhibit 1001, that's 22 the -- the 995 patent, again, is the patent that you 23 provided an opinion on in your declaration, Exhibit 24 2020, correct? 25 A Yes.

Page 18 1 Q Okay. Now, if we could turn to your 2 declaration, Exhibit 2020. 3 Did you prepare this Exhibit 2020, your 4 declaration, by yourself? 5 A No. I prepared this declaration working 6 together with the Devlin legal team. 7 Q Did you write the -- any portion of the 8 Exhibit 2020 yourself? 9 A Yes, most definitely. 10 Q Okay. What portions did you write 11 yourself? 12 A I would say the majority of the material 13 concerning the Eggert reference, for example, and the 14 problems that I found with the Eggert reference and 15 the majority of the material describing the problems 16 that I found with the Bradner declaration and the 17 problems and issues with the Bradner declaration. 18 The other material, including what I might 19 call the boiler plate language at the beginning, was 20 put together with my input. For example, my CV, 21 description of my experience, obviously, I wrote 22 that, provided that material. But I provided that 23 material and it was put into the form that you see in 24 the declaration by members of the Devlin legal team. 25 Q If you could turn to paragraph 11 of your	Page 19 1 declaration, please. That's on page 4. Tell me when 2 you're there, sir. 3 A I am. 4 Q Earlier we were talking about materials -- 5 yep, page 4. In paragraph 11, earlier, we were 6 talking about materials considered. 7 Does paragraph 11 summarize the materials 8 that you considered in support of your opinions in 9 your declaration? 10 MR. DAHLGREN: Objection, form. 11 THE WITNESS: Could you repeat that 12 question, please? 13 BY MR. PALYS: 14 Q Does paragraph 11 summarize the materials 15 that you considered to support your opinions in your 16 declaration? 17 A I don't think I understand your question, 18 because your question says -- your question asks does 19 it summarize the materials. The paragraph accurately 20 reflects the materials that I reviewed. 21 Q Okay. I'll just rephrase the question 22 then, sir. 23 Does paragraph 11 identify the materials 24 that you considered to support your opinions in your 25 declaration?
Page 20 1 MR. DAHLGREN: Objection, form. 2 THE WITNESS: Again, I don't think I 3 understand your question, because my paragraph states 4 I have considered materials listed in this 5 declaration as well as the 995 patent and its 6 prosecution history, as well as related patents. 7 This includes the petition, the reference 8 cited by petitioner, the petition's expert 9 declaration and other exhibits cited in this 10 proceeding. I've always reviewed the Board's 11 institution decision that accurately reflects the 12 materials that I reviewed. 13 BY MR. PALYS: 14 Q Are there any other materials you reviewed 15 to support your opinions in your declaration that are 16 not identified in paragraph 11? 17 A No. I believe that paragraph accurately 18 reflects materials that I reviewed. 19 Q In the first sentence of paragraph 11, you 20 state that: I have considered the materials listed 21 in this declaration as well as the 995 patent and its 22 prosecution history, as well as related patents, 23 correct? 24 A That is -- as far as my recollection goes 25 of the intense period of work that we conducted at	Page 21 1 the end of last year, that is accurate. 2 Q What do you mean by "related patents" at 3 the end of that first sentence in paragraph 11? 4 A I believe that I looked at some of the 5 other patents by the same inventor, Paul Morris. 6 Q Which patents were those? 7 A At this point, with four months gone by and 8 the intense period, I can't remember the numbers -- 9 the patent numbers. I do remember that I looked at 10 more than -- more than just the 995 patent, but I 11 cannot recall at which point in time which other 12 patents I may have looked at. 13 Q What would you need to refresh your 14 recollection to identify the related patents that you 15 considered to support your opinions in your 16 declaration? 17 MR. DAHLGREN: Objection, form. 18 THE WITNESS: Could you repeat that 19 question, please? 20 BY MR. PALYS: 21 Q What would you need to review to refresh 22 your recollection as to what related patents you 23 identified in paragraph 11? 24 A I don't know the answer to that question 25 other than more time. And that, given more time, I

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1 might remember something, but I have no notes; I have
 2 no -- nothing else that I can look at.

3 Q So if you were given more time, what would
 4 you consider to help you refresh your recollection as
 5 to what you meant by related patents in paragraph 11?

6 MR. DAHLGREN: Objection, form.

7 THE WITNESS: Could you repeat that
 8 question, please?

9 BY MR. PALYS:

10 Q If you were given more time, what would you
 11 consider to help you refresh your recollection as to
 12 what you meant by related patents in paragraph 11 of
 13 your declaration?

14 A I merely meant in my answer that, given
 15 more time, my memory might produce a recollection of
 16 why I looked at another patent. For example, I might
 17 have used Google Patents to quickly find a PDF of the
 18 original patent, and got to the wrong patent. I'm
 19 not sure.

20 Q At this time, sir, you can't identify which
 21 patents you considered that are what you call related
 22 patents; is that right?

23 MR. DAHLGREN: Object to form.

24 THE WITNESS: I certainly could not,
 25 sitting here in this deposition, produce a list.

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1 number?

2 Q It's not an exhibit, sir. That's why I'm
 3 asking the question.

4 A Can you give me a title?

5 Q The title is Patent Owner's Response.

6 A Can you give me a date on which that was
 7 filed?

8 Q It would have been filed the same day as
 9 your declaration.

10 A Then I believe that I did and have reviewed
 11 a copy of that response.

12 Q You also state that you reviewed the
 13 prosecution history of the 995 patent, correct?

14 A So by prosecution history, I normally
 15 understand that to mean the file wrapper. I
 16 certainly looked at the dates, but I did not focus my
 17 attention in my declaration on the entire file
 18 wrapper for the patent.

19 Q If you'd take a look at the first page of
 20 the 995 patent, sir, and let me know when you're
 21 there.

22 A I have that page.

23 Q And on the front cover of the 995 patent,
 24 on the right-hand side, about in the middle, is a
 25 section that identifies the attorney, agent, or firm

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1 BY MR. PALYS:

2 Q You mentioned that you reviewed the Board's
 3 institution decision in paragraph 11, correct?

4 A I missed the last part of that question.
 5 The Board's --

6 Q The last sentence of paragraph 11 says you
 7 also reviewed the Board's institution decision; is
 8 that right?

9 A That's correct.

10 Q Okay. How did you get a copy of that
 11 institution decision?

12 A I don't recall exactly, but I assume it was
 13 in a package of files that were provided to me by the
 14 Devlin Law Firm.

15 Q Did you consider the patent owner's
 16 response in -- to support your opinions with respect
 17 to your declaration?

18 MR. DAHLGREN: Objection, form.

19 THE WITNESS: Could you repeat that
 20 question, please, and perhaps simplify it for me?

21 BY MR. PALYS:

22 Q Well, let me ask it this way.
 23 Have you ever reviewed or seen the patent
 24 owner's response submitted in this proceeding?

25 A Can you give me a reference, an exhibit

Page 25

1 that prosecuted that 995 patent, correct?

2 A I see that, attorney, agent, or firm. I
 3 see --

4 Q And the attorney listed -- I'm sorry. You
 5 can finish your answer.

6 A I see the attorney, agent, or firm entry.

7 Q And that lists or identifies Patrick E.
 8 Caldwell, correct?

9 A I see Patrick E. Caldwell listed as the
 10 attorney, agent, or firm.

11 Q And also the Caldwell Firm, LLC, correct?

12 A I see that.

13 Q So do you know anyone at the Caldwell Firm?

14 A I have worked with Patrick Caldwell.

15 Q In what way have you worked with Patrick
 16 Caldwell?

17 MR. DAHLGREN: I just want to caution the
 18 witness not to get into the substance of the
 19 conversation, anything that's privileged.

20 MR. PALYS: Thank you Derek. Let me
 21 rephrase that question so we don't get into
 22 any privilege.

23 BY MR. PALYS:

24 Q So in what way have you worked with Patrick
 25 Caldwell, and I'm not asking about details of any

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1 conversations; just a general non-privileged summary
2 will work. So I'll repeat -- with that
3 understanding, I'll repeat the question for you.
4 In what way have you worked with Patrick
5 Caldwell?
6 A I'm not sure I can answer that question
7 without giving you information, which I'm not sure is
8 legally privileged or not. I'm not a lawyer and
9 therefore --
10 Q Okay.
11 A -- unable to answer that question.
12 MR. DAHLGREN: Would you like me to have a
13 call real quick with Mike to clarify.
14 MR. PALYS: That's fine. I'll ask the
15 questions. I'm not trying to get into any privileged
16 information, but I'll just ask it this way.
17 BY MR. PALYS:
18 Q You're an inventor of patents, correct,
19 sir?
20 A Sorry, could you repeat that, please?
21 Q You are an inventor of U.S. patents,
22 correct?
23 A That is true. Yes, I am.
24 Q And has the Caldwell Firm prosecuted those
25 patents that you are an inventor of?

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1 early last year.
2 Q And was that communication -- that last
3 communication with Patrick Caldwell, was that related
4 to anything relating to your opinions with respect to
5 the 995 patent?
6 A No. The work I performed on the --
7 Q Hold on. Let me stop you there.
8 MR. DAHLGREN: Yeah, objection, I think we
9 might get into --
10 MR. PALYS: I got it, Derek.
11 BY MR. PALYS:
12 Q I asked an inappropriate question. It
13 almost got into privileged information. I'll strike
14 the question and move on.
15 MR. DAHLGREN: Thank you, Joe.
16 MR. PALYS: Yes, sir. Keep me honest,
17 Derek.
18 MR. DAHLGREN: I'll try.
19 BY MR. PALYS:
20 Q Let's go back to your declaration, Exhibit
21 2020, sir.
22 A I have that.
23 Q Okay. The next paragraph in your
24 declaration, paragraph 12, you state that your
25 compensation is not dependent on the outcome of this

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1 A Again, I'm not sure if I'm -- I can answer
2 that question without giving you privileged
3 information.
4 Q I will let Derek respond here, but I
5 believe --
6 MR. DAHLGREN: Dr. Smith, you can answer
7 yes or no if Mr. Caldwell prosecuted any patents for
8 you.
9 THE WITNESS: Yes, I believe he has helped
10 in the prosecution of some of my patents.
11 BY MR. PALYS:
12 Q Did you work with the Caldwell firm before
13 the second quarter of 2020?
14 A Yes, I believe that would be the case.
15 Q Do you know anyone else at the Caldwell
16 firm other than Patrick Caldwell?
17 A No. I have dealt with Patrick directly in
18 prosecution of my patents -- some of my patents.
19 Q When is the last time you had a
20 communication with Patrick Caldwell?
21 A That, I can't recall exactly. But Patrick
22 helped me with the prosecution of patents that were
23 filed as far back as 2011. And most of the
24 prosecution of those patents has now finished, so I
25 would have to say it was probably, at the latest,

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1 proceeding; is that right?
2 A Did you say is that all right?
3 Q Is that right?
4 A That is right.
5 Q Is your compensation dependent on the
6 outcome of any proceeding?
7 A I'm not sure I understand your question.
8 Any proceeding related to the 995 patent? Any
9 proceeding anywhere in the world on any matter?
10 Q Yes, that last one. Any proceeding.
11 Is your compensation for the work you've
12 done for this declaration dependent on any
13 proceeding?
14 A No, not at all.
15 Q If we take a step back, a page back or two
16 from your -- in your declaration in terms of
17 paragraph 7, please.
18 A Paragraph?
19 Q Seven.
20 A Seven.
21 Q In paragraph 7, you indicate you did some
22 consulting work for Google from 2009 to 2010,
23 correct?
24 A Yes, I did.
25 Q What did you -- what type of consulting

Page 30 1 work was that for Google? 2 MR. DAHLGREN: This is an odd situation, 3 but I guess, given that Google's a petitioner, should 4 we worry about privilege issues? 5 BY MR. PALYS: 6 Q Well, let me ask you this, sir. 7 Dr. Smith, you're not a lawyer, right? 8 A I'm not a lawyer. 9 Q Okay. And did the work that you did for 10 Google, was it in any legal capacity? 11 A I did not offer any legal opinions, but I 12 was certainly working closely with the Google legal 13 team, because Google had just acquired a slew of 14 patents that I had written to avoid litigation. 15 Q So the type of work you did for Google, was 16 that analyzing patents? 17 A To start with, it was to understand and 18 limit the damage that Google had done by using 19 technology to which they did not have IP rights. 20 They had created a memory product without doing 21 proper research -- 22 Q Well, sir, hold on. 23 Is the information you're telling me, was 24 that obtained through your discussions with any 25 attorneys, inhouse or outside counsel from Google?	Page 31 1 A Both. 2 Q Okay. Then that's privileged -- 3 A And also engineers inside of Google. 4 Q Okay. So that's privileged information. 5 So we'll protect that, that discussion. 6 Let me ask you this first: Do you still 7 have any engagement agreement with Google? 8 A None. 9 Q Okay. And when did your engagement end 10 with Google? 11 A I believe the dates here are correct, to 12 the best of my recollection, 2009, 2010. The work 13 transitioned from work on my patents. These were 14 called the meteram patents. There were dozens of 15 them. After I finished that work, I started work 16 with Google on the Oracle case. And after I finished 17 the work on the Oracle case, I finished my consulting 18 arrangement with Google and Fish and Richardson. 19 Q With the patents that you reviewed for 20 Google, did any of that relate to the subject matter 21 that's at issue here with respect to the 995 patent? 22 A No. The material that I focused on were 23 the meteram patents, which were memory patents. And 24 in particular in the Oracle case, the application of 25 those meteram patents to Oracle products.
Page 32 1 Q Did you have any access to any confidential 2 Google information during your consulting work with 3 Google? 4 A No. There was a file largely in place, 5 largely through Fish and Richardson. 6 Q So did you have access to any nonpublic 7 Google information during your consulting work for 8 Google? 9 A No. They were very careful not to give me 10 any confidential information. 11 Q In paragraph 8, we go one paragraph down, 12 and I need your help here because I don't know how to 13 pronounce this company. But I will spell it out -- 14 A I think the name that you're referring to 15 is P-4-T-E-N-T-S-1. If you tip the 4 on its side, 16 you'll see it spells out Patents 1. 17 Q So when I refer to Patents 1, that's what 18 you identify in paragraph 8. And let me spell it out 19 for the court reporter. In all caps, P, the number 20 4, T-E-N-T-S, the number 1, correct? 21 A That's correct. 22 Q Okay. So Patents 1. 23 So in paragraph 8, you indicated that since 24 2011, you acted as founder and owner of Patents 1, 25 correct?	Page 33 1 A You're getting a little bit faint. I think 2 I caught your question, but to be sure, can I ask you 3 to repeat it again? 4 Q Just to make sure my connection is -- 5 A It's just when you turn your head away, 6 your voice becomes a little less distinct. Maybe my 7 hearing isn't as good. 8 Q I'll try to do a better job. I have 9 multiple monitors so I have to turn to see -- 10 A If you face me and talk, I can hear you 11 perfectly clearly. 12 Q Okay, sir. 13 So my question was, in paragraph 8, you 14 indicate that since 2011, when you acted as founder 15 and owner of Patents 1, correct? 16 A Yes. 17 Q Have you ever assigned any patents that you 18 are an inventor of to Patents 1? 19 A Yes. 20 Q Does Patents 1 -- let me rephrase that. 21 Has Patents 1 ever had any business 22 relationships with Jenam? 23 A None. 24 Q Has Patents 1 ever assigned any patents to 25 Jenam?

Page 34 1 A No. 2 Q Has Patents 1 ever assigned any patents to 3 any company affiliated with Jenam? 4 A No. 5 Q Will Patents 1 receive any compensation 6 based on the outcome of this proceeding? 7 A No. 8 Q What about, will Patents 1 receive any 9 compensation based on the outcome of any proceeding 10 involving Jenam patents? 11 A No. 12 Q Do you know Kevin Zilka? 13 A I do know Kevin Zilka. 14 Q How do you know Kevin Zilka? 15 A Kevin Zilka was an attorney that I found 16 while looking for help in prosecuting patents at a 17 company called iReady, where we built hardware for 18 networking. 19 Q When was that? 20 A I would have to refer to my notes here. It 21 was prior to 2004. Approximately between 2000 and 22 2004 was when I first found Kevin, because Kevin had 23 acted as a patent attorney for NVIDIA, and I found 24 his work and needed a good patent attorney. And that 25 is when I started working with Kevin.	Page 35 1 Q You mentioned that you had to refer to your 2 notes to answer your question. 3 Do you have notes in front of you? 4 A My notes in my declaration, my CV. So I 5 looked at paragraph 4 where it says from 2000 to 6 2004, I acted as CTO of a fabulous networking 7 semiconductor start up, iReady. That is what I 8 meant. 9 Q Thank you. You already mentioned Robert 10 Morris. Do you know -- strike that. 11 Have you ever had any dealings with a 12 company called Aloft Media? 13 A No. 14 Q Have you ever had any dealings with a 15 company called Quarter Technologies? 16 A No. 17 Q Have you ever had any dealings with a 18 company called Stragent, LLC? 19 A I believe that I may have seen e-mails with 20 Stragent included in my work with Kevin, but I don't 21 recall. 22 Q Have you personally had any -- let me 23 rephrase the question. 24 Have you personally had any dealings with 25 Stragent, LLC?
Page 36 1 MR. DAHLGREN: Dr. Smith, I just caution 2 you not to get into the substance of that -- of 3 dealings, but you can answer the question yes or no. 4 THE WITNESS: I can't recall. I know that 5 I've seen that e-mail -- Stragent in an e-mail 6 address, but I can't recall the exact circumstances. 7 That's the best answer I can give you sitting here 8 today. 9 BY MR. PALYS: 10 Q Can you recall if you've ever done any work 11 for Stragent? 12 A I don't believe so, no. I know that I 13 believe Kevin Zilka may work with Stragent, and 14 therefore, perhaps I saw an e-mail from Kevin at 15 Stragent rather than Kevin at Zilka.com. That's my 16 best recollection. 17 Q Have you ever done any work with Kevin 18 Zilka on behalf of Stragent? 19 A Not to my knowledge. I've certainly worked 20 with Kevin. I've certainly consulted with Kevin, but 21 not to my knowledge with Stragent. 22 Q Have you ever had any dealings with a 23 company called Azure, A-Z-U-R-E Networks? 24 A No, not to my knowledge. 25 Q Have you ever had any dealings with a	Page 37 1 company called Oso IT, spelled O-S-O? 2 A Again, I think maybe that Kevin has had 3 some association with Oso, but I have not had any 4 direct dealings with Oso to my knowledge, no. 5 Q Have you ever had any dealings with a 6 company called Power Mesh Networks? 7 A Not to my knowledge, no. 8 Q Have you ever had any dealings with a 9 company called Balther Technology, spelled 10 B-A-L-T-H-E-R? 11 A Not to my knowledge, no. 12 Q Have you ever had any dealings with a 13 company called Gummarus LLC, spelled G-U-M-A-R-U-S? 14 A Not to my knowledge, no. 15 Q Have you ever had any dealings with a 16 company called Cypress Lake Software? 17 A Cypress Lake Software. That one, I think I 18 have seen that name before in an e-mail, but I can't 19 remember exactly what the nature of -- 20 Q Do you recall if you've ever done any 21 work -- sorry, sir. 22 Do you recall if you've ever done any work 23 for Cypress Lake Software? 24 A That's possible, but I can't remember. I 25 remember the name. I performed several consulting

Page 38 1 engagements for a number of companies on patents and 2 IP, and I do remember that name, but I cannot 3 remember in what capacity. 4 Q Have you ever -- 5 A It's possible. That could have been a year 6 ago or more, a company that I worked with. 7 Q Thank you. 8 Have you ever had any dealings with a 9 company called Boccone, LLC, and let me spell it: 10 B-O-C-C-O-N-E? 11 A Not to my knowledge, no. 12 Q Have you ever had any dealings with a 13 company called Mirai Ventures, spelled M-I-R-A-I? 14 A Again, that's a company's name that I do 15 recognize. I cannot remember in what capacity. 16 Certainly, that one was a very long time ago. 17 Q Have you ever had any dealings with a 18 company called City Man, LLC? 19 A Again, that's one that I do recognize. 20 That one possibly in combination with the 995 patent, 21 but I don't recall the details and I have not worked 22 with or for City Man. But I do recognize the name 23 City Man. It's come across my desk somehow, some 24 way, but I don't remember how. 25 Q When you say possibly in combination with	Page 39 1 the 995 patent, what did you mean? 2 MR. DAHLGREN: I'll just caution Dr. Smith 3 not to get into privileged communications. 4 THE WITNESS: Well, if I look at the face 5 of the 995 patent, which I've studied, under assignee 6 on the copy that I have, I see City Man. 7 BY MR. PALYS: 8 Q So have you -- have you ever done any work 9 for City Man? 10 A No. I think I explained, and if I didn't 11 explain clearly, then I should clarify now; that now 12 that I look at the patent and I see assignee City 13 Man, I realize that that is where the name City Man 14 has come across my desk. Because I read this patent 15 over and over again and I recall seeing the name City 16 Man and here it is. This is where I saw it. 17 Q So if you turn to paragraph 20 of your 18 declaration, please. 19 MR. DAHLGREN: Joe, I apologize. Is this 20 an okay time to take a quick break? I have a little 21 bit of back injury so it helps me to get up and walk 22 around every 50 minutes or so. 23 MR. PALYS: I just got out of surgery, so I 24 could use the break as well. 25 MR. DAHLGREN: If that's okay with you, I
Page 40 1 didn't want to interrupt the line of questioning. I 2 thought if you're moving on... 3 MR. PALYS: Let's take about a five minute 4 break. Does that work for you, Dr. Smith? 5 THE WITNESS: Yes, it does. 6 MR. PALYS: So I'll just turn off my video 7 and you can do the same, Dr. Smith. And then let's 8 get back -- how about 1:05 my time, which is, I 9 think, 10:05 your time. 10 THE WITNESS: 10:05, which is approximately 11 five minutes from now, which all right with me. 12 MR. DAHLGREN: Thank you. 13 (Discussion was held off the record.) 14 BY MR. PALYS: 15 Q So Dr. Smith, if you can look at paragraph 16 20 of your declaration, you think that the 995 patent 17 describes the state of the art at the time of the 18 invention as related to, among other things, means 19 for defecting an idle PCP or TCP varying connection 20 over an IP network, correct? 21 A Yes. 22 Q So you -- would you agree that the -- that 23 means for detecting an idle TCP varying connection 24 over an IP network was known by a person already 25 skilled in the art before February of 2010?	Page 41 1 MR. DAHLGREN: Objection, form. 2 THE WITNESS: That was a very long question 3 and it seemed to involve some legal opinion. 4 Could you rephrase that, please? 5 BY MR. PALYS: 6 Q It did not involve any legal opinion, sir. 7 So let me ask it this way. 8 Do you agree with the first sentence of 9 paragraph 20? 10 A Yes, I wrote that. I agree with it. 11 Q Okay. In paragraph 22 of your declaration, 12 if you could turn to that, the next page, you provide 13 your opinion that you believe the 995 patent set out 14 to solve this problem by teaching method systems and 15 computer program products for sharing information for 16 detecting an idle TCP connection, dot, dot, dot, 17 correct? 18 A Did you say dot, dot, dot? 19 Q Yes. It continues on. 20 A Well, it didn't continue on for very long. 21 You just left out the including closing or resetting 22 them. 23 Q Okay. 24 A Yes, that is exactly what I said here in 25 paragraph 22.

