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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NINTENDO CO., LTD., and
NINTENDO OF AMERICA, INC.,
Petitioners,
v.

ANCORA TECHNOLOGIES, INC.,
Patent Owner,

Case No. IPR2021-01338
U.S. Patent No. 6,411,941 B

DEPOSITION OF DAVID MARTIN, PhD
Thursday, July 14, 2022
8:00 a.m. PST

Job No.: 455629
Pages: 1 - 188
Reported By: Cara Foster, RPR, CSR No. 11973

A P P E A R A N C E S

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I N D E X

PAGE

DAVID MARTIN, PhD

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E X H I B I T S

(none marked)

1 P R O C E E D I N G S

2 ***

3 THE STENOGRAPHER: We are on the record.
4 The time is 8:01 a.m.

5 I would like to first introduce myself.
6 My name is Cara Foster. I am your California
7 Certified Shorthand Reporter for today. My
8 license number is 11973.

9 Before I swear in the witness, will
10 Counsel place your appearances on the record and
11 whom you represent?

12 MR. CRUDO: Richard Crudo from Sterne,
13 Kessler, Goldstein, and Fox, PLLC, on behalf of
14 Petitioners Roku, Inc., and VIZIO, Inc.

15 Also on the phone are my colleagues
16 Jon Wright and Dohm Chankong also from Sterne and
17 Kessler.

18 MR. CANAVERA: Kyle Canavera from
19 Perkins Coie on behalf of the Nintendo
20 Petitioners.

21 MR. GOSSE: This is David Gosse on behalf
22 of Ancora Technologies, Inc., from the Fitch,

1 Even, Tabin, and Flannery Law Firm.

2
3 DAVID MARTIN, PhD,
4 was called for examination, and after having been
5 duly sworn under penalty of perjury by the
6 stenographic certified shorthand reporter, was
7 examined and testified as follows:

8
9 EXAMINATION

10 BY MR. CRUDO:

11 Q. Good morning, Dr. Martin.

12 A. Good morning.

13 Q. You understand you are being deposed
14 today in two IPR proceedings involving one of
15 Ancora's patents; right?

16 A. That sounds correct to me. Yes, sir.

17 Q. And that patent is U.S. Patent Number
18 6,411,941; does that sound right?

19 A. Yes, sir.

20 Q. And I'll refer to that patent as the '941
21 patent for simplicity today.

22 One of the proceedings at issue involves

1 Petitioners Roku and VIZIO; does that sound right?

2 A. Yes, sir.

3 Q. And the other proceeding involves
4 Petitioner Nintendo; is that correct?

5 A. That's correct.

6 Q. And you were involved with both of
7 them?

8 A. That's correct. My recollection, I was
9 retained on behalf of both of those sets of
10 companies. I'm sorry, I said that very badly.

11 I was retained by Ancora in regard to the
12 petitions that you described.

13 Q. Understood.

14 You understand that your testimony today
15 will be used in both of those IPR proceedings,
16 right?

17 A. Yes, I do.

18 Q. And where are you testifying from
19 today?

20 A. I am in Bismarck, North Dakota.

21 Q. In your home office?

22 A. Yes, sir. That's correct.

1 Q. There's nobody else physically in the
2 room with you, correct?

3 A. That's correct.

4 Q. And you're not communicating with anyone
5 electronically, such as through chat, instant
6 message, texting, or anything like that, right?

7 A. No, I'm not.

8 Q. You have on your screen the Zoom session
9 by which we are conducting this deposition.

10 You don't have any other screens open on
11 your monitor at this time; is that right?

12 A. That's not quite right. I have two other
13 windows open.

14 I can describe them if you'd like?

15 Q. Please.

16 A. I have one volume control application
17 just to facilitate the remote deposition. And
18 then I have another file browser window open that
19 has folders in it. And these folders contain the
20 files that I downloaded from the PTAB website
21 corresponding to the two petitions.

22 Q. So the browser that you've described has

1 essentially the docket from the IPR proceedings?

2 A. Plus the exhibits. Yes, sir.

3 Q. Okay. And did you receive a box of
4 papers and exhibits that we've sent to you?

5 A. Yes, I did.

6 Q. Do you have that box with you today?

7 A. Yes, I do.

8 Q. I'll go ahead and ask you to close the
9 browser, and we will focus on the paper copies of
10 the documents. If needed, I can certainly share
11 my screen, and we can look at any electronic
12 version of the document together; is that okay?