Page 42 1 Q In paragraph 22, when you said -- when you 2 identified to solve this problem, which problem are 3 you referring to? 4 A In paragraph 22, when I used this problem, 5 pronoun, I was referring to the problem that I 6 explained in paragraph 20, in that -- and among other 7 things, the problem existed in that time that there 8 was no mechanism to allow two TCP connection end 9 points or nodes to cooperate in supporting a 10 keepalive option; and more broadly, in detecting and 11 managing idle connections. 12 Q What do you believe is the inventive 13 concept of the 995 patent? 14 MR. DAHLGREN: Objection, form, foundation, 15 scope. 16 THE WITNESS: That is an extremely broad 17 question. I do address some of that in my -- both of 18 my declarations. 19 BY MR. PALYS: 20 Q Okay. Can you answer that question, 21 please? 22 What do you believe is the inventive 23 concept of the 995 patent? 24 MR. DAHLGREN: Same objections. 25 THE WITNESS: I believe that I answered	Page 43 1 that question as best as I can answer it now, in my 2 declaration, Exhibit 2002, which is the declaration 3 that I submitted in related case, IPR 00742. 4 BY MR. PALYS: 5 Q Okay. So I have a few questions. I might 6 go on a tangent here, so first things first. It 7 looks like you're looking at something on the screen. 8 Are you looking at something other than 9 Exhibit 1001 in this proceeding, which is the 995 10 patent to answer this question? 11 A Yes, I'm looking at my declarations, two of 12 them. 13 Q So the other -- other than Exhibit 2020, 14 you're looking at an exhibit labeled 2002, correct? 15 A That's correct. 16 Q Now, that exhibit, 2002, can you -- can you 17 go to the first page of that exhibit, please. Tell 18 me when you're there. 19 A I'm at that exhibit. 20 Q So what is the IPR number of that Exhibit 21 2002, what case? 22 A I think I just -- I explained that. It's 23 00742. 24 Q So it's IPR2020-00742? 25 A Yes.
Page 44 1 Q And that's not the proceeding that -- well, 2 strike that. 3 So -- and that document is labeled Exhibit 4 2002 in that proceeding, IPR2020-00742, correct? 5 A Sorry, you rushed that. I think I heard 6 IPR something 00742. That is correct. 7 Q Right. The exhibit you're looking at, sir, 8 relates to IPR2020-00742, correct? 9 A Yes. 10 Q Now, did you rely on Exhibit 2002 in the 11 742 proceeding to prepare your declaration in this 12 proceeding, which is labeled Exhibit 2020? 13 MR. DAHLGREN: I'm going to object. I 14 think that gets into privileged information and 15 attorney work product. I'll have a discussion with 16 you -- 17 MR. PALYS: I don't think so, Derek. We're 18 allowed to have access to any materials that the 19 expert relied on to support his opinion. 20 MR. DAHLGREN: Maybe I misheard the 21 question, then. 22 MR. PALYS: I'll start over. Let me phrase 23 it this way. 24 BY MR. PALYS: 25 Q My question is, did you rely on -- strike	Page 45 1 that. 2 Did you review Exhibit 2002 in IPR 742 to 3 prepare for your deposition today? 4 A I think I answered a similar question 5 earlier, that it's impossible for me to split my 6 brain into two pieces. I wrote both of these 7 declarations at the same time. They were submitted 8 within minutes of each other on New Year's Eve. I 9 cannot separate one from the other. 10 Q Okay. How about this: Have you looked at 11 Exhibit 2002 -- 12 A I'm sorry, I can no longer hear you. 13 MR. PALYS: Derek, can you hear me? 14 MR. DAHLGREN: When you turn your head away 15 too much, you get very, very muffled. I have trouble 16 hearing you. 17 THE REPORTER: It's just when you turn your 18 head, I think. 19 MR. PALYS: I'm going to take a quick 20 second here. I'm going to shift to my head phones. 21 One second. We're off the record. 22 (Discussion was held off the record.) 23 BY MR. PALYS: 24 Q So I'll repeat my question, sir. 25 Did you review Exhibit 2002 in the 742

Page 46 1 proceeding within the last week? 2 A If by review, you mean did I read it, I'm 3 sure that at some point, I read both of my 4 declarations in the last week. 5 Q And in response to the question I posed 6 earlier, you were reviewing Exhibit 2002 to help 7 answer the question that was posed, correct? 8 MR. DAHLGREN: Objection, form. 9 THE WITNESS: I'm sorry, could you repeat 10 the question, please? 11 BY MR. PALYS: 12 Q One second. I'll find it. I'm going to 13 repeat the question I asked you earlier, which is 14 where you referred to Exhibit 2002. So I'll just 15 repeat it. 16 The question was, what do you believe is 17 the inventive concept of the 995 patent? 18 A In one of my declarations, I point out that 19 I believe that one of the fundamental contributions 20 of the 995 patent is the different uses of silence 21 and different types of silence. 22 And I say the framework I just described is 23 a fundamental contribution of the 995 patent, and was 24 not told by any prior art reference or combination of 25 prior art references. I cannot construct the	Page 47 1 framework on which the 995 patent built by using any 2 combination of Berg, Keshop (ph), Eggert or any other 3 prior art reference. 4 For the reasons I've described, it's my 5 opinion that the 995 patent is not obvious over at 6 least the Berg, Keshop (ph) and Eggert or any other 7 cited prior art reference, or combination of those 8 references. 9 Q So you just read something from a document. 10 Can you identify what that document was and what 11 paragraph number? 12 A The paragraph number that I have in my copy 13 is 0107. And -- 14 Q And that's paragraph -- sorry, go ahead. 15 Finish your answer. 16 A And I think you also asked me for the 17 document. And the document is Exhibit 2002. 18 Q And that's the same 2002 exhibit that is in 19 the 742 proceeding, correct? 20 A As I understand it, yes, that is correct. 21 Q Do you have any testimony -- sorry, let me 22 rephrase that. Strike that. 23 I want to get back to something else I 24 wanted to ask you. It's a little tangent question. 25 Sir, do you have access to any live notes
Page 48 1 right now as you were testifying? 2 A None. 3 Q You can't see the streaming testimony as we 4 talk, correct? 5 A I don't even know what you're talking 6 about. I think Derek mentioned that he was able to 7 see something streaming, but I have no idea. No 8 knowledge, no comprehension, no visibility. 9 Q Okay. That's good enough. Thank you, sir. 10 When you said -- let me get back to your 11 answer. All right. 12 In your previous answer, you identified the 13 different uses of -- did you say silence, 14 S-I-L-E-N-C-E? 15 A Correct, silence. 16 Q And so when you described the different 17 uses of silence and different types of silence, what 18 are you referring to? 19 A I give some examples in my declaration of 20 the use of silence. And these may or may not be 21 applicable to the 995 patent and its claims; but 22 illustrate the principles of the use of silence that 23 I'm talking about. 24 In paragraph 105 of this same Exhibit 2002 25 document, I give an example of the use of silence in	Page 49 1 a telephone conversation. I believe this is 2 paraphrased, or borrowed, stolen from a movie, All 3 the President's Men. 4 Q Do you provide any -- any testimony in your 5 declaration here, in Exhibit 2020, regarding the 6 fundamental contribution of the 995 patent involving 7 a different use of silence and different types of 8 silence? Dr. Smith, I can withdraw that question. 9 And my question is going to be this: 10 Again, what do you mean by the use of silence and the 11 different types of silence in context of the 995 12 patent? 13 A In the 995 patent, I'm providing an answer 14 here now as someone who was a person of ordinary 15 skill in the art. I can't give a legal opinion, and 16 this may or may not be relevant to the 995 patent. 17 But in general, the 995 patent allowed you 18 to save or economize or even suspend or stop 19 communication, and that be understood as a way of 20 communicating information. So in that sense, the 995 21 patent uses silence, absence of packets, to convey 22 information because both parties have previously 23 agreed that silence will act as conveying 24 information. 25 Q Would a person of ordinary skill in the art

Page 50 1 understand Claim 1 to encompass the use of silence or 2 different types of silence as you just described? 3 MR. DAHLGREN: Objection, form, foundation. 4 THE WITNESS: I understand that the meaning 5 of claims is a legal issue. And I'm not a lawyer; 6 therefore, not equipped to provide a legal opinion. 7 But I believe that and therefore, what I say may or 8 may not be relevant to the 995 patent and its claims. 9 But I believe a person of ordinary skill in the art 10 would understand that Claim 1 is talking about the 11 absence of certain types of packets, and therefore, 12 silence. 13 BY MR. PALYS: 14 Q What aspect of Claim 1 refers to the 15 absence or certain types of -- the absence of certain 16 types of packets and therefore, silence? 17 MR. DAHLGREN: Objection, foundation. 18 THE WITNESS: Could you repeat the 19 question, please. 20 BY MR. PALYS: 21 Q Yes. So I'm responding to your answer 22 where you say you believe a person of ordinary skill 23 in the art would understand that Claim 1 is talking 24 about the absence of certain types of packets, and 25 therefore, silence.	Page 51 1 And so my follow up question is: What 2 aspect of Claim 1 provide that feature that you just 3 described, the absence of certain types of packets, 4 and therefore, silence? 5 A So again, I understand that the meaning of 6 claim terms is ultimately a legal question, and I'm 7 not a lawyer, and I can't give you a legal answer. 8 But a person of ordinary skill in the art would look 9 at the -- for example, no packet claim limitation in 10 Claim 1 and in Claim 15, and understand that that was 11 talking about absence of packets. 12 Q If you could turn to -- I'm looking at the 13 995 patent, sir, and turn to Figure 7, please. Tell 14 me when you're there. 15 A I have Figure 7 of the 995 patent. 16 Q So what is Figure 7 depicting, sir? 17 A Figure 7 is depicting a packet flow between 18 a First Node and a Second Node. 19 Q So the 995 patent encompasses scenarios 20 where Node 2 can send packets to Node 1, correct? 21 MR. DAHLGREN: Objection -- I withdraw the 22 objection. You can answer, Dr. Smith. 23 THE WITNESS: Figure 7 illustrates a 24 particular one of many embodiments in the 995 patent. 25 And in this particular embodiment, there are shown
Page 52 1 just two nodes, though there may be more. Other 2 embodiments clearly disclose more than one node 3 present. 4 And in this particular embodiment, there is 5 a series of packets being transferred from Node 1 to 6 Node 2 and from Node 2 to Node 1. But remember, the 7 diagram is stylized. There's much more going on in 8 this diagram. It can be much more complicated than 9 shown here. This is the internet. 10 BY MR. PALYS: 11 Q In Figure 1 -- 12 A In Figure 1? 13 Q Sorry, let me correct myself. I misspoke. 14 In Figure 7 of the 995 patent, that depicts 15 ICP operations occurring on the First Node side, 16 correct? 17 A In this particular embodiment, the 18 detection setting of timer and so forth is done on 19 the First Node, yes. 20 Q Does the 995 patent encompass scenarios 21 where Node 2 can perform the same type of IDT 22 operations? 23 MR. DAHLGREN: Objection -- 24 THE WITNESS: I believe you could swap Node 25 1 and Node 2 here and perform the same functions.	Page 53 1 It's not an issue that I focused on in my deposition. 2 I'd have to study it more. Can you point me to a 3 place in my deposition where I discuss this? 4 BY MR. PALYS: 5 Q So my next question is, sir -- 6 A Or my declaration, or either declaration. 7 Q So my question is, when a -- in the context 8 of the 995 patent, a packet that is sent from Node 2 9 to Node 1, that could initiate an idle time period 10 based on that packet, correct? 11 MR. DAHLGREN: Objection, form. 12 THE WITNESS: Are you talking about Figure 13 7? 14 BY MR. PALYS: 15 Q I'm talking about the 995 patent. Figure 7 16 can be included. But the 995 patent, does that -- 17 A So point me to a packet in Figure 7 and 18 tell me which packet you're talking about. Are you 19 talking about 706.2? 20 Q So my question is, again, sir, in the 21 context of the 995 patent, the packet that is sent 22 from Node 2 to Node 1 could initiate an idle time 23 period based on that packet, correct? 24 MR. DAHLGREN: Objection, form, scope. 25 THE WITNESS: I'm not sure I understood

Page 54

1 your question. Would you repeat it again, please?

2 BY MR. PALYS:

3 Q In the context of the 995 patent, a packet

4 that is sent from Node 2 to Node 1 can initiate an

5 idle time period, correct?

6 MR. DAHLGREN: Same objections.

7 THE WITNESS: Again, I would ask you to

8 point me to a place in my declaration where I discuss

9 this. I don't believe it was a focus of my

10 declaration; and therefore, sitting here today, I

11 would have to study that issue further and would

12 require analysis that's not possible in this setting.

13 BY MR. PALYS:

14 Q You did review the 995 patent to support

15 your opinions in your deposition; correct, sir?

16 A Yes, I did.

17 Q And you spent roughly around 50 hours

18 preparing for this deposition, correct?

19 A That's correct.

20 Q Did you spend any of that time reviewing

21 the 995 patent in preparation for your deposition?

22 A Yes, I did.

23 Q So based on all the review and work that

24 you've done with respect to the 995 patent, is it

25 your view that you cannot answer the question that

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1 A I have column 18.

2 Q Thank you. In column 18, roughly between

3 lines -- let me give you the line number. Line 27,

4 the patent explains at the beginning of the potential

5 idle time period has been detected, correct?

6 A Line number again, please, or the range?

7 Q Line 25 -- let me start over. Column 18,

8 lines 25 through 28. The patent explains that an

9 empty TCP packet may be received while a potential

10 idle time period is being monitored, correct?

11 A I see in one aspect an empty TCP packet may

12 be received while a potential idle time period is

13 being monitored.

14 Q And the patent explains, that is the

15 beginning of the potential idle time period has been

16 detected, correct?

17 A In one aspect, yes.

18 Q So in the context of the 995 patent, where

19 we were looking at the Node 1, Node 2 in Figure 7 and

20 even in Figure 6, can the initiation of an idle time

21 period occur in either one of those nodes, Node 2 or

22 Node 1?

23 MR. DAHLGREN: Objection, form, scope.

24 THE WITNESS: Can you point me to a place

25 in the declaration that I discuss this issue?

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1 the 995 patent encompasses that Node 2 can send a

2 packet to Node 1, which could initiate an idle time

3 period -- initiate an idle time period, correct?

4 MR. DAHLGREN: Objection, form, scope.

5 THE WITNESS: I'm not sure I understood

6 your question. Could you repeat it in a simple

7 fashion, please?

8 BY MR. PALYS:

9 Q It's the same question I've been asking.

10 If you can't answer, that's fine; say you can't

11 answer. I'll repeat it one more time.

12 So in the context of the 995 patent, a

13 packet that is sent from Node 2 to Node 1 can

14 initiate an idle time period, correct?

15 MR. DAHLGREN: Same objections.

16 THE WITNESS: That's a complex question,

17 and again, it's not something I focused on in my -- I

18 believe I focused on in my declarations, either of

19 them. If you can point me to somewhere in my

20 declaration where I discussed this, that would help.

21 Otherwise, no, it's a complex issue and I would need

22 further time to study that.

23 BY MR. PALYS:

24 Q Can you turn to Exhibit 1001, column 18,

25 the 995 patent.

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1 BY MR. PALYS:

2 Q Can you answer the question, sir? I gave

3 you a reference to 995 patent.

4 A Without the context of whether or not it's

5 in my declaration, I don't believe I addressed this

6 in my declaration. I didn't focus on it. This is a

7 complex issue. I'd have to spend more time looking

8 at this to give you a complete answer.

9 Q Do you have --

10 A That type of analysis is difficult in the

11 setting of this deposition.

12 Q Do you have an understanding as an expert

13 for Jenam in this proceeding of how the 995 patent

14 describes its invention?

15 A I'm sorry. Could you repeat that question,

16 please?

17 Q Do you have an understanding as an expert

18 for Jenam in this proceeding of how the 995 patent

19 describes its invention?

20 A An expert --

21 MR. DAHLGREN: Objection, form. You can

22 answer. I was making an objection.

23 THE WITNESS: I understand. But I -- the

24 question was a little garbled. I didn't hear what he

25 said after expert something.

Page 58 1 BY MR. PALYS: 2 Q Okay. Third time. Third time attempting 3 this question. 4 Do you have an understanding as an expert 5 for Jenam in this proceeding of how the 995 patent 6 describes its invention? 7 A I was the expert -- 8 MR. DAHLGREN: Objection, form. 9 THE WITNESS: -- didn't understand. 10 MR. DAHLGREN: I'm sorry. I don't want to 11 talk over each other. If you can just give me a 12 second to make an objection, I appreciate it. 13 THE WITNESS: I understand -- I understand 14 that someone -- a person of ordinary skill in the art 15 would have a bachelor's degree plus two or three 16 years relevant experience, and that I should be in a 17 position to offer an opinion as to what a person of 18 ordinary skill in the art would understand. 19 I would add that this particular case is 20 extraordinarily complex. There's a lot going on in 21 the various timers, functionality of packet exchange 22 between these nodes. There is more than one 23 embodiment described in the patent. I focused my 24 analysis on certain issues that were in dispute, and 25 I've asked you several times to point me where in my	Page 59 1 declaration I addressed these issues. 2 And I've -- if I haven't addressed them in 3 the declaration, that would mean that I haven't had 4 time to perform any type of extensive analysis, and 5 would need more time to do so. 6 BY MR. PALYS: 7 Q To support your opinions in your 8 declaration Exhibit 2020, did you consider how a 9 person of ordinary skill in the art would understand 10 the inventions in the 995 patent? 11 MR. DAHLGREN: Objection, form. 12 THE WITNESS: Could you repeat the 13 question, please? 14 BY MR. PALYS: 15 Q Second time. 16 To support your opinions in your 17 declaration that's Exhibit 2020, did you consider how 18 a person of ordinary skill in the art would 19 understand the inventions in the 995 patent? 20 MR. DAHLGREN: Objection, form. Counsel, I 21 don't want to make a speaking objection. When you 22 say inventions, is that the claims? I just want 23 to -- 24 MR. PALYS: You're speaking. You're 25 coaching right now.
Page 60 1 MR. DAHLGREN: Okay. I apologize. I 2 wasn't trying to do that. I was confused myself. 3 THE WITNESS: I'm confused too. 4 BY MR. PALYS: 5 Q That was an inappropriate objection. Okay, 6 I'll repeat the question. 7 So -- well, let me ask you, why are you 8 confused now that your counsel directed you to the -- 9 some confusion with respect to that question? 10 A Well, I'm confused because we've had to go 11 backwards and forwards after a fairly lengthy 12 question. So I can't remember literally the words 13 that you strung together in the question, and I was 14 confused as to the form of the question. 15 Q Okay. Let me repeat it again. This is the 16 third time. 17 To support your opinions in your 18 declaration, that's Exhibit 2020, did you consider 19 how a person of ordinary skill in the art would have 20 understood the inventions in the 995 patent? 21 MR. DAHLGREN: Objection, form. 22 THE WITNESS: That is one of the things 23 that I considered, but it's not the only thing that I 24 considered. In other words, I considered, when it 25 was appropriate, what a person of ordinary skill in	Page 61 1 the art would understand by the specification, by the 2 claims, all of them. 3 But in addition, when there were terms or 4 issues that were in dispute, I focused on those and 5 used all the knowledge that I had to try and 6 understand what was going on when there was a claim 7 term or an issue or some construction that was in 8 dispute. 9 BY MR. PALYS: 10 Q If you could turn to your declaration on 11 paragraph 25, sir. Tell me when you're there. 12 Again, we're talking about Exhibit 2020. 13 A So I have at paragraph 25, to accomplish 14 the above, the 995 patent discloses multiple 15 apparatuses with instructions that cause the sharing 16 of information -- 17 Q Sir, let me interrupt you. Let me 18 interrupt you right now because the timing -- we're 19 stretching this deposition out. You don't need to 20 repeat it. I didn't ask you. I just want you to 21 have paragraph 25 in front of you. 22 Do you have paragraph in front of you from 23 Exhibit 2020? 24 A Yes. The problem of the mechanics -- let 25 me explain, is that when I'm looking at this huge

Page 62 1 binder and I'm looking at a page, I cannot see the 2 page separators. So when I'm looking at a page, it's 3 not easy for me, because of the way the binder is, to 4 always see what the document is. 5 Q Do you have paragraph 25 of Exhibit 2020 in 6 front of you, sir? 7 A Yes. 8 Q In paragraph 25, you identify these terms: 9 TCP, TCP-variants, and non-TCP, correct? 10 A Yes, using TCP as well as TCP-variants and 11 non-TCP, yes. 12 Q And you refer to Figures 6 and 7 of the 995 13 patent after your reference to those three terms, 14 correct? 15 A Yes. 16 Q What would one of ordinary skill in the art 17 understand TCP to mean in the context of the 995 18 patent? 19 A A person of ordinary skill in the art would 20 understand -- generally understand that TCP was a 21 protocol used in the internet. It's something called 22 a layer 3 protocol operating at the transport layer. 23 It's the protocol that shuffles all the information 24 backwards and forwards on the internet. 25 Q And what would one of ordinary skill in the	Page 63 1 art understand a TCP packet to mean in the context of 2 the 995 patent? 3 A A person of -- again, I'm speaking as a 4 person of ordinary skill in the art, looking at the 5 patent, not trying to interpret the claims, meaning 6 the claims as a legal issue, and I'm not a lawyer. 7 But a person of ordinary skill in the art 8 would generally understand that a TCP packet or TCP 9 segment was the vessel by which the information in 10 the packet is carried. 11 And I believe Figure 8 of the 995 patent 12 shows an example of TCP and an IP packet. Packet and 13 segment somewhat interchangeable; we can get into an 14 argument which is correct, but even the RSCs mix 15 those two up. But generally, a person of ordinary 16 skill in the art would understand that a TCP packet 17 was a TCP segment. 18 Q In the context of the 995 patent, is TCP 19 limited to the RSC 793? 20 MR. DAHLGREN: Objection, scope. 21 THE WITNESS: I'm not sure I understand 22 that question. Could you repeat it or rephrase it, 23 please? 24 BY MR. PALYS: 25 Q So what I'm trying to understand is, in the
Page 64 1 context of the 995 patent, when it refers to TCP, 2 what would one of ordinary skill in the art 3 understand the scope of that term to mean? 4 MR. DAHLGREN: Same objection. 5 THE WITNESS: Well, at the time of the 6 invention, TCP was at a certain point of its 7 development. There are certain things we see today 8 that aren't present in TCP. But a person of ordinary 9 skill in the art would generally recognize that the 10 TCP, if not defined by the RFCs, was at least fairly 11 well described by various RFCs. 12 RFCs are not necessarily normative 13 standards. Many TCP implementations today don't 14 exactly follow the RFCs. But I've given a 15 description of what a person of ordinary skill in the 16 art would generally understand TCP to mean at the 17 time of the invention. 18 BY MR. PALYS: 19 Q So at the time of the inventions for the 20 995 patent, what are the various RFCs that existed 21 that would describe a -- the TCP in the context of 22 the 995 patent? 23 A I'm sorry, that was a long question. And I 24 know you're frustrated, but I thought I heard you use 25 the word "variant" in the middle of that, so that	Page 65 1 confused me. I don't mean to be -- could you just 2 slow down and repeat that part of the question, or it 3 would probably be easier just to repeat it again. As 4 I say, I thought I heard the word variant. 5 Q I didn't use the words variant, sir. 6 A Then I definitely would like you to repeat 7 the question again, perhaps a little more slowly, 8 please. 9 Q No problem. In your previous answer, you 10 identified various RFCs that would describe the TCP 11 in the context of the 995 patent. 12 So my question to you is: What various 13 RFCs are those? 14 A I'm very sorry, but -- 15 MR. DAHLGREN: Objection, scope. 16 THE WITNESS: I'm sorry, but I heard you 17 say various, various or various, variant RFCs. 18 BY MR. PALYS: 19 Q I'll spell it out for you, sir. 20 V-A-R-I-O-U-S, S as in Sam. Various. You used the 21 word in your answer so that's -- I'm repeating what 22 you said in your answer, which was you identify -- 23 you mentioned that there were various RFCs that 24 describe the TCP that's in the context of the 995 25 patent.

Page 66 1 So my question to you is: What various 2 RFCs are those? 3 A Well, 793 -- 4 MR. DAHLGREN: Objection, scope. Dr. 5 Smith, if you could wait a second before responding 6 so I could get my objection in. 7 BY MR. PALYS: 8 Q You can answer. 9 MR. DAHLGREN: You can answer, Dr. Smith. 10 THE WITNESS: Sorry. RFC 793, I believe, 11 is the main RFC, so would describe most of the 12 functionality of TCP at the time. 13 BY MR. PALYS: 14 Q When you mentioned a plurality, various 15 with an S, RFC, what other RFCs would describe the 16 TCP in the context of the 995 patent? 17 MR. DAHLGREN: Objection, scope. 18 THE WITNESS: Well, you need to understand 19 how the RFC process works. RFCs are being proposed 20 all the time. I think we have an example of one here 21 in Eggert. That existed and was being developed at 22 the time of the invention. So someone -- a person of 23 ordinary skill in the art looking at this area might 24 look at some of these draft RFCs, because some of 25 these RFCs have a very short life.	Page 67 1 Somebody has an idea, anybody can -- 2 anybody can come up with a draft RFC and it may or 3 may not stick; it may or may not wind its way through 4 the whole ITF RFC process. So that is what I was 5 talking about when I was talking about various RFCs. 6 There is a misconception that somehow the 7 internet has a standard -- TCP has a standard. There 8 is really not the same type of normative standard 9 processing in the internet world than there is, for 10 example, in the hardware world. 11 So that's why I used the term various RFCs 12 to encompass, not only those RFCs that have been 13 around a while and are generally accepted, and some 14 people thought of as standards. But there are also 15 RFCs that are people's ideas on how they might change 16 TCP or extend TCP. 17 BY MR. PALYS: 18 Q So switching to, for an example, TCP 19 packet, in the context of the 995 patent, what would 20 it -- how would one of ordinary skill in the art 21 understand what a TCP packet is; what would they 22 refer to? 23 MR. DAHLGREN: Objection, scope. 24 THE WITNESS: Could you point me to where 25 in my declaration I discuss this and how it's
Page 68 1 generally relevant? 2 BY MR. PALYS: 3 Q In paragraph 25, you mention that the 995 4 patent discloses multiple apparatuses with 5 instructions that cause the sharing of information 6 between nodes on a network to detect idle connections 7 using TCP, so TCP variants and non-TCP. That's one 8 paragraph where you mention the terms as you separate 9 out these terms. 10 And you also, throughout your declaration, 11 you cite to various portions of the specification 12 which solely describe the use of TCP and TCP packets 13 in connection with the 995 patent. I think there's 14 more than enough to support here in your opinions to 15 at least motivate you. 16 A The paragraph -- 17 Q Go ahead. Go ahead. 18 MR. DAHLGREN: Objection, form. 19 THE WITNESS: I was waiting for Derek to 20 object. 21 MR. DAHLGREN: I want to make sure there 22 was a question pending. And I apologize, Joe. 23 THE WITNESS: Well, I do have a comment. 24 The paragraph -- the reason I was hesitant is because 25 paragraph 25 does not, in fact, as far as I see,	Page 69 1 mention packets. So I'm -- what I'm struggling to 2 understand is packet, the use of packets. Packets is 3 such a broad term, could be used anywhere, could be 4 used in a number of different layers. 5 I was looking for the context in my 6 declaration in which this issue was discussed. I 7 don't see it in paragraph 25. What was the second 8 paragraph that you gave me? 9 BY MR. PALYS: 10 Q Sir, Claim 1 refers to the term 11 TCP-variant, correct? 12 A Let me switch from my declaration back to 13 the 995 patent. In Claim 1, and I believe Claim 15, 14 both include the term TCP-variant. And it's 15 important to include hyphen, potentially, because 16 there's a difference between a fast-moving van and a 17 fast moving van. One has a hyphen, one does not. 18 Q Thank you. 19 In paragraph 33 of your declaration, you 20 begin a section called claim construction, correct? 21 A Yes, I have that section. 22 Q And in paragraph 34, you state that these 23 constructions, referring to the table above it, 24 simply emphasize and make clear what is already 25 explicit and implicitly required by the existing

Page 70 1 claim language without construction. And as 2 supported by the specification and consistent with 3 how a person of ordinary skill in the art would have 4 understood these terms at the time of the invention, 5 which I am informed is in February 2010, correct? 6 A If you said correct at the end there, that 7 is correct, that's what I read. 8 Q Okay. So in that table, in paragraph 33 of 9 your declaration, there's constructions of certain 10 terms. And in one of the constructions it's to keep 11 the TCP-variant connection active; do you see that? 12 A I do see that. 13 Q And you provided opinions with respect to 14 the constructions of each of these three terms 15 identified in the table on paragraph 33 of your 16 declaration, correct? 17 A I did. 18 Q Okay. So what was -- what would one of 19 ordinary skill in the art understand what a 20 TCP-variant connection is in the concept of the 21 claims of the 995 patent? 22 MR. DAHLGREN: Objection, form, scope. 23 THE WITNESS: So I understand that this 24 term has actually not been the subject of claim 25 construction. And so while I understand the meaning	Page 71 1 of claim terms is ultimately a legal question, and 2 I'm not a lawyer, I can, with that caveat, say I 3 would expect that a person of ordinary skill in the 4 art at the time of this invention would understand a 5 TCP-variant protocol to be a protocol that shares the 6 most important characteristics of TCP, but that -- 7 with TCP, but that differs in some features. 8 So for example, TCP is a reliable protocol, 9 so a TCP-variant protocol might be a protocol like 10 TCP that was also reliable but differed in other 11 features. 12 BY MR. PALYS: 13 Q So a couple things. 14 What are the important characteristics of 15 the TCP that would be shared between TCP and 16 TCP-variant? 17 A I think I gave an example of one just now, 18 and that would be reliability. That might be one of 19 the features, one of the major features of TCP that 20 would be shared by TCP-variant protocols. 21 Q When you say "might be," do you mean that 22 sometimes it may be and sometimes it may not be 23 shared? 24 A In general, I think a person of ordinary 25 skill in the art would decide which of the features
Page 72 1 in TCP were most relevant to his application, and 2 then select, modify, design, create, use a 3 TCP-variant -- TCP-variant protocol that met those 4 restrictions or design parameters or whatever the 5 situation was. 6 Q What are the features -- 7 A I can't give an answer to that question 8 without knowing the context that the question was 9 asked in. 10 Q What are the features in TCP that would be 11 most relevant to the application in the use of 12 TCP-variant in Claim 1? 13 MR. DAHLGREN: Objection; form, scope. 14 THE WITNESS: That's a very broad question 15 which is hard to answer without context. Can you 16 give me a place where I discuss this in my 17 declaration? 18 BY MR. PALYS: 19 Q I'm referring to your answer earlier, sir. 20 Well, let me ask you this question first. 21 Did you consider -- did you consider an 22 interpretation of the term TCP-variant to support 23 your opinions in your declaration? 24 A I understand that the meaning of claim 25 terms is a legal issue, and I'm not a lawyer. I'm	Page 73 1 not qualified to comment on the legal interpretation 2 of that term. But a person of ordinary skill in the 3 art would understand what TCP-variant meant, I think, 4 in the same way that any other type of variant would 5 be understood. 6 Q When you keep mentioning that you're not 7 qualified to provide opinions on claim construction, 8 does that mean your opinions in section 6 in your 9 declaration on claim construction, you are not 10 qualified to provide those opinions? 11 MR. DAHLGREN: Objection, form. 12 THE WITNESS: Sorry, Derek. 13 BY MR. PALYS: 14 Q Go ahead. 15 A I'm not qualified to provide a legal 16 opinion, but I feel I'm qualified to provide an 17 opinion that a person of ordinary skill in the art 18 might understand by that term. 19 Q Okay. So again, back to TCP-variant in the 20 context of the claims of the 995 patent. 21 Did you consider how one of ordinary skill 22 in the art would understand what that term means in 23 the context of the 995 patent to support your 24 opinions in your declaration? 25 MR. DAHLGREN: Objection, form and scope.

Page 74 1 THE WITNESS: I apologize, Derek. Could 2 you repeat the question, please? Sorry, I lost my 3 train of thought. 4 BY MR. PALYS: 5 Q Sure. 6 MR. PALYS: And then Derek, just to 7 confirm, you just objected to scope on that question, 8 correct? 9 MR. DAHLGREN: I had form -- I'll withdraw 10 the form objection there, but yeah, scope. 11 MR. PALYS: So you're maintaining your 12 scope objection, okay. 13 MR. DAHLGREN: Yes. 14 BY MR. PALYS: 15 Q So my question is, sir, did you consider 16 how one of ordinary skill in the art would have 17 understood what TCP-variant means in the context of 18 the 995 patent to support your opinions in your 19 declaration? 20 MR. DAHLGREN: Same objection. 21 THE WITNESS: Sorry, I was thinking, and by 22 the time I was finished thinking I had forgotten what 23 the question was again. So I will respond if you 24 just refresh my memory as to the question. 25 BY MR. PALYS:	Page 75 1 Q I'll try one more time, sir. 2 Did you consider how one of ordinary skill 3 in the art would have understood what TCP-variant 4 means in the context of the 995 patent to support 5 your opinions in your declaration? 6 MR. DAHLGREN: Same objection. 7 THE WITNESS: Yes, generally I did. 8 BY MR. PALYS: 9 Q Okay. What was that -- what is the 10 understanding of one of ordinary skill in the art of 11 what a TCP-variant means in the context of the 995 12 patent? 13 A I believe I answered that question already. 14 Q And does your answer to that include it 15 could share some - and I'm paraphrasing here - share 16 some characteristics with TCP -- I'll tell you what, 17 so we don't have to fight back and forth. 18 Can you just repeat your answer? 19 What would one of ordinary skill in the art 20 understood TCP-variant to mean in the context of the 21 995 patent? 22 MR. DAHLGREN: Objection, scope. 23 THE WITNESS: That's a difficult question 24 to answer in general. But I think I stand by my 25 previous answer that TCP-variant protocol would be a
Page 76 1 protocol that shared important features with TCP but 2 that -- or characteristics, or -- well, features or 3 characteristics, but that differed in one or more 4 features or characteristics. 5 BY MR. PALYS: 6 Q What features or characteristics that 7 differed from TCP are you referring to? 8 MR. DAHLGREN: Objection, scope. 9 THE WITNESS: That's a very broad and 10 complex and difficult question to answer. For 11 example, a TCP-variant connection of a TCP-variant 12 protocol or a connection using a TCP-variant protocol 13 might use a different underlying protocol. It might 14 be UDP based instead of IP based. There are many, 15 many different changes or modifications or variants 16 is a good word to use on TCP that would be considered 17 to be TCP-variant. 18 BY MR. PALYS: 19 Q Can you identify the important features or 20 characteristics that a TCP-variant would share with 21 TCP from the context of a person of ordinary skill in 22 the art? 23 MR. DAHLGREN: Objection, scope. 24 BY MR. PALYS: 25 Q You can answer.	Page 77 1 A Well, I'm just thinking hard about your 2 question and the fact that you didn't use protocol. 3 You said, what's the difference between TCP and 4 TCP-variant and you didn't use the word protocol. 5 I don't know whether you meant to use the 6 word protocol or whether it was some subtlety 7 involved in your question, so that's why I gave 8 pause. 9 Q That's fair enough, sir. Let's go back to 10 what the claim language says and what you provided 11 your opinions on related to that. 12 So the claim language by Claim 1 uses the 13 term TCP-variant packet, correct? 14 A That's correct, yes. I see that. 15 Q So what would one of ordinary skill in the 16 art understand in the context of the 995 patent what 17 is a TCP-variant packet? 18 MR. DAHLGREN: Objection, scope. 19 THE WITNESS: Again, when it comes to 20 claims, the meaning of claim terms is ultimately a 21 legal question. I'm not a lawyer. I can't give you 22 a legal answer. And this was not an issue on which I 23 focused. 24 But having said all that, I can tell you 25 that a person of ordinary skill in the art would

Page 78 1 understand generally that a TCP-variant packet is a 2 packet at layer 3, transport layer or generally 3 understood to be at that layer that is carrying 4 information using a TCP-variant protocol. 5 BY MR. PALYS: 6 Q What distinguishes a TCP-variant packet 7 from a TCP packet in the context of the 995 patent? 8 MR. DAHLGREN: Objection, scope. 9 THE WITNESS: That's a very broad and 10 general question. In the context of a person of 11 ordinary skill in the art looking at this, they would 12 understand that a TCP-variant packet was also 13 possibly sharing the same -- some of the same 14 features that a TCP packet had, or differed in one or 15 more features, or potentially differed in format, but 16 achieving the same results as TCP. 17 BY MR. PALYS: 18 Q What are the results that are achieved by 19 TCP? 20 A Well, TCP is a main mover of packets around 21 the internet. So somebody looking at this and trying 22 to move packets around the internet and coming up 23 with a protocol that also packets on the internet, 24 that was, for example, largely interchangeable with 25 TCP, would view that protocol as a TCP-variant	Page 79 1 protocol. 2 Q Now, some of the phrases you identify in 3 the claim construction uses the word TCP-variant 4 connection. So my question is, how would one of 5 ordinary skill in the art understand a -- what a 6 TCP-variant connection means in the context of the 7 995 patent? 8 MR. DAHLGREN: Objection, scope. 9 THE WITNESS: Again, as far as the 10 interpretation of claim terms is concerned, that's 11 ultimately a legal question. I'm not a lawyer, so I 12 can't comment on that. 13 But a person of ordinary skill in the art 14 would understand that a TCP-variant connection was a 15 connection that might share some of the features of a 16 TCP connection, but that may also differ in one or 17 more aspects, features, or characteristics. 18 BY MR. PALYS: 19 Q What differences in a TCP-variant 20 connection is required from a TCP connection in the 21 context of the 995 patent? 22 MR. DAHLGREN: Objection, form, scope. 23 THE WITNESS: I'm not sure I got the delta 24 there between what the difference between A and B. I 25 was listening for that difference and I didn't detect
Page 80 1 it. 2 BY MR. PALYS: 3 Q Okay. So you just told me that a 4 TCP-variant connection can have some differences from 5 a TCP connection. 6 So my question is, what differences are 7 those? 8 MR. DAHLGREN: Objection, scope. 9 THE WITNESS: Well, there is a difference 10 because one is using TCP and one is using a 11 TCP-variant protocol in both cases, but variant in 12 one. 13 BY MR. PALYS: 14 Q How would a person of ordinary skill in the 15 art reviewing the 995 patent understand the 16 difference between a TCP connection and a TCP-variant 17 connection? 18 MR. DAHLGREN: Objection, scope. 19 THE WITNESS: I think a person -- I believe 20 a person of ordinary skill in the art would look at 21 the features of a connection that were important to 22 him or her and look to see if there were a 23 difference. 24 If they saw a difference in one or more 25 features that they were concerned with - and there	Page 81 1 are a whole host of features, of course, with any 2 connection - then they would perhaps or would 3 consider one protocol to be a variant of the other. 4 But there are a vast range of properties of 5 connections. 6 Q What does a non-TCP packet in the -- mean 7 in the context of the 995 patent? 8 MR. DAHLGREN: Objection, scope. 9 THE WITNESS: Can you refer me to the place 10 in my declaration where I discuss non-TCP to give me 11 context for that question? 12 BY MR. PALYS: 13 Q Sure, I'll give you one. Paragraph 25, you 14 identify non-TCP there. 15 A This term, I think, was not in dispute, and 16 so it's not something that I focused on in my 17 declaration. So I certainly can't offer claim 18 construction of that term, nor would I be qualified 19 to do so. That's a legal issue. 20 But in general, a person of ordinary skill 21 in the art reading the specification would see that a 22 non-TCP packet or a non-TCP connection was something 23 other than TCP. It might be, for example, be a 24 TCP-variant protocol but it would be something that's 25 not TCP.

Page 82 1 Q So in order to understand in your view -- 2 well, at least from the perspective of one of 3 ordinary skill in the art, what a non-TCP is, would 4 you agree that a person of ordinary skill in the art 5 would have to understand what TCP means in the 6 context of the 995 patent? 7 MR. DAHLGREN: Objection, scope. 8 THE WITNESS: I think a person of ordinary 9 skill in the art would generally understand what TCP 10 was, and we've, I think, gone through some of that. 11 I think a person of ordinary skill in the art would 12 generally understand what non-TCP was. There could 13 be some blurred lines between those, something that I 14 hadn't considered in detail in my declaration. 15 But I have to consider it in greater detail 16 to give you a complete and thorough answer. Couldn't 17 do that in the context of this deposition. 18 BY MR. PALYS: 19 Q So let me ask three questions depending on 20 your answers, just so we can get some guidance, not 21 only to us but also to the Board, who is going to be 22 reviewing your testimony. 23 So can you give me your opinion as to what 24 one of ordinary skill in the art would understand the 25 plain meaning of a TCP packet to mean in the context	Page 83 1 of the 995 patent? 2 MR. DAHLGREN: Objection, scope. 3 THE WITNESS: Again, the definition of a 4 TCP and a particular listing of all of its 5 characteristics is complex. But in general, for 6 example, TCP -- a TCP packet, you could recognize a 7 TCP packet on the wire, if it looks like a packet 8 that's described in Figure 8 of the patent 9 specification; the 995 patent specification. 10 BY MR. PALYS: 11 Q So if -- 12 A Let me check if I have that -- I'm sorry, 13 let me check that I've got that right. Yeah, Figure 14 8. So it's sort of one of those, I recognize it when 15 I see it. I know -- I know -- I know I'm dealing 16 with TCP when I look at packets on the wire because 17 they have that format. 18 I use a tool and the tool recognizes the 19 BITS. It understands that that's a TCP packet and it 20 tells me that's a TCP packet. So I would know it's a 21 TCP packet. If that tool tells me - or rather 22 doesn't tell me - it says I don't recognize this 23 protocol or if it's a standard protocol, it would 24 recognize it as some other protocol, then that would 25 be a non-TCP packet.
Page 84 1 Q So would one of ordinary skill in the 2 art -- sorry. 3 Would one of ordinary skill in the art 4 require use of this tool so it could identify it as 5 packet of TCP or not? 6 A If you were looking at packets on the wire, 7 absolutely. You have to do so, otherwise -- 8 Q So what is -- 9 A -- if you were looking at a packet in a 10 paper or a drawing, you might also recognize it. I'm 11 just giving you an example of how I would understand 12 when I look at packets, how I would understand a 13 packet to be a TCP packet. 14 And I would teach my students or I have 15 taught my students or students would also -- people 16 working in the field would also use these tools and 17 understand what a TCP packet is. 18 Q So what is your opinion as -- well, let me 19 strike that. 20 What would one of ordinary skill in the art 21 understand the plain meaning of TCP-variant packet to 22 mean in the context of the 995 patent? 23 MR. DAHLGREN: Objection, scope. 24 THE WITNESS: Well, I think we've been 25 through this, but I'll try again. A TCP-variant	Page 85 1 packet is one that differs in one or more features 2 from a TCP packet. 3 BY MR. PALYS: 4 Q So the TCP packet in the Figure 8, what 5 features would have to differ in order to make that 6 TCP packet a TCP-variant packet? 7 MR. DAHLGREN: Objection, scope. 8 THE WITNESS: Well, I think I already 9 answered this question partly. To some people, there 10 might be a small variation. There may be extra 11 fields. Some of the fields -- options, for example 12 would be added. That would normally be regarded as 13 an extension to TCP rather than a TCP-variant. And 14 you might regard extensions as being a subset of 15 TCP-variant protocols. 16 But it could be that these packets have a 17 completely different form. The fields are in 18 different places. Maybe, as I've said in my previous 19 answer, this packet might not be contained in an IP 20 packet. It might use a different protocol. But to 21 someone using this protocol at a higher level above 22 layer 3 where these packets reside, they may not even 23 notice that. They may not know these packets are 24 complete different in the shape, form, size, makeup 25 at layers below them.

Page 86 1 So it would very much -- the answer to your 2 question very much depends on where on the context, 3 where the person is sitting, if they're sitting at 4 4 or 5 or at the application where none of this is 5 visible. They might be told they're using a 6 TCP-variant protocol but may not know it. Now, if 7 I'm looking at the wire with Wireshark looking at the 8 packets, I would know it; I would see the difference. 9 So the answer to your question is very 10 broad, complex and depends on the context. 11 MR. DAHLGREN: Joe, we've been going over 12 an hour, is it possible to take a break soon? 13 MR. PALYS: Give me five minutes just to 14 clear up some things and we'll take a break. 15 BY MR. PALYS: 16 Q You just mentioned a word, and sorry, I 17 didn't recognize it. It started with a W -- 18 A I probably threw in the tool I've been 19 talking about, Wireshark, which is -- 20 Q Oh, Wireshark? 21 A Capital W-I-R-E-S-H-A-R-K, Wireshark. 22 Q Okay. Thank you. 23 A And Wireshark is a standard tool that a 24 person of ordinary skill in the art in this field 25 would or should know is used to look at packets of	Page 87 1 all types. 2 Q Okay. And then the last set of questions 3 and then we'll take a break. Is it your opinion 4 that -- well, let me start this way. 5 What would one of ordinary skill in the art 6 understand the plain meaning of a non-TCP packet to 7 be in the context of the 995 patent? 8 MR. DAHLGREN: Objection, scope. 9 THE WITNESS: I think we've covered some of 10 this already. It was in and around -- well, if it 11 isn't TCP, it's non-TCP and people of ordinary skill 12 in the art would know what TCP was. I gave the 13 example of, I know when I see a TCP packet because I 14 know what a TCP packet looks like. It might have 15 extensions. 16 And I therefore know what a non-TCP packet 17 is. But without you giving me some context as 18 exactly what you're looking for here, I cannot give 19 you any better answer than that. If you would give 20 me a specific context, a specific -- two types of 21 packets that you are comparing and ask me, is that a 22 TCP? Is that a non-TCP? I could absolutely give you 23 that answer. 24 But in the general nature of the question 25 that you've asked me, I can do no better than tell
Page 88 1 you I know what a TCP packet looks like, and 2 therefore, I know what a non-TCP packet looks like. 3 BY MR. PALYS: 4 Q Would a non-TCP packet -- well, in the 5 context of the 995 patent, would one of ordinary 6 skill in the art understand a non-TCP packet to not 7 be a TCP-variant packet? 8 MR. DAHLGREN: Objection, scope. 9 THE WITNESS: Well, there are so many 10 negatives and double negatives in that question, I 11 would really -- 12 BY MR. PALYS: 13 Q Let me start over. 14 So would one of ordinary skill in the art 15 understand in the context of 995 patent that a 16 non-TCP packet could be a TCP-variant packet? 17 MR. DAHLGREN: Objection, scope. 18 THE WITNESS: I've got to ask you to 19 simplify that again because there's so much negative 20 boolean logic in that question, I can't pass it. 21 BY MR. PALYS: 22 Q I don't see any of the negative logic but I 23 apologize; I'm using the term non-TCP as the phrase, 24 so that's where it comes from. But I'll say it this 25 way.	Page 89 1 You mentioned earlier when you were 2 describing a TCP-variant that it could be a 3 non-TCP packet. Now, I don't know if I misheard you 4 and I'm going to ask you to clarify. 5 So in the context of the 995 patent, is a 6 TCP -- does a TCP-variant packet encompass a non-TCP 7 packet? 8 MR. DAHLGREN: Objection, scope. 9 THE WITNESS: Well, I think we just covered 10 about three diagrams in that statement/question that 11 you covered. So maybe we can break it down a little 12 bit. 13 First of all, you said -- you paraphrased 14 something I said and I'm not sure I agreed with what 15 you paraphrased. So let's leave that at that. And 16 then let's go back to the question that followed that 17 paraphrasing of an earlier answer that I didn't agree 18 with, and maybe look at the question that you asked 19 at the end again and just repeat that for me. 20 BY MR. PALYS: 21 Q In the context of the 995 patent, does a 22 TCP-variant packet encompass a non-TCP packet? 23 MR. DAHLGREN: Same objection. 24 THE WITNESS: I really feel that this is 25 bordering on claim construction and I'm certainly not