13 A. Well, it may be okay, depending on how
14 this goes. I actually find it much easier to work
15 with the electronic documents, since that's the
16 form in which I have worked in this entire matter.

17 So I actually may prefer to use these
18 publicly available documents when it comes to me,
19 but, certainly, we can begin with the paper
20 form.

21 Q. Sure.

22 And no other electronic documents or

1 anything open on your computer, correct?

2 A. That's correct.

3 Q. And other than the box of hard copy
4 documents that we sent to you, you don't have any
5 other hard copy documents, notes, anything like
6 that in front of you?

7 A. I actually do have one document. It is
8 Exhibit 1001 from the Nintendo petition. This is
9 the '941 patent. This may not be the only copy in
10 the room. We'll find out when I open the box.

11 Q. Understood.

12 And based on your CV, it seems that you
13 have been deposed before; is that correct?

14 A. I have. Yes, sir.

15 Q. How many times have you been deposed?

16 A. I don't have a firm number in mind. I
17 would expect it to be in the dozens, depending on
18 how you count.

19 Q. And those were all patent infringement
20 cases, or were there other types of cases
21 involved?

22 A. There were some other cases, as well.

1 They weren't all patent infringement cases.

2 Q. When was the last time you were
3 deposed?

4 A. I believe it was about two weeks ago.

5 Q. And that deposition was a remote
6 deposition, I assume?

7 A. Yes, sir.

8 Q. Okay. Was that deposition in a patent
9 infringement case?

10 A. It was in a patent IPR case.

11 Q. Did that case involve Ancora?

12 A. No, sir. It didn't.

13 Q. So you're familiar with how these things
14 work, but I'll just briefly go over the ground
15 rules particularly because we're doing this
16 remotely.

17 You understand that you are under oath
18 today, correct?

19 A. Of course. Yes, sir.

20 Q. You understand that it's the same oath
21 you would take if you were appearing in a court of
22 law to testify, right?

1 A. It seems likely it would be the same
2 oath, yes.

3 Q. I'll be asking you questions today. If I
4 ask you a question that you don't understand,
5 please let me know.

6 Conversely, if I asked you a question and
7 you provide an answer, I will assume that you
8 understand the question.

9 Is that fair?

10 A. Yes, that seems appropriate.

11 Q. And you understand that any
12 communications you have during a break that we
13 take are discoverable; meaning, that I can ask you
14 about those communications after the break,
15 right?

16 A. Yes, I do.

17 Q. Can we agree that while we are on the
18 record, you'll have no off-the-record
19 communications via texting or anything like
20 that?

21 A. Yes, we can. I do.

22 Q. Okay. Can you please open the box that

1 we sent to you with the papers and exhibits?

2 A. Sure.

3 Yes, papers and exhibits. That's what I
4 see.

5 Q. Okay. Great. From time to time, I will
6 ask you to pull out certain documents. But I ask
7 that during breaks, you don't -- that you look at
8 only the documents that we've used and that have
9 been marked as exhibits; is that fair?

10 A. I can tell you, I have no plans to
11 deviate from that. I understand your instruction
12 and request.

13 Q. Okay. Is there any reason that you don't
14 believe you can provide full-and-complete
15 testimony today?

16 A. No, sir.

17 Q. And is there any reason that you don't
18 believe you can provide truthful testimony
19 today?

20 A. No, sir.

21 Q. What did you do to prepare for today's
22 deposition?

1 A. I spent some time in conversation with
2 counsel for Ancora, and I reviewed the materials
3 on the docket, including some of the exhibits.
4 And I think that fairly characterizes the extent
5 of my preparations.

6 Q. How many hours would you say, roughly
7 ballpark, that you've spent preparing for today's
8 deposition?

9 A. I would guess five hours, give or take.

10 Q. And you stated just now that you met with
11 counsel to prepare for the deposition.

12 When was the last time that you met with
13 counsel?

14 A. That was yesterday.

15 Q. And who was involved in those meetings?

16 A. Mr. Gosse was there and myself.

17 Q. Anyone else present either in the room or
18 on the phone or video?

19 A. I was not aware of anyone else being
20 present.

21 Q. Did you meet with Mr. Gosse before
22 yesterday?

1 A. Yes, I did.

2 Q. And when was that?

3 A. My recollection is it was Friday of last
4 week.

5 Q. Any other person in the room or on the
6 phone or in video at that meeting?

7 A. Not that I was aware of.

8 Q. Any other meetings?

9 A. Nothing comes to mind. No, sir.

10 Q. And did you review your declaration
11 before today's deposition?

12 A. Yes, sir. I did.

13 Q. Did you review the deposition transcript
14 of Petitioner expert Dr. Wolfe?

15 A. I recall having -- I glanced at it very
16 briefly.

17 Q. Did you review the deposition transcript
18 of Mr. Miki Mullor?

19 A. No, sir.

20 Q. If you would, Dr. Martin, will you please
21 pull out the exhibits marked Exhibit 2018 in each
22 IPR proceeding from the box?

1 A. Yes, I can find those. I recognize that
2 exhibit number as my declaration, so I'll look for
3 those.

4 Q. Sure.

5 A. The box is a little bit difficult to
6 manage.

7 Q. There are quite a few documents in there.
8 I think it's broken up into an exhibit tab, and
9 then a Nintendo tab which will have corresponding
10 exhibits for the case, if that helps.

11 A. Well, maybe I misheard you. I found one
12 folder labeled "Exhibit 2018".

13 Is there supposed to be more than one?

14 Q. So the version that you have is the
15 version that was submitted in the Roku/VIZIO case;
16 is that correct?

17 A. It does appear to be labeled that way.
18 Yes, sir.

19 Q. Okay. There should be one more
20 declaration in the box. I think it's under a
21 Nintendo tab. And that is the corresponding
22 declaration that you've submitted in the Nintendo

1 proceeding.

2 A. I see. Yes.

3 Okay. Yes. I see Exhibit 2018 also from
4 the Nintendo proceeding. I have both exhibits,
5 2018, now.

6 Q. Great.

7 And you recognize these documents as the
8 declarations that were used in those
9 proceedings?

10 A. On the basis of the cover page of these
11 documents, that looks like what they are.

12 Q. If you turn to the last page of each
13 document, you will see a signature there.

14 Is that your signature?

15 A. My signature is actually on page 132 of
16 the document, not on the last page, but I do see
17 it on page 132. I just looked in the Nintendo
18 declaration. And I see it similar in the Roku and
19 VIZIO declaration.

20 Q. And as far as you know, are these two
21 declarations identical?

22 A. I don't think that they are strictly

1 identical. I can see on the cover page that they
2 are different. There may be some different
3 exhibit numbering. The stamps are different.
4 There may be other differences.

5 Q. Are you aware of any substantive
6 differences in the body of the declarations?

7 A. As I sit here today, I'm not aware of
8 intending to have expressed any substantive
9 differences in these two declarations other than,
10 as I mentioned, the numbering and stamps and so
11 forth.

12 Q. Understood.

13 Did you draft these declarations?

14 A. Yes, but I don't want to mislead. I did
15 not perform all of the drafting of all of the text
16 in both declarations solely by myself.

17 Q. How long would you say that you spent
18 preparing each declaration?

19 A. I can't give you a firm estimate. I can
20 say that I expect that it would have been many
21 dozens of hours all told in working on the
22 material that appears in these declarations, but

1 it's very difficult to be accurate.

2 I did not track that effort from the
3 first word ever written that appears here towards,
4 you know, the last word that ever appears in the
5 declarations.

6 Q. Understood.

7 And before you drafted your declaration
8 or during the drafting process, did you review
9 Ancora's patent owner response?

10 MR. GOSSE: Object to the form.

11 THE WITNESS: I do not recall during the
12 preparation of either of these declarations having
13 reviewed in any substantive way a patent owner
14 response in one of the two proceedings that we're
15 discussing.

16 BY MR. CRUDO:

17 Q. In preparing for today's deposition, did
18 you review the board's institution decisions?

19 A. I don't recall having done that. I
20 haven't -- yeah, in preparation of the deposition,
21 I don't recall having reviewed the institution
22 decisions.