Page 90 1 qualified to give an opinion on that question. 2 Further, I'm not sure that I discussed any of this 3 comparison and Venn diagram inclusion; this includes 4 that, doesn't include this, doesn't include that in 5 my declaration. 6 My declaration -- if you can point 7 somewhere in my declaration where I discussed this, 8 we can start there. 9 BY MR. PALYS: 10 Q Okay. Last question, and we'll take a 11 break then. 12 So to support your opinions in your 13 declaration, is it safe to say you didn't consider 14 the understanding by one of ordinary skill in the art 15 of what a non-TCP packet is in relation to a 16 TCP-variant packet? 17 MR. DAHLGREN: Objection, form. 18 THE WITNESS: I'm not sure I understood 19 that -- the logic of that question. I was listening. 20 I got a little bit distracted because my train of 21 thought got lost with Derek's objection. 22 BY MR. PALYS: 23 Q Okay. I can -- let me start over again. 24 So to support your opinions in your 25 declaration, did you consider the understanding of	Page 91 1 what a non-TCP packet is in relation to what a 2 TCP-variant packet is? 3 MR. DAHLGREN: Objection; form, scope. 4 THE WITNESS: Without you giving me some 5 context, I think I repeatedly asked you to give me 6 context in the declaration -- 7 BY MR. PALYS: 8 Q Sir, let me repeat the question. Listen to 9 the first part of this, please. Do this again. 10 I am asking you: To support your opinions 11 in your declaration, did you consider the 12 understanding in the context of the 995 patent of 13 what a non-TCP packet is in relation to a TCP-variant 14 packet is? It's a yes-or-no question. 15 MR. DAHLGREN: Objection, form, scope. 16 THE WITNESS: Let me answer your question 17 as best I can. I did consider the meaning of a 18 non-TCP packet as would be understand by a person of 19 ordinary skill in the art. And I did consider the 20 meaning of a TCP-variant packet as would be 21 understood by a person of ordinary skill in the art. 22 I did not compare those two terms as would 23 be understood by a person of ordinary skill in the 24 art. It was not the focus of my deposition -- my 25 declaration; either of my declarations. I would have
Page 92 1 to give some more thought to exactly what the 2 relationship between those two may or may not be and 3 what that then diagram would look like. 4 As you know, many of the Board's opinions 5 that we've shown in our Venn diagrams have been 6 incorrect because of exactly this type of difficulty 7 in understanding exactly what's meant, especially 8 when we have non this and non that. 9 BY MR. PALYS: 10 Q When you say "we have shown," you mean you 11 and who else? 12 A When I say we -- 13 MR. DAHLGREN: Object to form. 14 THE WITNESS: Sorry, Derek. 15 MR. DAHLGREN: You can go on. 16 THE WITNESS: When I say "we," I generally, 17 engineering habit more than anything else, I like to 18 give credit to people who've helped me and certainly 19 worked on this declaration as a team; the Devlin Law 20 Firm and myself. I did not work in a vacuum to 21 generate this deposition. I think I explained that 22 at the beginning of the deposition. 23 MR. PALYS: Okay. Let's take a break. 24 MR. DAHLGREN: Is it an okay time for a 25 break?	Page 93 1 MR. PALYS: Let's take 10 minutes. How are 2 you doing, sir? Are you doing all right? 3 THE WITNESS: 10 minute break is fine. 4 MR. DAHLGREN: Thank you very much. 5 MR. PALYS: Let's come back at, let's call 6 it, 47 -- let's just make it 10 of. 7 MR. DAHLGREN: That works. 8 (Brief recess) 9 BY MR. PALYS: 10 Q So sir, can you get your declaration out in 11 front of you, please, again, and turn to page 13? 12 A Section 6, claim construction? 13 Q You got it. Thank you very much. All 14 right. So that table that we see on page 13 in 15 paragraph 33, you -- I think I asked you this 16 already, but I'll ask it again. 17 You provided an opinion on the construction 18 of each of these three terms, right, no pocket, the 19 term communicated and the phrase to keep the 20 TCP-variant connection active, correct? 21 A I did not provide the legal construction, 22 no. 23 Q So what are the opinions in section 6 under 24 claim construction? What do they represent? 25 A They represent my opinion on what a person

Page 94 1 of ordinary skill in the art would understand by 2 these terms. They also represent the opinion that I 3 have in looking at the proposed constructions and my 4 opinion that I agree with those proposed 5 constructions. 6 Q Can you turn to paragraph 72 of your 7 declaration, please. It's on page 34. 8 And in paragraph 72, don't you say: "In my 9 opinion, the claims should be construed/interpreted 10 as follows," and then you provide your constructions; 11 is that right? 12 A That is what I say and that is what I 13 meant, that I agree with those constructions. 14 Q All right. Let's go back to your 15 declaration on page 13 -- actually, page 14. We'll 16 start there. Paragraph 37, you can reference as I 17 ask my question. 18 Is it your opinion that -- not your 19 opinion. 20 Do you believe that the Board interpreted 21 the no packet term in a certain way in its 22 institution decision? 23 MR. DAHLGREN: Objection, form. 24 THE WITNESS: Without being able to offer a 25 legal opinion, with that caveat, I agree that the	Page 95 1 Board did offer an opinion. 2 BY MR. PALYS: 3 Q That you disagree with, correct? 4 A And I think you pointed out in my 5 declaration, the paragraph in which I express that. 6 Q 37? 7 A Let me check. Yes, my disagreement was 8 based at least in part by correcting the Board's 9 misunderstanding that no packet only refers to 10 specific types of packets. In my opinion, as I say, 11 it refers to packets communicated for the intended 12 purpose of keeping the connection active. 13 Q At the end of paragraph 36, you state: "I 14 note there are no qualifiers, adjectives, et cetera, 15 stated in connection with the term packet," correct? 16 A I'm sorry, I'm looking at paragraph 36 and 17 I do see that. I say I note there's no qualifiers, 18 adjectives, et cetera, stated in connection with the 19 term, "packet." 20 Q That was my question. Thank you. So the 21 phrase in the claims that you are interpreting these 22 terms from, three terms, states from Claim 1, it's -- 23 hold on. My eyes are bad. "An idle time period. 24 And during which no packet is communicated in the 25 TCP-variant connection to keep the TCP-variant
Page 96 1 connection active." 2 So my question is, this portion of the 3 phrase "to keep the TCP-variant connection active," 4 wouldn't you call that a qualifier to the term, "no 5 packet" or "packet" in that phrase that you're 6 interpreting? 7 MR. DAHLGREN: Objection, scope, form. 8 THE WITNESS: I think you're asking me to 9 interpret claims. And I'm not a lawyer. I'm not 10 able to interpret claims. However, I can give you my 11 opinion as to what a person of ordinary skill in the 12 art would understand by that question and by that 13 claim language. 14 And the answer is that there's nothing 15 between no and packet. There's no X packet where X 16 is something. There's no X there. There's no 17 qualifier. No packet means no packet. 18 BY MR. PALYS: 19 Q Can you turn to paragraph 46 of your 20 declaration, please. Tell me when you're there. 21 A Yeah, I'm there. I'm also just reaching 22 for a cup of water. 23 Q Sure. So in paragraph 46 -- 24 A 46, yes, sent or received by the apparatus. 25 Q In paragraph 46, about five lines down,	Page 97 1 it's the second to last sentence, you have this 2 opinion that: "Therefore, the plain meaning of the 3 claim is that the idle time period is a period in 4 which no packets of any kind are sent or received by 5 the apparatus." 6 Do you see that? 7 A Yes, I see that. 8 Q So is it your opinion that the claim 9 phrase, the no packet claim phrase -- the plain 10 meaning of -- let me rephrase that. 11 So do you -- is it your opinion that 12 that -- the plain meaning of idle time period is a 13 period in which no packets of any kind are sent or 14 received by an apparatus; is that your opinion? 15 A Sorry, I was teaching myself to wait for 16 Derek to raise any possible objection. Can you 17 repeat the question, please, because no, I don't 18 think that is exactly what I'm saying. 19 Q I just repeated the sentence that you 20 wrote, sir. 21 So are you disagreeing with the sentence in 22 paragraph 46? 23 A No, I'm asking you to repeat the question 24 so I can make sure I don't do that. 25 Q Okay. Sure.

Page 98 1 Is that your opinion in that sentence? 2 "Therefore, the plain meaning of the claims is that 3 the idle time is a period in which no packets of any 4 kind are sent or received by the apparatus?" 5 Is that your opinion? 6 A Yes, it is. 7 Q Okay. Thank you. 8 Now, do you -- is it your opinion that 9 where the claims were discussed, no packet, that one 10 of ordinary skill in the art would understand that to 11 mean in the context of Claim 1, that means no packet 12 of any kind, regardless of whether it was 13 communicated to keep the TCP-variant connection 14 active or not? 15 A That was a very, very long question. 16 MR. DAHLGREN: Yeah, objection, form. 17 BY MR. PALYS: 18 Q You know, the length of the question 19 doesn't make it confusing, sir. Sometimes there's a 20 lot of words here, but I'll try again. So you seem 21 to be ignoring in your interpretation of the claim 22 meaning of idle time period the phrase to keep the 23 TCP-variant connection active. Paragraph 46, you 24 never make reference to that. 25 So my question is: Are you interpreting	Page 99 1 the claim idle time period such that it can be where 2 no packet is communicated in the TCP-variant 3 connection? Stopping there. Any packet of any kind 4 during that time period would be no packet 5 communicated, regardless of the purpose of that 6 packet? 7 MR. DAHLGREN: Objection, form, scope. 8 THE WITNESS: I think you're asking me to 9 give a legal opinion on whether a claim -- a 10 shortened claim, a claim that is present here that 11 has some elements removed, is different. I'm not 12 qualified to give that legal opinion. But I think a 13 person of ordinary skill in the art would understand 14 that if you removed something from a claim, you're 15 changing the claim. 16 BY MR. PALYS: 17 Q Yeah, that's absolutely a hundred percent 18 not what I asked you. Sir, you did provide opinions 19 on claim construction. Unless you're going to 20 withdraw the opinions, you're here on cross 21 examination. And I would say that -- and especially 22 the Board would probably want to see your opinions 23 and answer questions regarding the interpretations 24 that you took to support your opinions in your 25 declaration.
Page 100 1 So with that backdrop, I'll ask you again, 2 is, in your interpretation as you set forth in 3 paragraph 46, you do not consider the language that 4 has -- that the claim says there's no packet to keep 5 the TCP-variant connection active? 6 MR. DAHLGREN: Objection, form. 7 BY MR. PALYS: 8 Q So that's my question. I want to know: Is 9 the plain meaning of idle time period, as you 10 represented in 46, is it truly only a period in which 11 no packets of any kind are sent or received by the 12 apparatus, period; nothing more? 13 MR. DAHLGREN: Objection; form, scope. 14 THE WITNESS: I think I can best answer 15 your question by pointing you to a section in my 16 declaration. You pointed me to paragraph 46. If I 17 point you to section C, paragraph 54 and following on 18 page 22, that section of my declaration addresses the 19 claim element that you're talking about. 20 BY MR. PALYS: 21 Q Uh-huh. 22 A So I say in my opinion, the correct 23 construction is to keep the TCP-variant connection 24 active; is to do so regardless as to what condition, 25 timer, period, counter, or other mechanism exists to	Page 101 1 keep the connection active. That is, if any packet 2 is sent or received by the apparatus for the purpose 3 of keeping the connection active, regardless of how 4 it's designed to keep the connection active, this is 5 outside the scope of the claimed idle time period. 6 Reason of explanation I address with or 7 without condition via any mechanism separately, this 8 is my opinion, both and aside the absolute nature of 9 the negative limitation. No packet present in the 10 claim language. 11 Q In paragraph 39, you express your opinion 12 that the 995 patent discloses a variety of different 13 packets, correct? 14 A That's correct. I have paragraph 39 in 15 front of me. 16 Q What is an empty packet in the context of 17 the 995 patent? 18 MR. DAHLGREN: Objection, scope. 19 THE WITNESS: Empty packet was not a term 20 that was in dispute, or I considered to be in dispute 21 in this -- in my declaration. I understand that 22 claim terms -- the meaning of claim terms must be 23 constructed by a lawyer or judge and opinion on it, 24 unable to give a legal opinion. But a person of 25 ordinary skill in the art would understand an empty

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1 packet, for example, to be a packet that contained no
 2 application data.
 3 BY MR. PALYS:
 4 Q Thank you.
 5 And what is a nonempty packet in the
 6 context of the 995 patent?
 7 MR. DAHLGREN: Objection, scope.
 8 THE WITNESS: With the same caveat that I
 9 should repeat, that I do not believe the difference
 10 in the two terms, empty packet and nonempty packet
 11 was a point of dispute. It's not something I focused
 12 on in my declaration. I cannot construct these
 13 terms.
 14 I understand that claim construction is a
 15 legal matter for which I am not qualified or equipped
 16 to provide. However, with that caveat, I can say
 17 that a person of ordinary skill in the art would
 18 understand that a nonempty packet includes
 19 application data, for example.
 20 BY MR. PALYS:
 21 Q And what would a person of ordinary skill
 22 in the art understand a syn packet, S-Y-N packet to
 23 understand in the context of the 995 patent?
 24 MR. DAHLGREN: Objection, scope.
 25 THE WITNESS: Sorry, Derek, to step on you.

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1 BY MR. PALYS:
 2 Q That's okay. I'm guilty of that too,
 3 Derek. Don't worry.
 4 In the context of the 995 patent, can a
 5 keepalive packet be an empty packet?
 6 MR. DAHLGREN: Objection, scope.
 7 THE WITNESS: The topic of the form of the
 8 keepalive packet in the 995 patent is not something
 9 that I focused on. I would have to study that more
 10 to give you a complete answer. But in general, I
 11 could tell you that a keepalive packet, generally in
 12 TCP, it would be considered to be an empty packet.
 13 That's a TCP keepalive packet.
 14 But keepalive packets could be sent by
 15 other layers. Those may or may not be empty. So the
 16 answer would actually depend on the context.
 17 BY MR. PALYS:
 18 Q Since we're talking about keepalive, let's
 19 skip to that for a second. The 995 patent describes
 20 the use of keepalive timeouts with its disclosed ITP
 21 context, correct?
 22 A Can we break that down into two separate
 23 questions, please?
 24 Q Sure. The 995 patent describes the use of
 25 keepalive timeout, correct?

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1 I gave you an example of a nonempty packet that could
 2 be a packet including data. A syn packet, a
 3 keepalive packet, an acknowledgement packet, or if
 4 we're talking about a non-TCP protocol or a
 5 TCP-variant protocol, some other type of packet,
 6 those packets might include information. They may or
 7 may not be considered empty packets.
 8 BY MR. PALYS:
 9 Q So --
 10 A Or nonempty packets.
 11 Q Yeah, I'm kind of confused by your answer.
 12 So --
 13 A You asked me what is a syn packet --
 14 Q Yeah, I'm going to follow up because I
 15 didn't understand your answer.
 16 So is it your opinion that a syn packet can
 17 be a nonempty packet?
 18 MR. DAHLGREN: Objection, scope.
 19 THE WITNESS: A syn is a flag. A syn
 20 packet could be an empty packet or could be a packet
 21 containing data.
 22 BY MR. PALYS:
 23 Q What about a keepalive packet?
 24 MR. DAHLGREN: Same objection -- I'm sorry,
 25 Joe.

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1 A Yes. Generally.
 2 Q And the 995 patent describes the use of
 3 keepalive timeout in connection with ITP, correct?
 4 A Yes.
 5 Q And keepalive features in the 995 patent
 6 make use of a timer, correct?
 7 A Yes.
 8 MR. DAHLGREN: Objection, form.
 9 THE WITNESS: Sorry, Derek.
 10 MR. DAHLGREN: No worries.
 11 THE WITNESS: Yes --
 12 BY MR. PALYS:
 13 Q The 995 patent -- go ahead, sorry.
 14 A Well, I was going to finish answering my
 15 question. That's generally correct. There are
 16 several embodiments. I think I believe that one of
 17 them includes a mechanism that does not necessarily
 18 involve the timer.
 19 Q The 995 patent describes that the keepalive
 20 timer can be stacked so it can expire before an idle
 21 time period, correct?
 22 MR. DAHLGREN: Objection; form, scope.
 23 THE WITNESS: To help me answer that
 24 question, can you direct me to the point in my
 25 declaration where I discuss this, so I have a context

Page 106 1 for your question? 2 BY MR. PALYS: 3 Q I'll give you context. Turn to column 15 4 of the 995 patent, Exhibit 1001. Tell me when you 5 have that ready. 6 A I have column 15. 7 Q Thank you. If you take a look in the 8 paragraph starting at line 34. In there, the 995 9 patent explains that, First Node system 2 may set a 10 keepalive timeout attribute, based on a duration of 11 the first idle time period identified in the first 12 idle information and/or in the metadata provided to 13 Second Node 604, correct? 14 A Yes, I see that. 15 Q And a little bit down, around line 40, the 16 995 patent says: Keepalive option handler and/or 17 keepalive component, not shown. Operating in First 18 Node 602 may set a keepalive timer according to the 19 timer attribute with a duration that will result in 20 the keepalive timer expiring before an idle time 21 period can occur, correct? 22 A Yes. 23 Q So the 995 patent describes that the 24 keepalive timer can be set so it expires before an 25 idle time period, correct?	Page 107 1 MR. DAHLGREN: Objection, form. 2 THE WITNESS: To the extent that you've 3 paraphrased the specification, the specification 4 actually sets that a keepalive option handler and/or 5 keepalive component not showing operating First Node 6 602 may set a keepalive timer according to the timer 7 attribute with the duration that will result in the 8 keepalive timer expiring before an idle time period 9 can occur. 10 BY MR. PALYS: 11 Q What do -- what does the keepalive time 12 period in the 995 patent represent? 13 MR. DAHLGREN: Objection, scope. 14 THE WITNESS: In the embodiments where a 15 keepalive timer is used, a keepalive is used for the 16 same purpose that a keepalive packet would be used in 17 any connection to keep the connection alive. 18 BY MR. PALYS: 19 Q The 995 patent explains the keepalive timer 20 may expire, which will result in a keepalive timeout, 21 correct? And you can look for context, lines 41 22 through 46 in column 15 of the patent. 23 A Yeah, in response to detecting that 24 keepalive timeout, which may be indicated by the 25 expiration of the keepalive timer, the keepalive
Page 108 1 option handler or keepalive and/or keepalive policy 2 component may provide information to packet 3 generator -- packet generator component 552 to 4 generate a TCP keepalive packet. 5 Q And the keepalive packet that's described 6 in the context of the 995 patent is a packet that is 7 sent to keep the TCP connection alive, correct or -- 8 I'm sorry, after. 9 MR. DAHLGREN: Objection, form. 10 BY MR. PALYS: 11 Q So the 995 patent explains that the TCP 12 keepalive packet is sent to the other node to keep 13 the TCP connection active, correct? 14 A I believe. 15 MR. DAHLGREN: Objection, form. 16 THE WITNESS: Sorry. 17 MR. DAHLGREN: Go ahead. Sorry, Dr. Smith. 18 THE WITNESS: Yeah, I think you've asked 19 that question in a couple of different forms and I 20 just want to make sure that when I answer, I am 21 answering the right forms. Because I believe in one 22 form of the question you asked whether it would keep 23 the TCP connection active. And in another form of 24 the question, you asked whether the keepalive would 25 keep the connection alive.	Page 109 1 BY MR. PALYS: 2 Q Let me stop you right now to make things a 3 lot easier for you, because I think it was pretty 4 clear that I was clarifying my question. All you 5 need to do is focus on the question that's pending. 6 That's the question that's pending. 7 So the question is, is the TCP keepalive 8 packet that's described in the context of the 995 9 patent, is that set to keep the TCP connection 10 active? 11 MR. DAHLGREN: Objection; form, scope. 12 THE WITNESS: I understand the construction 13 of terms used in claims and in the patent is a legal 14 issue. I'm not qualified to give a legal opinion. 15 But generally, a person of ordinary skill in the art, 16 and this may or may not be relevant to the 995 patent 17 and its claims, would understand that a keepalive 18 packet was intended to keep a connection alive or 19 active. 20 BY MR. PALYS: 21 Q And in column 15, lines 49 through 53 -- 22 actually, let me give you a tighter -- in column 15, 23 line 52 through 53, the 995 patent says just that, 24 that the TCP keepalive packet will determine or can 25 be sent, quote, to keep the TCP connection active,

Page 110 1 end quote, correct? 2 A Yes. And as I've explained, a person of 3 ordinary skill in the art would understand that 4 active -- to keep the connection active or to keep 5 the connection alive generally means the same thing. 6 Q If we -- let's look at Figure 7 again in 7 the 995 patent, please. Tell me when you're there. 8 A I have Figure 7. 9 Q Okay. So you considered the 995 patent 10 description of Figure 7 to support your opinions in 11 your declaration, correct? 12 A Yes, I did consider Figure 7 as part of my 13 analysis. 14 Q So in your -- 15 A Can I just add something? I also 16 considered the modified Figure 7 in the original 17 petition. Google modified this figure. That was the 18 subject of my analysis also. Bradner also, in his 19 declaration, covered modifications to this figure. 20 Q In your opinion, what is Figure 7 in 21 general; what is it depicting? 22 A Figure 7 depicts packet flow between two 23 nodes. 24 Q And in this packet flow, the message is 25 706.1 through 706.N.	Page 111 1 Do you agree that the 995 patent describing 2 this process, where the ITP, the idle time period is 3 negotiated, correct? 4 MR. DAHLGREN: Objection, form. 5 THE WITNESS: I'm sorry, which packets are 6 you talking about? For the negotiation, the packets 7 706.2, 706.N are just packets going backwards and 8 forwards. 9 BY MR. PALYS: 10 Q What is your understanding of the -- well, 11 let me start here. 12 Do you see the element 710.1 in the middle 13 of Figure 7? 14 A I do. 15 Q Okay. What is that representing; what's 16 happening at that time? 17 A The idle timer is being set, calculations 18 possibly being made before the idle time detection 19 process. 20 Q So at that time -- sorry, at that time 21 there was an idle time period that was determined 22 between the two nodes, correct? 23 A No, not necessarily. 24 Q Okay. So you interpret the 995 patent 25 where the idle time period can be initiated without
Page 112 1 an idle time period being negotiated? 2 MR. DAHLGREN: Scope. 3 THE WITNESS: Sorry. Again, that's not 4 what I said. 5 BY MR. PALYS: 6 Q Why did you say no? Explain to me. Help 7 me out. 8 Why is it that you disagree that the time 9 before the idle time period is set at 710.1, it was a 10 negotiation between First Node and Second Node to set 11 that idle time period? 12 A The idle time period duration may be set at 13 that point, but that idle period time duration is not 14 necessarily the parameter. I use that term 15 deliberately. That was exchanged in the negotiation. 16 Q So what's the parameter that was exchanged 17 in the negotiation? 18 MR. DAHLGREN: Objection, form. 19 THE WITNESS: Sorry, Derek. 20 BY MR. PALYS: 21 Q And the metadata represents what during 22 that negotiation? 23 MR. DAHLGREN: Objection, scope. 24 THE WITNESS: The metadata is part of the 25 negotiation in order to set the idle -- the duration	Page 113 1 of the idle timer. There may be calculations that 2 are performed in between. So at the point, for 3 example, of packet exchange 706.2, the exact idle 4 time duration is not known. 5 And that, for example, is a reason why 6 Google's petition in Bradner's declaration makes a 7 serious error in analyzing this figure; comes to 8 completely erroneous conclusions. 9 BY MR. PALYS: 10 Q So when is -- when is the exact idle time 11 duration known in Figure 7? 12 A Figure 7 -- 13 MR. DAHLGREN: Objection, scope. 14 THE WITNESS: Sorry. I need to stop doing 15 that. Go ahead, Derek. 16 MR. DAHLGREN: I got my objection in. I 17 said objection, scope. You can go ahead, Dr. Smith. 18 THE WITNESS: Thank you. Figure 7 is a 19 packet flow of what we call a ladder diagram. There 20 are no timestamps or times indicated on here. But 21 generally, what's going on here is that the idle 22 timer function, idle timer set will be called. If 23 you want to think of the vertical line underneath 24 Node 1 as a timeline, and the labels as times, at 25 around 710.1, after the packet flows, 706.2 to 706.N

Page 114 1 is complete. 2 BY MR. PALYS: 3 Q And then from -- again, I'm going to try to 4 do this so we don't -- we can have some agreement on 5 the terms we use. I was going to say time 710.1 but 6 let's use the term that you're comfortable with. I'm 7 representing 710.1, I'm referring to that moment in 8 this diagram. 9 Do you understand what I'm trying to get 10 at? 11 A Yes, I think it's the same term that I 12 used. 13 Q I know you used moment, so we can just move 14 on with the questions. 15 So at the moment of 710.1 down to 712, what 16 is occurring in the system of Figure 7, or this 17 diagram of Figure 7? 18 MR. DAHLGREN: Objection, scope, form. 19 THE WITNESS: That is the time at which the 20 whole detection process is running. 21 BY MR. PALYS: 22 Q So would that be the idle time period? 23 A Could be, yes. 24 Q In moment 710.1 -- 25 A Yes.	Page 115 1 Q -- and in moment 712 -- sorry, I'll finish. 2 Now you can answer. 3 A Yes, that could be an idle time detection 4 period that starts from around -- if you were to draw 5 it on the diagram, 710.1, down through 710.2 to 712. 6 Q Now, the 995 patent describes several ways 7 that that idle time period timer can initiate, 8 correct? 9 MR. DAHLGREN: Objection, scope. 10 THE WITNESS: Can you point me to the 11 context here in the patent or in my declaration? 12 BY MR. PALYS: 13 Q Sure. 14 Well, let me ask while I look: Do you 15 agree that a packet that is received by First Node 16 602 can initiate the idle timer -- idle time period 17 timer -- 18 MR. DAHLGREN: Objection, scope. 19 BY MR. PALYS: 20 Q -- in connection with the 995 patent? 21 MR. DAHLGREN: Sorry, Joe. Objection, 22 scope. 23 THE WITNESS: I'm sorry, I got completely 24 lost. We were going to go to context somewhere and 25 then another question came up.
Page 116 1 BY MR. PALYS: 2 Q Well, let me ask you right off and then 3 I'll give you some context, if you want it. 4 But what are some of the ways that the 995 5 patent can initiate an idle time period timer? 6 MR. DAHLGREN: Objection, scope, form. 7 THE WITNESS: Could you repeat the 8 question, please? The context in my answer? 9 BY MR. PALYS: 10 Q What are some of the ways that the 995 11 patent can initiate an idle time period timer? 12 A Can initiate an idle time -- 13 Q Period timer, when it can initiate the 14 timer. 15 MR. DAHLGREN: Objection, scope. 16 BY MR. PALYS: 17 Q Let me ask you this straightforward 18 question. Do you agree -- strike that. 19 Does the 995 patent describe that receiving 20 an empty TCP packet can initiate detection of an idle 21 time period? 22 MR. DAHLGREN: Objection, scope. 23 THE WITNESS: I'm sorry, I'm getting a 24 little backed up on your questions here. I was about 25 to answer the original question, because I looked	Page 117 1 through the 995 patent, some of the ways that that 2 detection period can be started. 3 The patent describes several ways. One of 4 them is First Node 602 may reset and initiate 5 detection of an idle time period with a different 6 duration of the previous time period. So in other 7 words, you're changing that period and starting 8 again, based on idle information for generating the 9 second ITP header. 10 That's one of the ways that the patent 11 describes initiation of the detection using a timer. 12 Now, on to your next question. 13 BY MR. PALYS: 14 Q So you didn't answer my first question any 15 way, so I'll ask this again. 16 Does the 995 patent -- in the context of 17 the 995 patent, can the reception of empty TCP packet 18 initiate detection of an idle time period? 19 MR. DAHLGREN: Objection, scope. 20 THE WITNESS: Can you point me to where in 21 my declaration I discuss this? It's not something I 22 considered, I don't believe, in detail. 23 BY MR. PALYS: 24 Q You didn't consider as part of 25 your opinions in your declaration how the 995 patent

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1 initiated detection of an idle time period; is that
2 right?
3 A I haven't focused on --
4 MR. DAHLGREN: Objection, form.
5 BY MR. PALYS:
6 Q Go ahead, sir.
7 A I haven't analyzed and focused on all the
8 different ways that that might occur.
9 Q Do you have an understanding today of how
10 the 995 patent initiates the detection of an idle
11 time period?
12 MR. DAHLGREN: Objection, form, scope.
13 Joe, after this, would it be possible to
14 take the lunch break?
15 MR. PALYS: Yeah, we'll see what the
16 response is.
17 THE WITNESS: So the 995 patent describes
18 several ways. One method is based here. First Node
19 602 may set an acknowledgement timer associated with
20 sending the packet. If the acknowledgement timer
21 expires before a TCP packet is received from the
22 Second Node 602 acknowledging the packet sent, ITP
23 monitor components 556 may detect the idle time
24 period in response to and/or otherwise based on
25 expiration of the acknowledgement timer.

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1 BY MR. PALYS:
2 Q You can't answer the question right now as
3 stated, sir?
4 A I've answered as much as I can. I've given
5 you the material that I have looked at. I haven't
6 studied this in detail. It's a complex issue.
7 Unless I -- unless you can point me to a place in my
8 declaration to give me context for what you're trying
9 to get at, I would have to say no. I would need more
10 time to analyze this thoroughly.
11 Q So you haven't studied in detail how the
12 995 patent describes how to initiate detection of an
13 idle time period?
14 MR. DAHLGREN: Objection, form, scope.
15 THE WITNESS: I'm not sure that was the
16 question that you asked me before.
17 BY MR. PALYS:
18 Q That's my question right now, sir.
19 MR. DAHLGREN: Same objections.
20 THE WITNESS: Okay. Can you repeat that
21 question, please?
22 BY MR. PALYS:
23 Q Have you studied in detail how the 995
24 patent describes to initiate detection of an idle
25 time period?

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1 So there are several ways that the 995
2 patent describes the initiation of the idle timer.
3 BY MR. PALYS:
4 Q I agree, there are several ways and one of
5 the ways is the reception of an empty TCP packet,
6 correct?
7 MR. DAHLGREN: Objection, form, scope.
8 THE WITNESS: The answer to that question
9 is that it -- at least one embodiment in the 995
10 patent describes that process as programmable. So if
11 ITP option handler component 602 determines the empty
12 packet reaches the condition, ITP monitor component
13 556 may be instructed to reset or restart detection
14 of the first known time period, including detection
15 of the beginning of the next potential time period.
16 BY MR. PALYS:
17 Q Can reception -- in the context of the 995
18 patent, can reception of the TCP packet initiate the
19 detection of an idle time period?
20 MR. DAHLGREN: Objection, scope, form.
21 THE WITNESS: Can you point me to, again,
22 to my declaration where I discuss this? If it's not
23 in my declaration, it's not something that I focused
24 on. I would have to take time to study this further.
25 Impossible in the context of a deposition.

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1 MR. DAHLGREN: Same objections.
2 THE WITNESS: I think we covered this. I
3 think we've covered some of the ways -- this was not
4 an area I focused on in my declaration, so I'm going
5 to have to take more time, reread the patent and
6 focus on this area to give you a full and complete
7 answer.
8 BY MR. PALYS:
9 Q How would one of ordinary skill in the art
10 understand, in the context of the 995 patent, a
11 keepalive timer to be initiated?
12 MR. DAHLGREN: Objection, scope.
13 THE WITNESS: Someone would understand a
14 certain period of time had go by without activity
15 being noticed. And in order to keep the connection
16 active, a keepalive packet would be sent under a
17 programmable or option control.
18 BY MR. PALYS:
19 Q In Figure 7 where --
20 MR. DAHLGREN: Joe, we've been going a
21 little over a lunch break. Is there going to be a
22 good time for lunch --
23 MR. PALYS: Let me finish this last
24 question.
25 BY MR. PALYS:

Page 122 1 Q In the moment between 710.1 and 712, which 2 we described as the idle time period, does the 995 3 patent describe at a -- strike that. 4 Could a keepalive message timer start -- 5 strike that. 6 Does the 995 patent describe features where 7 a keepalive packet can be sent within the time period 8 of the idle time period between moment 710.1 and 712 9 in Figure 7? 10 MR. DAHLGREN: Objection, scope, form. 11 THE WITNESS: So I have not considered this 12 hypothetical in my analysis. If you are asking could 13 a keepalive be sent from Node 2 to Node 1 during the 14 idle time duration detection period, the answer is 15 yes, it's possible. 16 But the reason for Figure 7 is for Node 1 17 to tell Node 2, don't bother sending keepalives 18 because we've agreed that in the event of silence, 19 I'm going to close the connection. That's the point. 20 MR. PALYS: Okay. Let's break for -- I 21 guess you want lunch? 22 MR. DAHLGREN: Is this a good time? Yeah. 23 How much time? Dr. Smith, how much time would you 24 like for a lunch break? 25 THE WITNESS: Half an hour, 45 minutes. I	Page 123 1 think that is what you suggested, Derek. An hour 2 seems too long. 3 (Lunch recess) 4 BY MR. PALYS: 5 Q Dr. Smith, let's look at Figure 7 of the 6 995 patent. 7 Can you look at that and let me know when 8 you have it in front of you? 9 A I have it. 10 Q The moment in Figure 7, 710.2, what does 11 that represent? 12 MR. DAHLGREN: Objection, scope. 13 THE WITNESS: I haven't performed detailed 14 analysis of this particular step in my analysis, but 15 710.2 in Figure 7 shows the -- where the monitor 16 component 556 receives information identifying 17 expiration of the time after detecting the first idle 18 time period. So it's part of the functional process 19 for detecting idle time. 20 BY MR. PALYS: 21 Q And so detecting an idle time period, that 22 can include or be based on detecting a timer 23 expiration, correct? 24 MR. DAHLGREN: Objection, scope. 25 THE WITNESS: In one of the embodiments,
Page 124 1 that's true. But the 995 patent is very broad and 2 describes a number of different ways that both 3 detection, setting of the detection, and the type of 4 detection can be performed. 5 It doesn't even have to be by a timer. It 6 could be some -- I'm not sure of the exact word, but 7 proxy or alternative event or trigger. It doesn't 8 have to be a timer. 9 BY MR. PALYS: 10 Q So in the embodiments where it's a timer, 11 in looking at Figure 7 in moment 710.2, what are some 12 of the examples in the context of the 995 patent that 13 would cause expiration of that timer? 14 MR. DAHLGREN: Objection, form, scope. 15 THE WITNESS: Could you point me to my 16 declaration where I discuss this so I have context 17 for the answer? 18 BY MR. PALYS: 19 Q You described the 995 patent throughout 20 your declaration. So the 995 patent, how it operates 21 is in the scope. And I'd appreciate if you'd answer 22 the question that I'm asking. 23 So again, my question is what are some of 24 the ways -- 25 MR. DAHLGREN: Counsel, I'm just -- if you	Page 125 1 would just -- 2 MR. PALYS: You can't interrupt a question. 3 MR. DAHLGREN: -- talk lighter with the 4 witness. I understand you're frustrated with the 5 answers, but I do think he's answering the questions. 6 But please go on. 7 BY MR. PALYS: 8 Q Yeah, I appreciate that, Derek, and that's 9 not my intent. But please let me finish the question 10 and don't interrupt. I'll give you a chance to 11 object at all times. 12 So anyway, my question is, in the context 13 of the 995 patent, what are some of the ways that 14 the -- that timer can be caused to expire? 15 MR. DAHLGREN: Objection, scope, form. 16 THE WITNESS: As I said, I haven't analyzed 17 this issue in detail. And to do so completely would 18 require more time. 19 In general, the idle time could expire 20 because it hasn't seen anything happen. 21 BY MR. PALYS: 22 Q And when you say it hasn't seen anything 23 happen, do you mean receive a packet? 24 A Could be. That could be one trigger, that 25 it was expecting to receive a certain type of packet

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1 in a certain amount of time, and it did not.

2 Q And could the -- what would happen -- well,

3 let me put it this way: The lack of receiving a

4 packet, that could cause the timer to expire, could

5 that occur if there was a disconnection between the

6 First Node and the Second Node?

7 A Well, what do you mean by --

8 MR. DAHLGREN: Objection, form, sorry.

9 Objection, form, scope.

10 THE WITNESS: Sorry, Derek. That's a very

11 good question.

12 What do you mean by disconnection? When is

13 the disconnection happening? Can we go back to --

14 probably the easiest thing to do here is go back to

15 the original petition.

16 Can we go back to the original petition and

17 I can answer this question?

18 BY MR. PALYS:

19 Q No, we're not going to go back to the

20 original petition. I'll ask my question and you can

21 answer it or not. That's up to you.

22 So my question is: What are -- could a

23 disconnection between the First Node and Second Node

24 cause the timer to expire?

25 MR. DAHLGREN: Objection, form, scope and I

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1 which ones I haven't, for clarity.

2 (All parties speaking simultaneously.)

3 Q Right. Guys, guys, guys, let me just

4 finish my question. I will let you talk, I promise.

5 MR. DAHLGREN: I was saying the petition

6 wasn't included.

7 MR. PALYS: I appreciate that. I'll get

8 that.

9 BY MR. PALYS:

10 Q My question was, when you said we didn't

11 provide you with your two declarations, do you mean

12 Exhibit 2002 in the other proceeding and Exhibit 2020

13 in this proceeding?

14 Are those the two declarations you're

15 referring to?

16 A I have a copy of Exhibit 2020. I do not

17 have a copy of anything, uh...

18 Q Right.

19 But you've been referring to Exhibit 2002

20 earlier to answer questions in this proceeding,

21 correct?

22 A I did talk about that because that

23 declaration was provided, was submitted at the same

24 time as 2020, so it's hard for me to separate what I

25 considered in one without talking about the other.

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1 also object, the witness asked for a document and I

2 think he should be entitled to be provided it. You

3 can answer, Dr. Smith.

4 THE WITNESS: In order to answer this

5 question - and it's a hypothetical question and it

6 was a question that was addressed in the original

7 petition and also in the Bradner declaration - in

8 order to answer the question, I would like to go

9 first to the annotated Figure 7 in the original

10 Google petition.

11 BY MR. PALYS:

12 Q If you -- you have -- by the way, Derek and

13 everyone, you do have a copy of the petition. That

14 was one of the documents that we provided; was it

15 not? Unless I'm wrong. I may be mistaken.

16 A No, there are many documents that you did

17 not provide to me. You did not provide both of my

18 declarations. You did not provide the original

19 petition. You did not provide Bradner's declaration.

20 Q So when you say both declarations, I just

21 want to be clear, are you referring to Exhibit 2020

22 in this proceeding and also 2002 in the other IPR

23 proceeding?

24 A I'm just trying to point out which

25 documents that we're been talking about I have and

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1 But the point I was making was I don't have the

2 petition.

3 Q Can you turn to column 2, please?

4 A I have an electronic copy of the petition

5 that Derek has provided to me and I have the

6 annotated Figure 7 in that.

7 Q My question right now, and we can get to

8 that if we have time, is: Can you please turn to

9 column 2 of the patent, the 995 patent?

10 A I'm sorry, but I was in the middle of

11 answering your original question about this

12 connection. I don't think I even got started on that

13 answer.

14 Q What question is that; do you want to jump

15 back to another question?

16 A No, I think you interrupted me before I got

17 a chance to answer that question.

18 Q So let's go back to that question. If

19 there was a disconnection between the First Node and

20 Second Node, would that cause expiration of the timer

21 in --

22 MR. DAHLGREN: Scope, form.

23 THE WITNESS: And I would like to go to the

24 petition, annotated Figure 7.

25 BY MR. PALYS:

Page 130 1 Q Okay. 2 A I believe that's petition labeled as page 3 31. It's actually page 43. 4 Q So you have a copy, sir; do I have that 5 right, of the petition? 6 A I believe I do. 7 Q Okay. And you're looking at what page of 8 the petition? 9 A I'm looking at page -- it's -- at the 10 bottom of the page it says page 32, but I believe the 11 absolute number in the PDF is page 43. So it -- 12 Q I see it. I see it. So you're looking 13 at -- let's use the page number on the physical copy, 14 page 32. 15 A Yes, the number of the physical page is 16 page 32. And you see -- 17 Q And -- go ahead. 18 A You see 7? 19 Q I do. 20 A So this addresses the issue, the question 21 that you posed of what happens when there's a 22 disconnect. 23 Q Okay. So let me frame it using this Figure 24 7 on page 32 of the petition. We're talking about 25 the expiration of the timeout value in moment 710.2	Page 131 1 down below; do you see that in Figure 7? 2 A We are. And I'm explaining that the 3 disconnect shown here is -- we're talking about a 4 figure here and graphical symbols and we're trying to 5 do it in words, so I'm going to have to create some 6 terms here so that you can understand my answer. 7 And the term I'm going to create describes 8 the symbol that Google has added to this figure to 9 show the disconnection. And the term I'm going to 10 use is ghost busters sign. So Google has added a 11 ghost busters sign to show the disconnect. And I can 12 now explain to you what happened -- when that 13 disconnect occurs. 14 Q Let me stop you here because I have a 15 different question. We can use this -- we can use 16 this figure, but follow along with me. 17 My question is, we're not looking at the 18 disconnection where you call the ghost buster figure, 19 which I assume you mean the blue cross out. I'm 20 looking at, could a disconnection cause the -- see 21 the red language, expiration of the timeout value at 22 moment 710? Could a disconnection cause that 23 expiration? That's what I'm referring to, not what 24 happened up above or in the green box. 25 MR. DAHLGREN: Form.
Page 132 1 THE WITNESS: Go ahead, Derek. 2 MR. DAHLGREN: It was a form objection. 3 You can answer. 4 THE WITNESS: No, the disconnection as 5 shown here, for example, could not cause an 6 expiration in the timeout -- let me use this example 7 to explain why in general -- 8 BY MR. PALYS: 9 Q But I -- 10 MR. DAHLGREN: Let him finish. You're 11 interrupting him. 12 MR. PALYS: You're right. I am. The 13 reason why I'm doing it -- I'm not trying to be 14 rude -- is because you're starting to go off on a 15 tangent and I want to bring you back, sir. And I do 16 that with respect, because you're not really 17 answering the question that I'm trying to pose. And 18 it could be my fault. So let me try to rephrase it 19 so we get us back on track. 20 A I understand your question very clearly. 21 I'm trying to answer it. But you're not giving me a 22 chance to answer it. 23 Q I know you understand my question. Can you 24 tell me the question you're trying to answer? 25 A I'm going to tell you what happens in this	Page 133 1 particular case of a disconnect with the expiration 2 of the timer, and I'm going to use that to explain to 3 you what happens in a more general case. It's a 4 complex issue and I have to do it in that order. 5 That's the way I'm going to be forced to answer this 6 question. So we've established that we're going to 7 use this ghost busters sign to represent this 8 disconnection that's occurring. 9 And at the moment that this particular 10 disconnect occurs, you'll see the disconnect is 11 happening before the timer value is even being set. 12 So there's no detection going on here at all during 13 the disconnect, though the timer will not expire in 14 this case. That's the first problem with this figure 15 and the hypothetical of the disconnect. 16 The second problem with this figure and the 17 hypothetical of the disconnect is when you place this 18 ghost buster sign on the figure and you eliminate all 19 the packets, you complete change the meaning of this 20 figure. You haven't just annotated it; you've 21 changed the logical behavior. 22 So what will happen here is when these 23 packets are dropped, and we don't know how they're 24 dropped, I'll come to that in a minute, but assuming 25 that they are dropped in such a fashion that nothing

Page 134 1 gets through during this ghost busters period of 2 time, then both the protocols involved here and the 3 internet itself are designed for this very scenario. 4 The internet was based on ARPANET, which is 5 designed to withstand nuclear attack. So these 6 packets will reappear. They will be transmitted. 7 And in fact, Google in its petition and Bradner in 8 his declaration admitted these packets will be 9 retransmitted. They will be retransmitted with the 10 purpose of keeping this connection alive. 11 And so those packets will reappear after -- 12 and we're going to use the labels loosely to 13 represent time, but these packets will reappear after 14 706.N. They will reappear during the running of the 15 detection of the idle time and the idle time will not 16 expire. 17 Now, if Google wishes to change this 18 hypothetical disconnect that you've shown here and 19 that I've shown as erroneous, we run into more 20 problems. First of all, I have to explain that the 21 red annotation is also incorrect here. The red 22 annotation would imply that a timeout parameter 23 directly being used in the time for the timeout 24 duration timer is passed in the negotiation. That is 25 not the case.	Page 135 1 Metadata is transferred; the timeout 2 duration is calculated, and if that duration is being 3 used to run a timer, that value may be used or a 4 value calculated from that value, that may be used to 5 run the timer. So we've got multiple problems in 6 this figure. Let's go back, though, to what happens 7 when the disconnect period is changed. 8 Now, I have to construct more language to 9 explain what's going on in a graphical diagram. 10 Let's call the period that Google wishes to 11 disconnect for a goal post. And the goal post has a 12 width in time. And the goal post has a start and the 13 goal post has a finish and the goal post has a 14 location on the internet in order to destroy the 15 packet flow or attempt to destroy the packet flow 16 through the network. 17 Now, at this point, I should add that we're 18 strongly in a hypothetical scenario here. None of 19 this is disclosed by Eggert. None of this is 20 disclosed by any of the other references in 21 combination with Eggert or in combination with any of 22 them with or without Eggert. So given that we're in 23 the realm of hypothetical situations, if Google now 24 attempts to move these goal posts, for example, move 25 the goal post so that it occurs later in time, the
Page 136 1 same arguments still apply. 2 The packets will reappear at some point. 3 They will be retransmitted or keepalives will be 4 retransmitted. And it could well be that the timeout 5 value doesn't expire. In fact, constructing the goal 6 posts so that this interruption is going to fail 7 somehow and meet the claims is so difficult that I 8 haven't been able to conceive of a way to doing it. 9 In order to construct the goal post size, 10 position and location, you would have to know what 11 packets had been transmitted, what types of packets 12 had been transmitted, when they were transmitted, 13 what their purpose was, how long they had been in the 14 network, where they were in the network, and that is 15 just considering the packet parameters. 16 On top of that, you have to consider that 17 these two nodes may be two different operating 18 systems. They may be different versions of the same 19 operating system. Typically, they would have 20 differences from RFCs, produce unpredictable 21 behavior, and in general, may have problems 22 interoperating with each other, which are unknown in 23 practice. 24 So when you put all of these factors 25 together, both the amount of state that you would	Page 137 1 have to understand and keep to figure out when the 2 disconnection should occur in order to meet the 3 claims, and how difficult it would be to know exactly 4 how each node is going to behave in these 5 circumstances, I find it impossible that such a 6 hypothetical could work to meet the claims. 7 Q Okay. So it's your opinion that claims -- 8 or Claim 1 does not encompass a scenario where a 9 disconnect could occur during the idle time period; 10 do I have that right? 11 MR. DAHLGREN: Objection, form. 12 THE WITNESS: Could you repeat that 13 question, please? 14 BY MR. PALYS: 15 Q That's all right. I think you actually 16 already answered that question. 17 So this understanding that you just 18 described at length, and I appreciate that, thank 19 you, is this the understanding of the 995 patent that 20 you had to support your opinions in your declaration? 21 MR. DAHLGREN: Objection, form. 22 THE WITNESS: I'm not sure I understand the 23 question. Could you rephrase it, please, for me? 24 BY MR. PALYS: 25 Q Not really. That's how I could ask the

Page 138 1 question. 2 The description of how the 995 patent would 3 work in a scenario you just gave your answer to, is 4 that your understanding of the 995 patent that you 5 relied upon to support your opinions in your 6 declaration? 7 A I'm sorry, that was a very circular. I 8 just don't understand the circular nature of that 9 question. 10 Q Okay. If you could turn to your 11 declaration at paragraph 104. It's Exhibit 2020. 12 A I have paragraph 104. 13 Q Right. And in paragraph 104, you say: 14 Given the Board's interpretation, one way to 15 distinguish Eggert and any other prior art for that 16 matter, is to identify at least one packet that is 17 communicated in the connection. 18 During the detected idle time period, e.g., 19 abort timeout in Eggert, to keep the connection 20 active, e.g., to avoid the connection end, correct? 21 A Yes, that is what part of paragraph 104 22 reads. 23 Q Right. And so following paragraph 104 and 24 let's say -- paragraph 105 on page 51, you provide a 25 table; Table 1, correct?	Page 139 1 A Well, there's a series of tables here. 2 I -- I thought they were labeled on top but they're 3 actually labeled on the bottom. So if you turn over 4 onto page 52, you see Table 1 -- yes, Table 1. 5 Q Thank you. 6 So the Table 1, what is that -- what is 7 this representing to support your opinion? 8 A Yeah, it's actually very simple, but very 9 complex at the same time. 10 Q Give me the high level one? 11 A Start with the high level. 12 Q Thank you. 13 A You're welcome. Each table represents a 14 counter example. And if we find a counter example, 15 it's in the last column of the tables, and the 16 counter example is a packet that I have referred to 17 in paragraph 104 where I say one way to distinguish 18 Eggert is to identify at least one packet. That last 19 column of the table is at least one packet. Now, 20 that's the simple part. 21 The hard part was, constructing these 22 tables was extraordinarily difficult. I can't even 23 remember, since I didn't have any notes and all the 24 details of how these tables were constructed. But 25 the point is that in the packet flow that was
Page 140 1 constructed, there's a packet in the last column that 2 corresponds to the packet that's referred to in 0104, 3 paragraph 104. 4 Q So when you say the tables, you used 5 plural, you're referring to all the following tables, 6 and if I may, the Table 1 that you identified -- 7 A Yeah, if you look at Table 2, and we're 8 going to count the header as row 1, row 1, 2, 3, 4, 9 5, where 5 contains -- 10 Q Sir, I was in the middle of my question, if 11 you don't mind. 12 All I want to do is identify all the tables 13 that follow Table 1. So you have a number of tables, 14 right? You have Table 1 on page 51 and 52, you have 15 Table 2 on page 54, correct? I'll stop there. 16 Correct? 17 A Yes, Table 2, page 54. 18 Q Okay. On pages 56 and 57, you have another 19 table; Table 3, correct? 20 A Table 3 is on 56 and 57. 21 Q And Table 4 is on pages 59 to 60, correct? 22 A Yes, 59 and 60 is Table 4. 23 Q And I'll try to shorthand it. So Table 5 24 is on pages 52 to 63, correct? 25 A No.	Page 141 1 Q Did I misspeak? 2 MR. DAHLGREN: I think it's just page 62. 3 BY MR. PALYS: 4 Q You're right, Table 5 is on page 62, 5 correct? Sir? 6 A Yes, is that a question, okay, about the 7 fact that's it's only on page 62. 8 MR. DAHLGREN: Just the location. 9 BY MR. PALYS: 10 Q I'm not trying to trick you, sir. I'm 11 trying to identify all the tables. 12 A Yes. 13 Q It's pretty straightforward. So on page 64 14 to 65 is Table 6, correct? 15 A Yes. 16 Q And Table 7 is on pages 66 and 67? 17 A Yes. 18 Q You have Table 8, pages 69 to 70? 19 A Yes. 20 Q You have Table 9, pages 72 to 73? 21 A Yes. 22 Q I think that's the last table, correct? 23 A I believe so. 24 Q Yes. So all these tables, Tables 1 through 25 Table 9, are these all examples, if you will, that