1 Q. After reviewing your declarations in
2 preparation for this deposition, did you find any
3 errors that you wished to correct?

4 A. I did notice one issue with an exhibit.
5 I believe it's Exhibit Number 2009. One moment.

6 Yes, in both of the declarations, I
7 referred to Exhibit 2009 for a definition that
8 was, I believe, mistakenly omitted from that
9 exhibit. My understanding is that this is -- this
10 will be corrected or that's underway. That's one
11 thing I recalled.

12 I noticed a typo elsewhere in my
13 declaration that I don't believe would confuse
14 anyone.

15 Q. Do you know which definition was omitted
16 from Exhibit 2009?

17 A. I can easily find it. And the most
18 efficient way for me to do that is to consult the
19 electronic forms of my declaration on my desktop
20 so that's what --

21 Q. It's okay. We'll get there in just a
22 minute. Moving on.

1 Did you identify any other errors in your
2 declaration beyond Exhibit 2009 and the typo that
3 you just referred to?

4 A. Other than the typo I referred to and the
5 errors involving the citations to the Microsoft
6 dictionary for the term "BIOS", I can't think of
7 any other comparable issues that I noticed in
8 review of my declarations.

9 Q. And as of today, do you have any plan to
10 supplement your declaration?

11 A. Can you repeat that, please?

12 MR. GOSSE: Object to the form.

13 BY MR. CRUDO:

14 Q. Yes.

15 As of today, do you have any plan to
16 supplement your declarations?

17 MR. GOSSE: Object to the form.

18 THE WITNESS: As I sit here today, I do
19 not have a plan to supplement either declaration.
20 I'm not sure what circumstances would arise where
21 that might be appropriate, but sitting here today,
22 I'm not aware of any.

1 BY MR. CRUDO:

2 Q. Sitting here today, do you have any plan
3 to change any of your plans set forth in your
4 declarations?

5 A. As I sit here today, no, I do not have
6 any plans to change opinions that I've expressed
7 in the declarations.

8 Q. How did you become involved in these
9 proceedings?

10 MR. GOSSE: Object to the form.

11 THE WITNESS: Can you clarify by what you
12 mean "involved in"?

13 BY MR. CRUDO:

14 Q. Did Ancora approach you about serving as
15 a witness in these proceedings?

16 A. My recollection is that I received
17 contact from attorneys for Ancora. That was when
18 I first became aware of these proceedings.

19 Q. And when you say, "attorneys from
20 Ancora", are you referring to Mr. Gosse and his
21 firm?

22 A. I do believe Mr. Gosse was involved in

1 what I'm recalling now.

2 Q. Were other law firms involved?

3 A. Yes. I do recall there was other counsel
4 for Ancora present.

5 Q. And when you say, "other counsel for
6 Ancora", are you referring to Ancora's district
7 court litigation counsel?

8 A. I'm not sure if that's a precise enough
9 way to characterize the counsel. It may be yes.
10 It may be no. Maybe you could clarify the
11 question for me.

12 Q. Who was the other counsel that contacted
13 you regarding this case?

14 A. I also recall having communicated with
15 Andres Healy at Susman Godfrey in this matter as
16 well.

17 Q. And when were these communications?

18 A. I'm recalling that the communications I'm
19 referring to regarding these two IPR proceedings
20 would have been sometime early in this calendar
21 year... January, February, or something like
22 that.

1 Q. Did you have a pre-existing relationship
2 with either Mr. Gosse or the Susman Godfrey
3 attorneys?

4 MR. GOSSE: Object to the form.

5 THE WITNESS: I'm not sure what you mean
6 by "relationship". Can you clarify, please?

7 BY MR. CRUDO:

8 Q. Had you worked with either Mr. Gosse or
9 the Susman Godfrey attorney on any other case
10 prior to this one?

11 A. Yes, sir. I had.

12 Q. How many cases?

13 MR. GOSSE: I will object to the form of
14 that question.

15 THE WITNESS: I do not recall having
16 worked with Mr. Gosse before this engagement. I
17 do recall having worked with Mr. Healy on what I
18 consider to be two different engagements
19 previously. I'm not exactly sure about that. I
20 can think of at least those two engagements.

21 BY MR. CRUDO:

22 Q. And did either of those engagements

1 involve Ancora?