Page 142 1 you came up with to show how Eggert may provide a 2 packet during the abort time period to keep the 3 connection active; is that a fair statement? 4 A These tables each provide a way to 5 distinguish Eggert and any other prior art by 6 identifying at least one packet that's communicated 7 in the connection during the idle time period to keep 8 the connection active. 9 Q Great. Thank you. All right, so let's -- 10 let's go back to Table 1, page 51. So you provide -- 11 you came up with these examples as a way -- well, 12 strike that. You already said it. Let me start 13 over. 14 So the packet that you identify in your 15 example for Table 1 that is transmitted to keep the 16 connection active is the acknowledgement packet for 17 data packet 03; is that accurate? 18 A The active data_03 on column 1, 2, 3, 4, 5. 19 Q Right. So that's a yes, right? The packet 20 that you identified -- 21 A Yes. 22 Q -- in your example -- thank you. I 23 appreciate it. All right. 24 So this, in your example, the hypothetical 25 that you set up for Table 1, that acknowledgement for	Page 143 1 data packet 03 is being sent during these -- what you 2 identified as the second abort period, correct? 3 A I certainly labeled it second abort period 4 in the table. It's been so long, I can't remember 5 exactly all the details of this flow, but yes. 6 Q And is it your opinion, with respect to the 7 example in Table 1, the reason why, in your opinion, 8 that Eggert would not meet the claims is because in 9 this scenario, the acknowledgement packet for data_03 10 is being transmitted to -- or during that second 11 abort period, correct? 12 MR. DAHLGREN: Objection, form. 13 THE WITNESS: So the best I can do here is 14 use paragraph 107 on page 52 to explain what's going 15 on. And the active data_03 packet is communicated in 16 the connection to keep the connection active by being 17 sent by Node 1 to cause Node 2 to remove data_03 from 18 the retransmission queue for the connection on Node 19 2, which is necessary to prevent detection of an 20 abort user timeout Node 2. 21 More than that, I would have to go back and 22 reconstruct this packet flow, which took some time to 23 review. I cannot remember here, sitting here now, 24 exactly all the details of this packet flow. I would 25 have to recreate it, study it, review it again. And
Page 144 1 that would be hard to do, impossible to do in the 2 setting of this deposition. 3 BY MR. PALYS: 4 Q All right. So kind of hard for us to ask 5 you questions about your opinions on a table that you 6 created and you're saying it's impossible for you to 7 recollect how you came up with the table. So not 8 only for us, but for the Board. I mean, this is our 9 opportunity to ask you questions about that. But if 10 that's your position, that's your position. 11 MR. DAHLGREN: Objection, I think it 12 mischaracterizes testimony. 13 BY MR. PALYS: 14 Q Okay. So -- 15 A The best answer I can give you is in 16 paragraph 107. I spent a lot of time reviewing this 17 at the time; much, much more time than I have now, 18 and I can't come up with a better answer than the 19 answer I've given you than the explanation in 107. 20 Q Okay. So the -- in Table 1, you mentioned 21 in paragraph 106 that -- this is the second 22 sentence -- depicted flow may occur in a number of 23 situations such as when a packet is sent -- I'm 24 sorry, when a sent package is not received, e.g., due 25 to a network condition, when no acknowledgement or	Page 145 1 ACK is sent for received data packet, e.g., due to an 2 error condition in the receiving node, or when an 3 acknowledgement, or ACK is sent for a received data 4 packet, but the ACK is not received due to a network 5 problem or node problem. 6 Did I read that accurately? 7 A Yes, I think so. 8 Q So the flow in Table 1, as you indicate in 9 paragraph 106, can occur when no acknowledgement is 10 actually sent for a received data packet, correct? 11 MR. DAHLGREN: Objection, form. 12 THE WITNESS: When no ACK is sent for a 13 received packet, for example, due to an error 14 condition in the receiving node, yes. 15 BY MR. PALYS: 16 Q And Table 1 is your example based on 17 Eggert, correct? 18 A Table 1 is a counter example that shows or 19 distinguishes Eggert. 20 Q Okay. 21 A By identifying at least one packet that is 22 present in the connection in the -- 23 Q In the hypothetical -- sorry. My 24 apologies. I thought you were done. Are you done 25 with your answer?

Page 146 1 A Yes. 2 Q All right. Thank you. 3 Your hypothetical for Table 1, what 4 would -- how would your hypothetical in Table 1 and 5 your conclusions there from it in paragraph 107 6 change if there was no transmission of a data packet 7 from the Second Node to the First Node which you 8 identify as tx data_03? 9 A These were extraordinary complex packet 10 flows to construct. I could not answer that 11 hypothetical sitting here today in the context of 12 this deposition. 13 Q Did you consider hypotheticals relating to 14 Eggert, where there would be no data packet transmit 15 from Node 2 to Node 3, such as what you identify as 16 PS data_03 in support of your opinions in your 17 declaration? 18 A Did you say from Node 2 to Node 3? Because 19 that's how I heard the question. 20 Q That's right. That's what I said. Did I 21 say Node 3? I'm sorry, good call. Good call. 22 A Attention to detail is absolutely paramount 23 here and unfortunately, the level of attention to 24 detail is so excruciating that it's hard enough to 25 keep things straight when I have all the tools that I	Page 147 1 normally use to construct these type of packet flows 2 to try and keep things straight and understand what a 3 hypothetical on top of a hypothetical would be in 4 these situations. 5 It takes far longer to analyze than is 6 possible in these depositions. But please go 7 ahead -- please go ahead and re-ask your question 8 with the nodes correct and I will see if I can do my 9 best to answer your question. 10 Q I appreciate that. So I'm going to change 11 the question a little bit so you don't get confused. 12 I'm going to ask you a slightly different question -- 13 A I wasn't confused. You said Node 2 and 14 Node 3. It didn't confuse me. 15 Q Okay, sir. I didn't mean anything by that. 16 All right. 17 So my question is this: You provided nine 18 tables of hypotheticals of what, in your way, or in 19 your view, would show how Eggert is distinguished 20 from the challenged claims, correct? 21 A Actually, I think what I said more 22 accurately was that I used these charts, that were a 23 product of team work, to distinguish Eggert by 24 identifying at least one packet that is communicated 25 in the connection during the idle time period.
Page 148 1 Q Right. 2 And these scenarios that you created in 3 Tables 1 through 9 are scenarios that you -- are 4 hypotheticals that you created based on Eggert's 5 disclosures, correct? 6 A I don't think that is a fair 7 characterization, no, because we didn't base the 8 packet flows on Eggert's description, because there 9 isn't enough in Eggert to base it much of anything 10 on. What we did was create these flows in order to 11 distinguish Eggert. 12 Q Did you -- 13 A I don't think that's quite the same thing 14 in my mind, anyway. 15 Q Did you consider any hypothetical where 16 Eggert would not be sending a packet to keep the 17 connection active during the second abort period in 18 your example, in Table 1? 19 A I don't know the answer to that question, 20 because enough time has passed that I can't remember. 21 And to go back, since I don't have any notes, and try 22 and answer that question, I would have to recreate 23 this packet flow and then consider that hypothetical. 24 So I can't answer the question in the 25 context of this deposition.	Page 149 1 Q Did you -- did you consider -- in 2 preparation of your declaration, did you consider any 3 hypothetical based on Eggert where there would be no 4 acknowledgement packet sent during the abort period? 5 A Well, I think that that is what paragraph 6 106 says; that the depicted flow may occur, for 7 example, in a situation when no ACK is sent for 8 received data packet due to some error. 9 Q Okay. So you did consider it. So let's 10 talk about that then. In Table 1, what would happen 11 when the acknowledgement for data_03 was not sent 12 during the second abort period, which is consistent 13 with your framework in paragraph 106? 14 A Again, I -- 15 MR. DAHLGREN: Objection, form. 16 THE WITNESS: Sorry Derek. 17 MR. DAHLGREN: You're fine, Dr. Smith. 18 THE WITNESS: Again, the chance is so 19 complex that I can't sit here and answer that 20 question without further analysis. 21 BY MR. PALYS: 22 Q And if you could turn to paragraph 54 -- 23 sorry, page 54 of your declaration. 24 Did you consider any scenario with respect 25 to Eggert, where Eggert does not send the

Page 150 1 transmission data packet 03 that you identify in the 2 fourth row, fourth column of Table 2? 3 MR. DAHLGREN: Objection, form. 4 THE WITNESS: If I look at -- sorry, which 5 packet? You're dropping a packet here or -- 6 BY MR. PALYS: 7 Q I'll use the label that you have, so we're 8 talking about the same thing. I'm referring to your 9 label tx data_03 and you see that in the column 10 involving Node 2. 11 A Tx data_03 with ACK data_01. 12 Q Right. So -- well, you tell me because 13 it's your table. 14 But is that representing a transmission of 15 a data packet from Node 2 to Node 3? Sorry, let me 16 rephrase. 17 Is that -- is tx data_03 in Table 2 18 representing a transmission of a data packet from 19 Node 2 to Node 1 in your example of Table 2? 20 MR. DAHLGREN: Objection, form. 21 THE WITNESS: That packet from Node 2 to 22 Node 1 data, yep, I had that in my packet flow. Now, 23 what do you want to know about that packet? 24 BY MR. PALYS: 25 Q I just asked if tx data_03 in your Table 2	Page 151 1 is reflecting a data packet that's going from Node 2 2 to Node 1. 3 A Yes. And that's shown on page 56. 4 Q Okay. So back to Table 2. 5 Have you considered any hypotheticals 6 regarding Eggert where that tx data_03 packet was not 7 sent from Node 2 to Node 1? 8 MR. DAHLGREN: Objection, form. 9 THE WITNESS: No, I can't remember whether 10 we can -- I considered it, whether we considered, 11 whether we reviewed it. I can't remember. 12 BY MR. PALYS: 13 Q What would happen in Eggert in your 14 hypothetical of Table 2 if tx data_03 was not sent 15 from Node 2 to Node 1? 16 MR. DAHLGREN: Objection; form, and scope. 17 THE WITNESS: I couldn't answer that 18 question in a deposition. 19 BY MR. PALYS: 20 Q Okay. Thank you. Is there -- 21 A I would have to perform analysis that would 22 take me considerable amount of time in the format of 23 this deposition. It's impossible to do so. These 24 are extraordinarily complicated flows. 25 MR. PALYS: Derek, I'm just asking if you
Page 152 1 could expand on your scope objection for the record, 2 please. 3 MR. DAHLGREN: Well, I think you're asking 4 about a hypothetical that wasn't presented in his 5 declaration. He had said previously -- I believe he 6 had said previously he hadn't considered it, so I 7 thought it was outside the scope. 8 MR. PALYS: Thank you. 9 BY MR. PALYS: 10 Q If we could turn to Table 3, please, sir. 11 And it bridges pages 56 to 57 of your declaration. 12 A Uh-huh, yes. 13 Q Have you considered the scenario with 14 respect to Eggert where the acknowledgement for data 15 01, which is identified here in your last column, was 16 not sent in your hypothetical for Table 3? 17 A So data 01 from Second Node to First Node? 18 Q Let me frame it up for you. 19 On page 57 at the very top right, you see 20 the ACK for data 01? 21 A Yes. 22 Q Do you see that? Yeah. So that's -- 23 sorry. 24 A So -- 25 Q My question -- go ahead. Go ahead, sir.	Page 153 1 A For me, I tend to -- the master reference, 2 the way this works for me is actually Figure 3 on 3 page 59, and then the table comes from that figure. 4 So whenever you're asking me questions about the 5 table, I'm actually looking -- for example, you're 6 asking me a question about Table 3, I'm actually 7 looking at Figure 3, making sure I understand what 8 you want to do to the packet flow on Figure 3. 9 And then I'm going to make a call using my 10 best judgment as to whether I can answer that 11 hypothetical. And I -- as I say, I would start from 12 the packet flow on page 59. So that's why I keep 13 going to the packet flow figures rather than the 14 tables. Because the tables' fallout are a result of 15 the constructing these packet flows. 16 So to explain to you why it's hard for me 17 to answer your hypothetical questions for any of 18 these tables and figures, let me explain what 19 happens. I first have to draw the packet flow as 20 you're hypothetically modifying it, and then I have 21 to reconstruct this graphical diagram. 22 And since I can't do it here in the 23 deposition, I have to reconstruct this graphical 24 packet flow diagram in my head. And from that 25 graphical packet flow diagram in my head, I would

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1 have to extract from these tables. That's how this
2 process works. And that took days, in some cases,
3 weeks to construct these tables, each one.
4 So when you ask me a hypothetical question
5 about deleting a packet or moving a packet or
6 changing a packet or adding a packet, that's why it's
7 so hard for me to, on the spot here, sitting in the
8 deposition environment, answer your questions; for
9 this table or for any of the other tables.
10 BY MR. PALYS:
11 Q So thank you for that. But my question was
12 more of whether you actually did that analysis when
13 you were preparing your declaration Exhibit 2020.
14 Did you consider -- let me rephrase that.
15 Did you consider any scenario with respect
16 to Eggert where the acknowledgement packet that you
17 identify as the packet to keep the connection active
18 was not sent for Table 3 --
19 MR. DAHLGREN: Objection to form.
20 THE WITNESS: So I will try and answer your
21 question and I use the previous answer to help do so.
22 So when I constructed these diagrams and reviewed
23 these diagrams, it was with the intent to find, and
24 now I can use the table, to find a packet that would
25 appear in the final column.

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1 our head. We would do --
2 Q I understand.
3 A -- we would do on pieces of paper or think
4 about what was going on here. I know when I was
5 drawing packet diagrams, I would draw them, but I
6 don't have any notes that I retained or have any
7 record of what options we explored and did not
8 explore.
9 Q Thank you, sir. Did you -- well, strike
10 that for a second.
11 Let's take a five minute break because I
12 want to get my notes together and I don't want to
13 waste the time on the record.
14 MR. DAHLGREN: Okay.
15 MR. PALYS: So thank you. Let's come back
16 at, like, 2:35 your time.
17 MR. DAHLGREN: Works for me. Dr. Smith,
18 good for you?
19 THE WITNESS: Yes.
20 (Brief recess)
21 BY MR. PALYS:
22 Q So Dr. Smith, what would happen in Eggert
23 if a node doesn't receive an acknowledgement packet
24 within an abort timeout period?
25 MR. DAHLGREN: Objection, form.

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1 So the whole goal was here to sort of hunt
2 the ball, try and find an example where a packet
3 would appear in this column. And that would allow us
4 to distinguish from Eggert.
5 And so during this process that took days
6 and sometimes weeks, we would search for this counter
7 example and we'd explore many different options. We
8 didn't record them all. We made notes. We didn't
9 keep packet tracers. We didn't keep a record of all
10 of the different packet flow diagrams that we drew.
11 So to answer your question directly, I
12 don't know. And the reason I don't know is because I
13 can't remember how many of the different permutations
14 and combinations that we explored for Table 3. Now,
15 I believe you also wanted to know, did -- well,
16 that's my answer for Table 3.
17 BY MR. PALYS:
18 Q Okay. Great. You said something that I
19 want to follow up with, if I may. You said that we
20 didn't keep a record of all the different packet flow
21 diagrams that we drew.
22 So that suggests to me that you do have
23 packet diagrams that you drew; you just don't have
24 any records of them anymore; is that correct?
25 A Well, we would not do this completely in

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1 THE WITNESS: What would happen -- could
2 you repeat the question? Make sure I'm answering the
3 right question.
4 BY MR. PALYS:
5 Q What would happen in Eggert if
6 acknowledgement of a packet was not received within
7 the -- an abort timeout period?
8 A So are any other packets received -- I need
9 to see a packet flow.
10 Q I'm just asking in general. If you don't
11 understand, that's fine. But in Eggert, when -- I
12 mean, in your table, you refer to abort period, okay.
13 So if an abort period is started, what
14 would happen in Eggert if an acknowledgement packet
15 was not received to a transmitted data packet within
16 that abort timeout period?
17 MR. DAHLGREN: Objection, form, scope.
18 THE WITNESS: Well, if the connection was
19 inactive for a period of time greater than or equal
20 to the idle period, then a timeout would occur.
21 BY MR. PALYS:
22 Q Can you please turn to your declaration at
23 paragraph 93? It's on page 44.
24 A Concerning the reset?
25 Q Yes. So in paragraph 93, you state:

Page 158 1 Petitioner then concludes that the reset method is 2 not sent when the user timeout expired. 3 And you refer to the petition on page 44, 4 correct? 5 A Yes. That reference is petition at 44. I 6 don't have that up. I assume that's correct. 7 Q That's okay. It's in your -- it's in your 8 declaration. So I hope it's correct. So the next 9 sentence, though, you say: Patent owner respectfully 10 disagrees with this conclusion. 11 Are you providing opinion with respect to 12 what patent owner agrees in your declaration? 13 MR. DAHLGREN: Objection, form. 14 THE WITNESS: Can't explain that, other 15 than to say may have been some text that was -- can't 16 explain it. But I would -- looking at this, I know 17 that I read this section. I certainly agree with the 18 conclusion. But I can't explain the grammar that was 19 used here. 20 BY MR. PALYS: 21 Q Did you write that sentence or did someone 22 else write that sentence? 23 A I would certainly not have put patent owner 24 when I meant myself. So I do not know at what point 25 that was edited in or edited out or what I wrote or	Page 159 1 what was put together by the legal team. I just 2 don't remember and I can't explain. 3 Q Okay. Nonetheless, so in paragraph -- 4 A I might just like to add to my answer that 5 you recognize that this was submitted at almost 6 midnight on New Year's Eve and we worked through 7 Christmas and New Year's to meet the deadline here. 8 So I may -- I may have missed a few typos, I may have 9 missed a few. I clearly missed one, I think, here. 10 Q Okay. In your opinions in paragraph 93, 11 94, 95, et cetera, you're referring to this reset 12 message that's provided by RFC 793; is that accurate? 13 A Yes. 14 Q In paragraph 95, you have a Figure 10 from 15 RFC 793. 16 A Yes. 17 Q And -- thank you. And some citations to 18 that. 19 And you cite, and the cite is at the top of 20 page 46, Exhibit 1006 as 37 through 39, correct? 21 A Yes, I see that. 22 Q Great. I believe we sent you a copy of 23 Exhibit 1006. 24 Would you mind pulling that out? 25 A That's going to be tricky. Maybe I should
Page 160 1 try and bring that up. Which document is that? 2 1006? 3 Q Yes, sir. 4 A Okay, RS 793. 5 Q Great. I'm looking at page 37 of the 6 exhibit, petitioner's Exhibit 1006 on the bottom 7 right side of every page, hopefully. I'm sorry, 38. 8 I made a mistake. 9 A So you're looking at where it says page 38 10 of 89? 11 Q That's right? 12 A Which is page 34 of the RFC? 13 Q That's correct. 14 And that figure -- that Figure 10 that you 15 see on page 38 of Exhibit 1006, that's the Figure 10 16 that you're observing on page 45 of your declaration, 17 correct? 18 A Yes. 19 Q And on the title for Figure 10 says half 20 open connection discovery; do you see that? 21 A Yes. 22 Q And if turn one page back to page 37 in 23 Exhibit 1006, you see a section at the bottom that 24 says half open connection and other anomalies; do you 25 see that?	Page 161 1 A Yes. 2 Q And RFT 793 in Exhibit 1006 is describing: 3 An established connection is said to be half open, 4 one of the -- if one of the TCPs is closed or aborted 5 the connection at its end without the knowledge of 6 the other, or if the two ends of the connection have 7 become de-synchronized owing to a crash that resulted 8 in loss of memory, correct? 9 A Yes. 10 Q So Figure 10, it's describing a scenario in 11 a half open connection, right? 12 MR. DAHLGREN: Objection, form. 13 THE WITNESS: Yes. 14 BY MR. PALYS: 15 Q And -- 16 A Sorry. Can you repeat the question? I 17 got -- there was so much ping pong there -- 18 Q I think it's noncontroversial. 19 But I said, my question was, Figure 10 is 20 describing a scenario in a half open connection? 21 A Yes, I wanted to make sure what I was -- 22 yes. 23 Q I appreciate it. 24 So in Figure 10, sir, there's a sequence 25 number, I'll call it, on the left-hand side, it's

Page 162 1 numbered 1 to 7? 2 Do you see that? 3 A Yes. 4 Q Now, at number 1, it says "TCP A crash." 5 Do you see that? 6 A Yes. 7 Q Okay. And when we get down to number 3, it 8 shows TCP A sending a syn message with a sequence 9 number 400. 10 Do you see that? 11 A Yes. 12 Q And control equals syn, correct? 13 A Yes. 14 Q Now, in response, you see -- in line 4, TCP 15 B is sending back a packet that has a sequence number 16 300 and an acknowledgement for 100. 17 Do you see that? 18 A Yes. And an enact. 19 Q And enact. Right. 20 And number 5, this is where you see a 21 package sent from TCP A to B where it has sequence 22 number 100 in a controlled reset, which is the reset 23 message, correct? 24 A Correct. 25 Q So in Figure 10, the RFC 793 is providing	Page 163 1 or describing where this reset message is sent in 2 response to a packet that's being received by the TCP 3 in this half open connection scenario, correct? 4 A Well, I'm almost a hundred percent with you 5 until you said a packet. I'd rather you spell out 6 which packet we are talking about. 7 Q In response to line 4, going from TCP B to 8 A. 9 A Yes. 10 Q The reset message that's sent in line 5 is 11 in response to the message sent in line 4, correct? 12 A Not just that, but the state in which we're 13 in, we have to know we're in this state of half open. 14 But generally and basically, yes. This is very much 15 a corner case, very, very much a corner case 16 situation. Doesn't normally happen -- 17 Q This is Figure 10 that you identified in 18 your -- 19 A Uh-huh. 20 Q Oh, I already asked that. Never mind. 21 So the reset message that's being sent in 22 Figure 10, that is not being sent in response to any 23 timer timing out, correct? 24 A I'd have to think about that. That's a 25 good question. I'm not sure if there's a scenario
Page 164 1 where you just let this sit. 2 Q Well, if you look at page 38 at the bottom, 3 the paragraph under Figure 10, it's about three lines 4 down, there's a sentence that says: TCP A sees that 5 this segment does not acknowledge anything it sent, 6 and being unsynchronized, sent a reset, RST, because 7 it has detected a half open connection; correct? 8 A You've got -- you're correct, but the 9 problem -- the reason I'm pausing is you have all 10 sorts of other things going on at the same time here, 11 especially when you're in this three-way handshake. 12 There are all kinds of exceptions to timers and 13 options. Some of them work in the -- let's back up. 14 RFC is not gospel. There's no TCP IP stack 15 out there that follows the RFCs. There's certainly 16 no TCP IP stack out there that follows the RFCs in 17 these extreme corner case situation. I've been burnt 18 by this so many times. So that's high level. 19 Secondly, the reason I give pause is 20 because my training has caused me to wonder what's 21 going on in this three-way handshake, especially in 22 this corner case condition that you don't normally 23 see and what the effect of the various other timers, 24 there's seven timers running in the TCP IP stat; what 25 the effect of those may be.	Page 165 1 And that's why I give pause. The answer is 2 I can't give you an immediate answer. I'm still 3 thinking. 4 Now, what was your question again? 5 Q I forgot myself, sir. 6 A I don't blame you. 7 Q One second. In Figure 10 of the RFC -- 8 actually, let's go to your declaration on paragraph 9 96. 10 A Paragraph -- 11 Q Yeah, 96. At paragraph 96, you're 12 describing what's going -- what's happening with 13 Figure 10 in the RFC 793. And in there, you refer to 14 the language in the RFC where it says: If at site A 15 the connection no longer exists, and such reset 16 control message at line 5 of the above figure is an 17 abort. 18 Do you see that? 19 A Yes. 20 Q And that abort is identified, if you go 21 back to page 38 of Exhibit 1006 is on line 5 -- 22 A You're racing ahead of me now. A little 23 bit slower, please. Sorry. 24 Q We're still looking at Figure 10 of Exhibit 25 1006, the RFC.

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1 A Right, but I'm going backwards of two media
2 here. I'm going backwards and forwards between paper
3 and screen. I don't have the benefit that you do of
4 multiple monitors and preparation in advance. So you
5 may have to go a little bit more slowly so that I can
6 keep up.
7 Q On page 38 of Exhibit 1006 at line 5, you
8 see the abort --
9 A Yes.
10 Q -- that's there at the end?
11 That's the abort that you're referring to
12 in paragraph 96 in your declaration, correct?
13 A Yes, I believe so. Yes.
14 Q Can you please turn to page 48 of the RFC
15 793. That's Exhibit 1006.
16 A Page 48. As numbered or as --
17 Q As labeled in the bottom right.
18 A Uh-huh.
19 Q Page 48 of Exhibit 1006.
20 A Okay. I have -- interfaces?
21 Q Yes. Thank you.
22 So there on page 48 of Exhibit 1006, you
23 see a section called interfaces, correct?
24 A Yes. I do.
25 Q Thank you.

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1 different types of abort.
2 Q So let me just ask you: Which type of
3 abort in Figure 10 is this describing?
4 A Well, it's a generally accepted term there,
5 abort is it will abort the connection, close the
6 connection through resources if the OS sees that
7 situation, typically.
8 Q And page 39 of Exhibit 1006, in the first
9 full paragraph at the end, it says: The RST is
10 acceptable, so TCP B processes it and aborts the
11 connection, correct?
12 A I'm scrolling back up. I didn't get to the
13 page before you finished telling me what was on the
14 page. This is page 39 of 89 in 1006?
15 Q Yes, sir. The last sentence in the first
16 full paragraph.
17 A I see. The top of the page. The reset is
18 acceptable so TCP B process it and aborts the
19 connection?
20 Q Yes.
21 So RFC is describing that TCP that is
22 aborting the connection, correct?
23 A Yes.
24 Q I guess back to my other question, which --
25 you said that RFC 793 describes that number, a

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1 And under the section interfaces, down at
2 the bottom, there's a TCP user command section; do
3 you see that?
4 A I do see that. TCP user command section.
5 Q And following from page 48 through page 54
6 are the TCP user commands that RFC 793 identifies,
7 correct?
8 A Yes.
9 Q And on page 54, one of those user commands
10 is the abort command, correct?
11 A Yeah, I think I'm scrolling, scrolling, I
12 couldn't remember whether -- is it the last one?
13 Q Page 54 of Exhibit 1006.
14 A Last one, yeah.
15 Q Right.
16 And that abort on page 54 is the same abort
17 that's referenced in Figure 10 of the RFC that we
18 were previously discussing on line 5, which is on
19 page 38, correct?
20 A You know, I'm not sure that that is
21 correct. I'd have to study that. That's a good
22 question and I don't know the answer to that offhand.
23 They're certainly related. But whether the abort --
24 let me search on -- whether RFC actually links those
25 two explicitly, I don't remember. There's so many

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1 different abort, so which abort is Figure 10
2 referring to?
3 MR. DAHLGREN: Objection, form, foundation.
4 THE WITNESS: I know it's in this RFC
5 somewhere. I have to find it.
6 BY MR. PALYS:
7 Q Do you need more time?
8 A Yes, a little bit. I'm reading section 3.5
9 which is where I expected to find it. This is 1006.
10 Q Section 3.5, on what page?
11 A Section 3.5 starts on -- well, the part
12 that I'm looking at that describes the abort is -- I
13 was looking for what happens when a reset is
14 processed. And that would be on page 41 of 89.
15 Q So -- okay, I see it.
16 So page 41, section 3.5 and that's for
17 closing the connection, correct?
18 A Yeah, and the best I can find so far is
19 that TCP aborts a connection and advises the user and
20 goes to the close state. Without studying this
21 further, I'd have to go through all of the instances
22 of aborting here.
23 I think I've seen this issue before where
24 the RFC doesn't exactly say what has to be done on a
25 reset, and different operating systems do different

Page 170 1 things. Or even if a reset has to be sent in certain 2 circumstances. 3 Q A reset might be optional according to this 4 RFC? 5 A Yes. 6 Q Okay. With respect to the abort though, 7 you know, on page 39, it does say that the TCP 8 processes and aborts the connection, and that's the 9 TCP -- TCP B. And that RFC describes the abort as a 10 user command through the interface. Does that 11 help -- 12 MR. DAHLGREN: Objection, form. 13 THE WITNESS: Sorry, Derek. 14 MR. DAHLGREN: That's all right. 15 THE WITNESS: The two abort processes are 16 not defined in the RFC and operating system may 17 choose to do different things. A stack may choose to 18 do different things on those two cases where a reset 19 causes an abort or some other condition. Several 20 conditions that could cause an abort. Not just the 21 half open fiasco. And you don't necessarily do all 22 of the same things. 23 BY MR. PALYS: 24 Q Let me turn to page -- sorry. Let's go to 25 page 56 of the RFC of Exhibit 1006. That's page 56	Page 171 1 of the exhibit. 2 A We're back to user calls and event 3 processing? 4 Q It's event processing, right, section 3.9; 5 do you see that? 6 A Yes. 7 Q And RFC 793 explains that the different 8 events that can occur include user calls, arriving 9 segments, and timeouts, correct? 10 A Yes. 11 Q And the abort is under user calls, correct? 12 A Well, that's a user call abort. That's not 13 the same as abort caused by a half open fiasco, for 14 example. 15 Q Okay. And then the time -- under timeouts, 16 we have user timeout, retransmission timeout, and 17 time wait timeout, correct? 18 A We do. I'm not on that page yet. Which 19 page are you looking at? 20 Q It's the same page we were looking at, page 21 56, event processing. 22 A Okay. I'm scrolling back to that. 23 Q Yeah. Sorry. 24 Under timeouts, there's a user timeout; do 25 you see that?
Page 172 1 A Yes. 2 Q And if you'd now turn to page 81 of Exhibit 3 1006. 4 And at the top on page 81 is describes the 5 user timeout in the RFC. 6 Do you see that? 7 A Yes. 8 Q And according to RFC 793, it says: User 9 timeout. For any state if the user timeout expires, 10 flush all cues, signal the user, as, quote, air: 11 Connection aborted due to user timeout, end quotes. 12 In general and for any outstanding calls delete the 13 TCB, enter the close state and return; is that right? 14 A Yes. 15 Q What is the TCB? 16 A The control block that holds all of the 17 state information associated with the connection. So 18 basically, you're flushing all the resources in the 19 system. 20 Q The user timeout discussion here on page 81 21 of the RFC doesn't describe sending a reset message, 22 correct? 23 MR. DAHLGREN: Objection, form. 24 THE WITNESS: There is no mention of reset 25 under user timeout on page 81.	Page 173 1 BY MR. PALYS: 2 Q All right. Let's go back to your 3 declaration, please, sir. And I want to go back to 4 your claim construction section. And that will be -- 5 get the page in a second. Page 21, paragraph 52 is 6 on that page. This is Exhibit 2020. 7 A The page with the Venn diagram. 8 Q That's right. So -- well, why don't you 9 explain to me, what's this Venn diagram describing? 10 A So a Venn diagram is a logical diagram 11 intended to show what is and what isn't part of the 12 set. So we have the universal set, everything around 13 the Venn diagram. Then we have a circle representing 14 the Board's interpretation of a term; a square box 15 representing system 1, a square box representing 16 system 2, and alternative plain English descriptions 17 of a claim element. 18 And then a circle within a circle but 19 disjoint -- disjoint in the sense of set disjoint, 20 no overlap, showing patent owner's construction in 21 system 3 and the patent owner's construction. 22 Q And in the Venn diagram, you have this 23 labeled, Board's Interpretation; do you see that? 24 A Sorry. Yes. 25 Q Okay. So is it your understanding that the

Page 174 1 Board has interpreted the claims as you represent 2 here with system 1 and system 2? 3 A I -- I understand that claim language is a 4 legal issue and of course, a legal opinion, I'm not a 5 lawyer. But as a person of ordinary skill in the art 6 read this construction proposed by the patent owner, 7 I agreed with it. And I agree this does represent 8 what I consider to be the Board's interpretation of 9 the no packet claim limitation. 10 Q It's your opinion that the term 11 communicated in the no packet is communicated phrase 12 in the claims means sent or received by the 13 apparatus, correct? 14 A Sent and/or received. There's support in 15 the specification for sent only, received only, send 16 or receive or send and receive. And in addition to 17 that support in the specification, and you would be 18 wrong to cherry-pick the multiple appearances of send 19 and receive so that you would imply or attempt to 20 imply that communicate meant only send or only 21 receive or only send or receive or only send and 22 received. 23 So in addition to the multiple appearances 24 and definitions of communicate broadly, as send or 25 received in the specification, I'm instructed in the	Page 175 1 doctrine of claim differentiation, as I understand 2 claim differentiation, is that it would help a person 3 of ordinary skill in the art understand what was 4 meant by a term as it was used in the specification 5 and in the claims. 6 And in the 995 patent, Claim 30 addresses 7 the issue of what communicate means. To me, it was 8 already clear from the specification what communicate 9 means; that it was broadly to be interpreted as send, 10 receive, send and/or receive. But the principle of 11 claim differentiation echoes, reenforces that view 12 because Claim 30 quite clearly shows, through the 13 doctrine of claim differentiation, that the term in 14 my opinion and -- would, for a person of ordinary 15 skill in the art, quite clearly show that communicate 16 was broadly defined in claim one to mean send, send, 17 only send, receive only, send or receive, send and/or 18 receive. 19 Q So you mentioned claim differentiation in 20 Claim 30. 21 I see in paragraph 50 of your declaration 22 you also bring up Claim 30 in claim differentiation, 23 correct? 24 A On page 50 of my declaration? 25 Q Paragraph 50.
Page 176 1 A Paragraph 50. 2 Q It's one page before the Venn diagram? 3 A In my opinion, the doctrine of claim 4 differentiation also supports the construction. I 5 wasn't reading that when I gave you my answer, but 6 I -- my answer was consistent with this paragraph. 7 Q Yeah. Thank you. 8 So what is it about Claim 30 and claim 9 differentiation that supports your understanding and 10 the patent owner's understanding about the term 11 "communicated"? 12 A Again, I think you're border line asking me 13 a legal question there and I'm not qualified to 14 answer any legal questions. But as I understand the 15 doctrine of claim differentiation, if a claim says -- 16 claim differentiation claim such as Claim 30, and 17 maybe we should turn to Claim 30 and use that as an 18 example. 19 So I'm turning to Exhibit 1001. And Claim 20 30, amongst other things, states that the apparatus 21 claim 29, or at least one of -- and I'm omitting some 22 elements. The communication includes only receiving; 23 the communication includes only sending; the 24 communication includes receiving and sending. 25 My understanding of claim differentiation	Page 177 1 means that that's a dependent claim and any claim on 2 which that is dependent must be broader. So if I am 3 to include apples, oranges and bananas in a claim 4 differentiation claim, then the claim that that claim 5 is dependent from at least includes apples, oranges 6 and bananas. 7 But more than that, here, this claim 8 differentiation claim, to me and the person of 9 ordinary skill in the art, would resolve any doubt 10 that they would have in their mind as to what a term 11 that could potentially be interpreted in different 12 ways actually means. 13 So while it might be possible in some 14 circumstances to communicate to imply a certain 15 direction or multiple directions quite clearly here, 16 the claim was meant to encompass all of these 17 variations. 18 No doubt in my mind if there were any in 19 the first place. From the specification, it's quite 20 clear alone. The claim differentiation makes it 21 quite clear to me. 22 Q Claim 30 depends on Claim 29, correct? 23 A Claim 30 does depend on Claim 29. 24 Q And Claim 29 depends on 28, correct? 25 A Claim 29 does depend on Claim 28.

Page 178 1 Q And Claim 28 is an independent claim, 2 correct? 3 A Yes, it is. 4 Q So what is it about Claim 30 depending from 5 Claim 29 supports your opinion that claim 6 differentiation supports patent owner's constructions 7 with respect to Claims 1 and 15? 8 MR. DAHLGREN: Objection, form and 9 foundation. 10 THE WITNESS: Thank you, Derek. I'm 11 offering my opinion not as a legal opinion. I'm 12 offering my opinion based on the instruction that 13 claim differentiation may help a person of ordinary 14 skill in the art understand what a term might mean. 15 A person of ordinary skill in the art, like 16 myself, is not qualified to give an opinion on the 17 law, on the exact meaning of the term that might be 18 subject to construction. 19 So I read this claim as I was instructed to 20 do so, and interpret what a person of ordinary skill 21 in the art would understand when they read this claim 22 and applied the doctrine of claim differentiation. 23 And to me, since the term communication is 24 being used consistently throughout the patent 25 specification, throughout the claims, it was clear	Page 179 1 and unambiguous in my mind that a person of ordinary 2 skill in the art would interpret the term 3 communication as used in the specification and as 4 used in all of the claims to mean and include, but 5 not be limited to, only sending, only receiving, or 6 sending and receiving. 7 BY MR. PALYS: 8 Q Claim -- Claims 28 through 29 refer to 9 non-TCP packets, correct? 10 A One -- 11 MR. DAHLGREN: Objection, scope. 12 THE WITNESS: Thank you, Derek. I see that 13 one of the claim elements includes the term non-TCP. 14 BY MR. PALYS: 15 Q And Claim 29 at column 26, lines 47 through 16 48 of the 995 patent, states during -- 17 A Can you -- sorry, I just need a little bit 18 of time to get there. You're already there. What 19 claim am I looking at? 20 Q It's Claim 29, column 26, lines 47 through 21 48. 22 A Oh, I'm sorry. I went to column 29 or 23 something crazy. So Claim 29 -- 24 Q Column 26, lines 47 to 48. 25 A I'm sorry, using columns confuse me. You
Page 180 1 said Claim 29, column 26. 2 Q That's exactly what I said, sir. That's 3 what we're looking at, column 26, lines 47 to 48? 4 A I can't see the column. It's at the top of 5 the page. So if you give me a line number, that 6 might be easier. Claim 29? 7 Q I did three times. Line 47 through 48. 8 A Okay. I'm there. 9 Q Okay. Thank you. 10 And that Claim 29 states there, during the 11 idle time period, no non-TCP packet including data is 12 communicated in the non-TCP connection, correct? 13 A Yes. You have read that portion of the 14 claim element. 15 Q That's communicated, 16 C-O-M-M-U-N-I-C-A-T-I-O-N, correct? 17 A Yes, that spelling as it appears here. 18 Q Now, Claim 29, we're going to move down the 19 same line 55 through 57. Tell me when you're there. 20 A Claim 29, 50 through 57. 21 Q 55. Line 55? 22 A Yep. 23 Q Okay. And in line 55 through 57 of column 24 26, it states that: Without communication between 25 the Second Node and the First Node, correct?	Page 181 1 A Yes. 2 Q Okay. And in column -- we're going to move 3 up a claim. In column[sic] 28, same column, 26, but 4 now I want you to look at line -- 5 A Did you say column 28 or Claim 28? 6 Q It's Claim 28. 7 A Claim 28, yes. 8 Q Claim 28. And we're on the same column, 9 column 26, line 18. Tell me when you're there, 10 please. 11 A I have one or more processes in 12 communication. 13 Q That's correct. 14 So there, Claim 28 has a limitation where 15 it says: One or more processes in communication with 16 the nontransitory memory, correct? 17 A Yes. 18 Q Okay. So between Claims 28 and 29, there's 19 only two instances of the word "communication" used, 20 correct? 21 A That appears to be the case, yes, I agree. 22 Yes, from my cursory review. 23 Q In Claim 30, going back down to where you 24 were relying on, you took me to, at column 26, lines 25 58 to 62 - this is in Claim 30 - I believe you read

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1 this earlier. Claim 30 says: Wherein at least one
 2 of the apparatuses, at least one component of the
 3 First Node, and then we have the three limitations
 4 that you read earlier.
 5 And the communication -- the communication
 6 includes only receiving, correct?
 7 A Yes.
 8 Q The communication includes only sending,
 9 correct?
 10 A Yes.
 11 Q And the communication includes receiving
 12 and sending, correct?
 13 A Correct.
 14 Q Which of the two instances of the word
 15 communication that are found between Claims 28 and 29
 16 is Claim 30 referring to when it recites the
 17 communication?
 18 MR. DAHLGREN: Objection, form, foundation,
 19 calls for a legal conclusion.
 20 THE WITNESS: Sorry to step on you again,
 21 Derek.
 22 Claims are a matter of legal construction,
 23 requiring legal construction by a lawyer or judge, an
 24 opinion. I understand that hasn't happened yet. I'm
 25 not sure that communication was a claim, a term that

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1 Q Go ahead.
 2 A Sometimes it's absolutely essential that
 3 you use the same word because if you don't, and many
 4 of my engineers scurry around to try and chase and
 5 use other words so that they somehow think that their
 6 specification reads better, more like a book or a
 7 novel, I caution them that that is a poor choice. It
 8 is much better to use the correct word and make sure
 9 that it's unambiguous than to try and chase around
 10 using different words purely to avoid using the same
 11 word.
 12 So I would and have, and always catch my
 13 students to use language such as this, where it's
 14 absolutely clear what the communication means and
 15 it's made more so clear because of the claim
 16 differentiation that's used in Claim 30. I tried to
 17 answer your question as best I can.
 18 Q I appreciate that. You did give us some
 19 insight there.
 20 My question was really, when Claim 30 says
 21 the communication, which communication is that claim
 22 term referring to in Claims 28 and 29?
 23 MR. DAHLGREN: Same objections.
 24 BY MR. PALYS:
 25 Q There's one on line 18 in column 26 and

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1 was in dispute here. I'm not qualified to give a
 2 legal opinion.
 3 Having said all that, and with the caveat
 4 that what I say may or may not be relevant to this
 5 patent and its claims, it's quite clear to me that
 6 the communication in Claim 30 refers to the protocol
 7 communication.
 8 And it would be equally clear to anybody of
 9 skill -- ordinary skill in the art. There are many,
 10 many, many places in engineering where we use -- we
 11 call it overloading terms. And I'm always cautioning
 12 my programmers, my engineers to be careful when they
 13 overload terms. But generally, what we look for is
 14 context.
 15 If in context you use one word, an
 16 association with one idea -- well, let's call it an
 17 element, claim element, and then the same word in
 18 association with another and the context is clear
 19 that they're different or may be different, maybe
 20 they're the same, you know --
 21 Q Sir --
 22 A Can I finish my answer, please?
 23 Q You're actually not answering my
 24 question -- go ahead.
 25 A The last part is important.

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1 there is one in Claim 29 on line 55 of column 26.
 2 A To me, it's quite clear it's the second
 3 one. But that -- that is borderline asking me for a
 4 legal opinion on claim construction, and that's, as I
 5 pointed out a number of times, an answer that would
 6 require a legal opinion that I'm not qualified to
 7 give.
 8 But having given that caveat, for me and
 9 for a person of ordinary skill in the art, it would
 10 be quite clear it was the second one.
 11 MR. DAHLGREN: Joe, we've been going about
 12 an hour. Is there a good time for a break soon?
 13 MR. PALYS: Sure, we can take 10. Come
 14 back at 3:45 your time. And we're off the record.
 15 (Brief recess)
 16 BY MR. PALYS:
 17 Q So Dr. Smith, can you turn back to your
 18 Venn diagram that you have on page 21 of your
 19 declaration.
 20 A I am there on that page, page 21.
 21 Q So in your Venn diagram, and the Board's
 22 interpretation, you have on the left, system 1, no
 23 packet is sent, but may be received, correct?
 24 A Correct.
 25 Q On the right you say system 2, no packet

Page 186 1 received but may be sent, correct? 2 A Yes. 3 Q Those are outside of the set that you drew 4 with respect to patent owner's construction, which is 5 no packet sent or received; is that accurate? 6 A Yes. 7 Q My question is, where does the set no 8 packet is sent and received fall in your Venn 9 diagram? 10 MR. DAHLGREN: Objection, form. 11 THE WITNESS: No packet is sent and 12 received would sort of be the null set, so without 13 belaboring the exact mathematical correctness or 14 otherwise of this diagram, which was merely intended 15 to help people understand and wade through the 16 differences between -- solely between the Board's 17 interpretation and the patent owner's construction, 18 no set would not appear on this Venn diagram. 19 So that's the best answer I can give you. 20 The diagram may not be perfect, but the point was to 21 explain the difference between these two approaches. 22 And again, the exact difference may be a 23 legal question, and I'm not qualified to give a legal 24 opinion, but certainly from a point of view of 25 someone who is skilled in the art and myself, this	Page 187 1 diagram made it clear to me what the differences were 2 between the Board's interpretation and what was in 3 the patent in claims, and shown in the diagrams being 4 a difference. One set of boxes and the other inside 5 one circle. 6 BY MR. PALYS: 7 Q Okay. Thank you. Can you get the 995 8 patent out again, Exhibit 1001. And if you could 9 please turn to column 3, line 52 through 55. 10 A I'm at column 3. 52 through 55 would be -- 11 Q Thank you. 12 A Well, the sentence that starts at 50 is the 13 method further includes. 14 Q Yes. And that from line 50, say 50 to the 15 55 of column 3, the 995 patent discloses a first idle 16 time period detectible by the First Node, during 17 which no TCP packet, including data in a first TCP 18 data stream sent in the TCP connection by the Second 19 Node is received by the First Node, correct? 20 A Yes. 21 Q This is an example of the 995 patent 22 describing this no packet feature where no packet is 23 sent and received, correct? 24 MR. DAHLGREN: Objection, form. 25 THE WITNESS: Well, I've got to say, that's
Page 188 1 not quite what the specification says. That 2 specification says that the -- there's no packet 3 including data sent in the TCP connection, received 4 by the First Node. It's not quite the same as what I 5 believe you asked and stated as representing this 6 sentence. 7 BY MR. PALYS: 8 Q If you turn to column 4, lines 4 through 7, 9 please. 10 A Column 4 -- 11 Q Four, yes? 12 A Lines 4 through 7. I have -- I don't 13 know -- I don't know that I have a sentence that 14 starts on line 4. 15 Q Yeah, I'll ask -- 16 A I'm at that location. 17 Q Yeah. Thank you. I'm just going to ask my 18 question. 19 And then -- starting on line 4, the patent 20 describes the first idle time period detectible by 21 the First Node, during which no TCP packet, including 22 data in a first TCP data stream sent in TCP 23 connection by the Second Node is received by the 24 First Node, correct? 25 A Correct.	Page 189 1 Q So this is describing another example where 2 a TCP -- no TCP packet is sent by the second -- sent 3 by the Second Node is received by the First Node, 4 correct? 5 A Generally, that's correct. You paraphrased 6 the specification language which is precise and 7 precise for a reason. So I -- with that caveat, I 8 would say that you are generally correct. But I -- 9 if pressed, I would stand by the language in the 10 specification. 11 Q And a little bit further down in column 4, 12 starting at line, let's call it 14, the patent is 13 describing a first idle time period where it refers 14 to a TCP packet that is sent in the TCP connection by 15 Second Node, is received by the First Node, correct? 16 A Again, with the proviso that we've 17 extracted a fairly long and precise sentence and 18 paraphrased it, you are generally correct. 19 Q And in column 4, a little bit lower at 20 lines 37 to 40, we see similar language regarding a 21 first idle time period, which uses the term "sent" 22 and uses the term "received," correct? 23 A That is correct. And that sentence that 24 you've outlined, there is the word sent and there is 25 the word received.

Page 190 1 Q Column 10, if you don't mind please going 2 to. 3 A I'm at column 10. 4 Q Thank you. 5 And line 28 with the sentence starting with 6 reference to; do you see that? 7 A Yes, I do. 8 Q So there in column 10, lines 28 through 34, 9 the patent is referencing Figure 2. And it's 10 describing a first idle time period during which no 11 TCP packet, including data in a first data packet 12 stream, sent in the TCP connection by a Second Node 13 is received by the First Node, correct? 14 A Not quite. You are absolutely correct, 15 except you inserted the word packet where it's not 16 present. But generally, you are correct. You read 17 it almost correctly. 18 Q I apologize for that. In column 10, lines 19 42 through 45, a few lines down, again, with 20 reference to Figure 2 -- 21 Can you still hear me? 22 A I can still hear you; however, the 23 reference is to Figure 4A that I see. 24 Q Yeah, no, no. I heard -- I thought my head 25 phones were going out of power. Let me start over	Page 191 1 with my question. 2 In column 10, lines 42 through 45, with 3 reference -- yes, you're right, with reference to 4 Figure 4A - thank you, sir - the patents describing 5 an idle time period, a first idle time period, during 6 which no TCP packet including data in the first data 7 stream sent in the TCP connection by a Second Node is 8 received by the First Node, correct? 9 A Yes. 10 Q And in column 18, if we can turn there. 11 I'll give you a second to get there. 12 Are you there, sir? 13 A I am at column 18. 14 Q Thank you. Line 59, all the way at the 15 bottom. So column 18, lines 59 through 63, in 16 reference to figure -- Figure 7, and actually in 17 reference to the nodes that are identified in Figure 18 6, the 995 patent describes a first -- it says that 19 the identified second ITP header may be for detecting 20 by First Node 602 in idle time period during which no 21 TCP packet in a TCP connection is received, period. 22 Correct? 23 A No. You stated is received -- you stated 24 is received, period. It's received, comma. 25 Q You're right, sir. My eyes are going bad.
Page 192 1 I'm going to change glasses. I thought that was a 2 period. 3 A Precision is everything in this case. 4 Q I understand. Sometimes your eyes get to 5 you, though. Let me start over. 6 Column 18, lines 59 through 63, the 995 7 patent is describing with reference to Figure 7 and 8 Node 602 a first idle - let me find it - a first idle 9 time period that may be detected by First Node 602 10 during which no TCP packet in the TCP connection is 11 received by the First Node 602 that includes data in 12 the first TCP data stream from the Second Node 604, 13 correct? 14 A I actually was reading -- I patent matched 15 and I was reading the next sentence as you were 16 reading it, and not the sentence that you just read. 17 But I accept that you -- 18 Q Yes. 19 A Let's move on. Let's accept that as given, 20 that that was correct, yes. 21 Q And it's referring to the word no TCP 22 packet in the TCP connection is received, correct? 23 A Yes. 24 Q And in column 20, line -- starting at line 25 8, with respect to Figure 3, the 995 patent is	Page 193 1 describing a first idle time period, which no TCP 2 packet including data in the first TCP data stream 3 sent in the TCP connection by the received -- the 4 Second Node is received by the First Node, correct? 5 A You swapped Second Node -- I think you 6 corrected yourself. Let's move on. I see that. 7 Q And also with respect to Figure 3 in column 8 20, lines 15 through 18, you see the 995 patent is 9 also describing the first idle time period during 10 which no TCP packet is sent in the TCP connection by 11 the Second Node is received by the First Node, 12 correct? 13 A Almost. I think you paraphrased. You 14 missed a bit in the beginning of the sentence and you 15 missed out a bit in the middle of the sentence. Yes, 16 I see that sentence. 17 Q I'm not quoting them, sir. I'm just citing 18 them. If you disagree with the representation, 19 clearly, let me know. 20 So in column -- column 20, lines 21 through 21 25, we see with reference to Figure 4B, the 995 22 patent is referring to a first idle time period 23 during which no TCP packet sent in the TCP connection 24 by the Second Node is received by the First Node, 25 correct?

Page 194 1 A Again, with the caveat that that -- you 2 have paraphrased the sentence, that is correct. I'm 3 looking at that sentence. 4 Q Okay. Thank you. 5 So with respect to the different 6 embodiments that we just went through in the 995 7 patent, does your construction of the no packet is 8 communicated language in Claims 1 and 15 exclude 9 these embodiments for the idle time period described 10 where no packet is received or where no packet is 11 sent and received? 12 MR. DAHLGREN: Objection, form, foundation. 13 THE WITNESS: I understand the claim terms 14 have to be constructed by proper process, legal 15 process. I'm not qualified to give claim 16 construction. 17 BY MR. PALYS: 18 Q Is that the end of your answer, sir? 19 A Would you repeat the question? 20 Q Does the construction -- let me say it this 21 way. 22 Does your construction that you set forth 23 in your declaration of the no packet is communicated 24 term in the challenge claims of the 995 patent 25 exclude those embodiments that we just walked through	Page 195 1 in the 995 patent? 2 MR. DAHLGREN: Same objections. 3 THE WITNESS: And the same answer. I think 4 you're asking for two legal opinions there. You're 5 asking me if something, as I understand it, disavows 6 an embodiment. And you're asking me to construct the 7 claim terms. I'm not qualified to do either. 8 BY MR. PALYS: 9 Q Okay. So let's use your Venn diagram, if 10 you could turn to page 21, please. 11 A I have that. 12 Q Okay. In some of the examples that we just 13 went through in the embodiment of the 995 patent, 14 there was a discussion of no packet being sent and 15 received in a discussion of the idle time period. 16 Where would that fall into this Venn 17 diagram that you have on page 21? 18 MR. DAHLGREN: Same objections. 19 THE WITNESS: I think I answered that 20 question already when I said that if nothing is sent, 21 nothing is received, nothing happens; that's the null 22 set. That's the best answer I can give. 23 BY MR. PALYS: 24 Q If you turn to page -- I'm sorry, paragraph 25 100 of your declaration.
Page 196 1 A Page? 2 Q It will be page 47. Let me know when 3 you -- 4 A I have that, paragraph 100. 5 Q Great. 6 In paragraph 100 of your declaration, you 7 discuss the scenario where Alice and Bob may have a 8 connection via a telephone network, correct? 9 A Correct. 10 Q And using your hypothetical, can you 11 consider the scenario where Alice and Bob were 12 disconnected during their conversation where neither 13 Alice nor Bob can hear each other, okay? 14 A I understand your question. I have not 15 considered -- sorry, you interrupted me, I wasn't 16 sure what you said. 17 Q Finish. Sorry. 18 A Did you say finish, sorry? 19 Q Yeah, I did. I apologize. I said, please 20 finish. 21 A I have not considered all the hypotheticals 22 associated with this type of telephone call because 23 they are extraordinarily complex, simple question 24 though it may seem. What happens in the face of 25 unreliable communications in an example like this is	Page 197 1 actually ongoing research. It's called consensus 2 problem. So no, I did not consider all of the 3 possibilities of disconnection. 4 Q Okay. That wasn't my question. I'll ask 5 you this. 6 In context of your hypothetical between 7 this conversation or communication, if you will, 8 between Alice and Bob, if Alice had lost some 9 connection with Bob, such that Alice is speaking but 10 Bob cannot hear Alice, and Alice cannot hear Bob, are 11 they -- are they having a communication between the 12 two? 13 MR. DAHLGREN: Objection; form, foundation. 14 THE WITNESS: Again, that's a very 15 difficult question to answer because it depends on 16 context. Bob and Alice have agreed, for example, in 17 certain protocol where none of them -- neither can 18 hear each other, they will do something, then yes, 19 they have communicated. 20 BY MR. PALYS: 21 Q So the context of my question is in the 22 context of a hypothetical that you provided with 23 Alice and Bob. 24 So if they can't hear each other, are they 25 in communication?

Page 198 1 MR. DAHLGREN: Same objections. 2 THE WITNESS: I think that -- that's 3 borderline a legal question on the construction of 4 any communication. I can't offer you a legal 5 interpretation of whether they're in communication, 6 depending on the use of broad communication. So 7 my answer may or may not be relevant to the 995 8 patent and its claims. 9 But a person of skill in the art would 10 understand that there are definitely circumstances in 11 which there are periods or portions of time in which 12 no communication can -- no connection is present, but 13 there is a way still to communicate. 14 BY MR. PALYS: 15 Q And there may not be a scenario -- or, 16 sorry. 17 Is it your opinion that in such a scenario, 18 there would always be some other way of communicating 19 between Alice and Bob if there was a disconnection 20 between the two where they could not hear each other? 21 MR. DAHLGREN: Objection, form, foundation. 22 THE WITNESS: I stand by my previous 23 answers, that you need a framework to allow this type 24 of communication to take place. But once that 25 framework is in place, communication can take place.	Page 199 1 BY MR. PALYS: 2 Q What kind of framework? 3 A Well, remember, for example, we're talking 4 about the internet here. So when we talk about 5 connections between two nodes, it's not just a wire 6 that goes between those two nodes and a disconnection 7 snips the wire and everything's lost. 8 There's intermediate nodes and those are 9 quite clearly described in the 995 patent 10 specification. And they are also quite clearly 11 present because of claim differentiation in Claim 30. 12 So it's quite clearly envisioned even if there were 13 just two end points. But there would be intermediate 14 nodes in between those two nodes. 15 So when you launch a packet from a computer 16 on the East Coast, you set the wheels in motion. 17 That packet is going to be probably routed to an 18 internet exchange in IX Hudson Street in New York. 19 Hudson Street New York IX is linked to Chicago IX; 20 Chicago IX is linked to San Francisco IX, Palo Alto 21 IX and the packet gets to me. 22 So I think I mentioned earlier the internet 23 is designed this way. You design a packet, 24 connections will drop. Paths -- network paths will 25 change. Protocol will take care of short
Page 200 1 interruptions. The internet will take care of longer 2 interruptions. But almost all of -- the cellphone 3 providers, God bless them, put these huge packet 4 buffers in place, so the network will withstand and 5 survive almost any kind of interruption. 6 And moreover, the end points won't even 7 know it. You can have a disruption and a period 8 disconnect of the type of disconnect that Google is 9 talking about in their hypothetical ghost busters 10 example. And at the end points, the connections -- 11 the end points wouldn't even know that that 12 connection has been disrupted. 13 So it's perfectly possible to have a 14 framework in which you can communicate in the face of 15 broken communication. 16 Q What if that disconnect was longer than a 17 user timeout value which triggered an abort like you 18 see in the RSV 793? Would there still be 19 communication? 20 MR. DAHLGREN: Same objection, form, 21 foundation. 22 THE WITNESS: I haven't really considered 23 that type of hypothetical scenario in detail. I 24 would want some more time to think about all the 25 repercussions and ramifications of various	Page 201 1 possibilities of disconnections, reconnections; how 2 many times that happened, what the packet situation 3 was before the disconnection occurred, what the state 4 of the TCP connection was; were retransmits -- were 5 data in flight, were acts in flight. 6 So many things that can affect the answer. 7 It's a very complex question. 8 BY MR. PALYS: 9 Q Could you consider all those items you just 10 listed in framing your opinion for paragraph 100? 11 A Paragraph 100 -- paragraph 100 was meant to 12 illustrate a point, not provide a global framework of 13 communications in the face of disruptions. The point 14 that paragraph 100 attempted to convey was that 15 silence can indeed convey information. That's all, 16 purely and simply. 17 Q In your scenario, when you were talking 18 about, and this is about the internet and you 19 mentioned -- I may be paraphrasing but a computer on 20 the East Coast launches -- sets the wheels in motion, 21 if that computer experienced an error where it could 22 never even launch the packet, would there be a 23 communication between that computer on the East Coast 24 and a computer on the West Coast in your hypothetical 25 you discussed?

Page 202

1 A In the right framework, yes. We used
2 that -- I worked for a company called Remote It that
3 builds ultra reliable protocols that have some of the
4 characteristics as Google's quake -- related quake.
5 We work with IOT devices and if an IOT device is
6 supposed to check in on a regular interval and does
7 not because it's broken, we will flag that to the
8 user.

9 And so the device is communicated to us
10 that it's broken by the absence of its communication.
11 And that's a service that's valuable to the user.

12 Q So the fact that no message was -- no
13 packet was ever launched by the computer on the East
14 Coast in your opinion is representative of a
15 communication with the computer on the West Coast.

16 Did I understand that correctly?

17 MR. DAHLGREN: Objection, form.

18 THE WITNESS: I'm simply providing an
19 example of where a silence in the right framework,
20 just as the conversation between Alice and Bob
21 proceeded, can convey information.

22 BY MR. PALYS:

23 Q Silence being in the example with the two
24 computers on the East Coast and West Coast that the
25 computer on the West Coast never received any packet;

Page 204

1 Q Do I have to start over?

2 A I hope not. I don't think so, because
3 silence is not a term that appears in the patent or
4 in the claims. It's merely a term that I was hoping
5 to be able to use to explain what could otherwise
6 appear to be a complex issue. It was merely used in
7 combination with this analogy or example of a
8 conversation between Alice and Bob, where silence was
9 being used to convey information.

10 And I think as we discussed earlier today,
11 to me, and I think also to a person -- and I believe
12 I know, also to a person of ordinary skill in the
13 art, they would recognize that the 995 patent also
14 used various forms of silence to convey information.

15 Q Would you mind turning now to page -- one
16 second -- page 22 of your declaration.

17 A I'm at page 22.

18 Q Thank you. And you see the section C up
19 top where it's referring to the "to keep the
20 TCP-variant connection active" term?

21 A Yes, I do. I think we discussed this
22 earlier.

23 Q So -- actually, let me set this up so I
24 can -- I hate to bounce you around, but I need to do
25 this.

Page 203

1 in your view that would still be communication, even
2 though at the same time, the East Coast computer
3 never launched a packet; is that right?

4 MR. DAHLGREN: Objection, form.

5 THE WITNESS: I think I answered the
6 question several times in my declaration, that
7 silence can convey information.

8 Leave it at that. I can't give you a
9 better answer than that.

10 BY MR. PALYS:

11 Q I'm just trying to understand what you mean
12 by silence. And I think the Board would probably
13 want to know what you mean by silence. So I'm giving
14 you the opportunity to explain that input into the
15 record.

16 So in this context of your hypothetical,
17 where you say silence with the East Coast computer
18 not sending a packet and the West Coast computer
19 never referring a packet, is that the type of silence
20 that you're referring to?

21 MR. DAHLGREN: Same objections.

22 BY MR. PALYS:

23 Q That would --

24 MR. DAHLGREN: Sorry.

25 BY MR. PALYS:

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1 Can you first refer to paragraph 33 on page
2 13?

3 A 33.

4 Q And keep your finger there because we're
5 going to go back to paragraph 22.

6 A Paragraph 33 which is section 6, claim
7 construction.

8 Q Thank you. And you see the table that we
9 discussed earlier today?

10 A Yes, I do.

11 Q And on the bottom of the table is the
12 phrase to keep the TCP-variant connection active; do
13 you see that?

14 A Yes, I do.

15 Q And as you mentioned in paragraph 34 --
16 well, skip that, let me start over.

17 In paragraph 33, you see the construction
18 that you agree with, which is to keep the TCP-variant
19 connection active with or without a condition and via
20 any mechanism; do you see that?

21 A I do see that.

22 Q Now, we can go back to page 22. And on
23 page 22, you have the section right after paragraph
24 34 with or without a condition.

25 So is it your opinion that the term to keep

Page 206 1 the TCP-variant connection active must be interpreted 2 such that it includes this phrase with or without a 3 condition? 4 A I have not considered the hypothetical of 5 what you would mean if you removed some of this 6 construction. Again, I would point out that Venn 7 construction is a legal issue involving a judge, a 8 lawyer, an opinion. I'm not qualified to give a 9 legal opinion on this. 10 But as a person of ordinary skill in the 11 art looking at the sentence to keep the TCP-variant 12 connection active with or without a condition and via 13 any mechanism, if you were to remove any part of that 14 sentence or phrase, it may well alter the meaning of 15 the phrase. And I certainly haven't considered -- it 16 certainly wasn't a focus of my declaration to 17 consider all possible variations on the proposed 18 constructions. 19 I looked at the proposed constructions and 20 applied my viewpoint of a person of ordinary skill in 21 the art to determine whether or not I agree with that 22 construction. And I agree with the construction 23 exactly as it's written here. 24 Q So does the language with or without a 25 condition encompass every scenario with respect to a	Page 207 1 condition? 2 MR. DAHLGREN: Objection, form. 3 THE WITNESS: I don't believe that I could 4 give an opinion on that issue, which to me, seems as 5 though it's a question on the legal construction of 6 the construction. And that's not something that I 7 focused on in my declaration. It's not something 8 that I analyzed in great detail. 9 And therefore, at least, I would have to 10 spend some time analyzing that hypothetical, not 11 something I could do here in the confines of the 12 deposition. 13 BY MR. PALYS: 14 Q That wasn't -- I apologize, that wasn't my 15 question. I wasn't asking you to interpret the 16 phrase with or without a condition. My question 17 is -- by the way, in paragraph 55, you certainly give 18 your opinion that the plain language of the claims 19 requires -- and if you continue to language all the 20 way to page 23 at the top, you state that to keep the 21 TCP-variant active with or without conditions. So 22 you have provided an opinion on this term. 23 With that backdrop, my question is simply 24 this, and to get some clarification: What is the 25 difference between saying something is with and
Page 208 1 without a condition versus not stating that? 2 MR. DAHLGREN: Objection, form. 3 BY MR. PALYS: 4 Q So let me -- okay, let me rephrase that. 5 The objection is good. What I don't understand is 6 what does the term or phrase, "with or without a 7 condition" bringing to help interpret that to keep 8 the TCP-variant connection active phrase? 9 A So I think your first condition you said 10 with and without a condition, and in your second 11 condition you said with or without a condition. I 12 just want to make sure before we get into answering 13 the question that I know which question you are 14 asking. 15 Q So I'm referring to the language that you 16 gave an opinion on, which is with or without a 17 condition. Thank you. 18 A So now I know that we're talking about your 19 second question, which is with or without a 20 condition. 21 What was your second question again, 22 please? 23 Q What does the term with or without a 24 condition do to help a person of ordinary skill in 25 the art understand the claim meaning of to keep the	Page 209 1 TCP-variant connection active? 2 A My opinion, the proposed construction 3 emphasizes the broad nature of the phrase "to keep 4 the TCP-variant connection active," to me and to a 5 person of ordinary skill in the art, it was clear 6 that the patent 995 did not claim how, with or 7 without a condition, the packet is purposed to keep 8 the TCP-variant condition active. 9 In my opinion, a person of ordinary skill 10 in the art would understand that the patent used 11 claim language broad enough to cover any manner in 12 which the packet serves to keep the TCP-variant 13 connection active. I don't see any qualifiers, 14 words, adjectives in connection with the phrase "to 15 keep the TCP-variant connection active" and I agree 16 with the patent owner's statement that none of those 17 should be inserted, given the clear language of the 18 claims. 19 Q The phrase "to keep the TCP-variant 20 condition active," is that broader or narrower than 21 the phrase to keep the TCP-variant connection active 22 with or without a condition? 23 MR. DAHLGREN: Objection, form, foundation. 24 THE WITNESS: You're asking me now to 25 perform claim analysis, claim construction, and that

Page 210 1 is something that I understand requires a legal 2 opinion with legal qualifications. And I'm not 3 qualified or able to give you an answer to that 4 question. 5 BY MR. PALYS: 6 Q Did you consider what one of ordinary skill 7 in the art would have understood the construction to 8 keep the TCP-variant connection active to mean to 9 keep the TCP-variant connection active with or 10 without a condition and via any mechanism to support 11 your opinions in your declaration? 12 A I considered what a person of ordinary 13 skill in the art would understand by the entire 14 phrase, to keep the TCP-variant connection active 15 with or without a condition and via any mechanism, 16 and having explained the whole and the parts in my 17 declaration. 18 Q Does the portion with or without a 19 condition of the construction that we're discussing 20 have any bearing on your opinions with respect to 21 Eggert and the challenged claims? 22 A I'm not sure I understand that question and 23 how I would be able to apply or relate Eggert to this 24 particular language. 25 Can you repeat the question and rephrase it	Page 211 1 so that it's a little clearer to me what you're 2 after? 3 Q I'll try to rephrase. 4 So did you provide any opinion in your 5 declaration with respect to Eggert in terms of 6 distinguishing the challenge claims from Eggert based 7 on the interpretation of this phrase, to keep the 8 TCP-variant connection active to include the phrase, 9 with or without a condition? 10 A I don't believe that I addressed that in my 11 declaration. If you can point me to a place in the 12 declaration where the issue that you're questioning 13 me on appears, so as to give me context for that 14 question, I could attempt to answer it. 15 Otherwise, it would be outside the scope of 16 my declaration and I'm unable to answer sitting here 17 today. 18 Q Okay. 19 MR. PALYS: Okay. Let's take a five-minute 20 break, if you don't mind. 21 MR. DAHLGREN: Okay. 22 MR. PALYS: Let's just do 7:40, make it 23 easy, whatever it is on the West Coast. 24 (Brief recess) 25 MR. PALYS: Dr. Smith, thank you for your
Page 212 1 time today. Petitioner has no further questions for 2 this witness. 3 MR. DAHLGREN: Joe, I'd like to have -- may 4 I have a 15-minute phone call with my team to see if 5 we want to do any redirect; would you mind just kind 6 of hanging tight while we have that conversation? 7 MR. PALYS: Sure. What time do you want to 8 come back? 9 MR. DAHLGREN: Let's plan on -- 8:00; does 10 that work? 11 MR. PALYS: Sure. 12 MR. DAHLGREN: I can e-mail you or call you 13 if we're ready sooner. 14 MR. PALYS: Yeah, give me a call. 15 Although, Kathy is going to be monitoring -- just 16 e-mail. 17 MR. DAHLGREN: Okay. 18 MR. PALYS: I'll just -- all right. 19 Dr. Smith, if you can hang tight. 20 (Brief recess) 21 MR. DAHLGREN: On the record -- actually, 22 we can go off the record. 23 (Discussion was held off the record.) 24 /// 25 ///	Page 213 EXAMINATION 1 BY MR. DAHLGREN: 2 Q So Dr. Smith, you were asked a question 3 about transport layer protocol and TCP and what layer 4 that was. Could you expand on that? 5 A I think I said layer 3, and I meant layer 6 4. 7 Q Okay. And that doesn't change any of your 8 opinions in your report, right? 9 A None whatsoever. 10 Q Okay. Perfect. Well, I have no further 11 questions for you. Thank you very much for your time 12 and effort, and we will reserve reading and signing. 13 And I hope everyone has a great evening. 14 MR. PALYS: I have no questions for the 15 witness on recross. Thank you, Dr. Smith. 16 THE WITNESS: Thank you. Thank you, 17 everybody. 18 MR. PALYS: Off the record. 19 20 (Off the record, 5:09 p.m.) 21 22 23 24 25

1	I N D E X	Page 214	1	STATE OF CALIFORNIA)	Page 215
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3	WITNESS EXAMINATION PAGE		3	COUNTY OF LOS ANGELES)	
4	Michael Smith, Ph.D.		4		
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6	By Mr. Palys 4		6		
7	By Mr. Dahlgren 213		7	I, MICHAEL SMITH, PH.D.,	
8			8	hereby certify under penalty of perjury under the	
9			9	laws of the State of California that the foregoing is	
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1	STATE OF CALIFORNIA)	Page 216	1	ERRATA SHEET OF THE TRANSCRIPT OF:	Page 217
2	) ss		2	Case Name: Google, LLC V. Jenam Tech, LLC	
3	COUNTY OF LOS ANGELES)		3	Dep. Date: April 30, 2021	
4	I, KATHERINE FERGUSON, Certified Shorthand		4	Deponent: Michael Smith, Ph.D.	
5	Reporter, for the State of California, do hereby		5		
6	certify:		6	CORRECTIONS:	
7	That prior to being examined, the witness named		7		
8	in the foregoing deposition, was by me duly sworn to		8	Pg. Ln. Now Reads Should Read Reason	
9	testify the truth, the whole truth and nothing but		9	— — — — —	
10	the truth;		10	— — — — —	
11	That the testimony of the witness and all		11	— — — — —	
12	objections made at the time of the examination were		12	— — — — —	
13	recorded stenographically by me;		13	— — — — —	
14	That the foregoing transcript is a true record		14	— — — — —	
15	of the testimony and all objections made at the time		15	— — — — —	
16	of the examination.		16	— — — — —	
17	I hereby certify that I am not interested in the		17	— — — — —	
18	event of the action.		18	— — — — —	
19	IN WITNESS WHEREOF, I have subscribed my name		19		
20	this 4th day of May, 2021.		20	Signature of Deponent	
21			21		
22			22	SUBSCRIBED AND SWORN BEFORE ME	
23			23	THIS DAY OF , 2021.	
24	Katherine Ferguson		24		
25	CSR No. 12332		25	(Notary Public) MY COMMISSION EXPIRES:	

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