2 A. Yes, sir. They did.

3 Q. Did both of them involve Ancora?

4 A. The ones I'm recalling did involve
5 Ancora, yes.

6 Q. Did both of those cases involve the '941
7 patent at issue here?

8 A. That is my recollection, yes. Both of
9 those cases, I was previously engaged on,
10 concerned the '941 patent.

11 Q. One of those cases involved LG
12 Electronics and Samsung as defendants, right?

13 A. That is correct. That is one of the
14 cases I had in mind in my previous answer.

15 Q. And what is the other case?

16 A. The other case that I was referring to is
17 a case involving HTC.

18 Q. And neither of these cases are listed in
19 your CV; is that correct?

20 A. I don't recall. I would have to consult
21 my CV to answer that question.

22 Q. Is there a reason they would have been

1 omitted from the CV?

2 MR. GOSSE: Object to the form.

3 THE WITNESS: I just remembered my CV is
4 actually attached to Exhibit 2018, so I'm looking
5 at it now.

6 And the area in my CV, for example on --
7 I'm looking at the Nintendo Exhibit 2018, on page
8 135. And this is where I list what I describe as
9 "Representative Testifying Expert Engagements".

10 So my intent in my CV has never been to
11 list every one of my business relationships or
12 testifying engagements or consulting engagements,
13 but rather to identify those that I considered to
14 be representative.

15 BY MR. CRUDO:

16 Q. But in so doing, you omitted the two
17 cases that involve the same patent owner and the
18 same patent at issue here, right?

19 MR. GOSSE: Object to the form.

20 THE WITNESS: Well, I wouldn't phrase it
21 like that. It is true that neither of those cases
22 are listed, as what I describe, as representative

1 engagements in my CV.

2 However, those engagements were -- I
3 don't -- I don't recall that as having been
4 omitting them. Rather, it was just that is not
5 one of the examples that I put in my CV.

6 BY MR. CRUDO:

7 Q. Have you been retained by Ancora in any
8 other case other than the LG and the HTC cases?

9 A. I am recalling some other engagements.
10 Yes, sir.

11 Q. What are those engagements?

12 A. I am remembering some IPR engagements.
13 For example, there was one with Sony and the '941
14 patent. I believe there was also one with TCL or
15 TCT and the '941 patents. My recollection is that
16 there may have been an engagement related to TCL
17 or TCT, and a district court case involving the
18 '941 as well. That's all I can remember at this
19 moment.

20 Q. Were you deposed in any of those cases?

21 A. Yes, sir. I was.

22 Q. How many times were you deposed across

1 all those cases?

2 A. I'm not going to be able to recall, for
3 example, how many deposition notices there were
4 that -- that I responded to and testified because
5 of.

6 However, I do remember that in the LG and
7 Samsung matters, I'm recalling that I testified
8 both with respect to infringement and validity on
9 both of those -- on both of those cases. So for
10 both LG and Samsung, at least two depositions
11 each.

12 Q. Are you aware of any testimony that you
13 provided in any of those cases that is
14 inconsistent with the position you or Ancora are
15 taking in these IPRs?

16 A. No, sir. I'm not.

17 Q. Did you submit expert declarations or
18 reports in any of those other cases?

19 A. Yes, sir. I did.

20 Q. Do you know approximately how many
21 declarations or reports you've submitted?

22 A. I do recall one declaration in the Sony

1 IPR, and I'm recalling at least one -- let me
2 rephrase. In the LG and Samsung cases, I'm
3 recalling for each of them both opening reports
4 and rebuttal reports. There may have been some
5 supplemental reports as well. I don't recall
6 clearly sitting here right now.

7 Q. By opening reports, are you referring to
8 infringement reports?

9 A. That is correct. They were opening
10 reports for the infringement case, yes.

11 Q. By rebuttal reports, are you referring to
12 rebuttal reports that address patent validity?

13 A. Yes, that was the primary substance of
14 the reports I had in mind.

15 Q. To the best of your recollection, were
16 those reports submitted before or after you
17 admitted your declaration in these IPRs?

18 A. I'm quite sure that all of the reports
19 that I mentioned that were in the district court
20 litigation involving LG and Samsung, were filed
21 before my involvement with the IPRs that we're
22 discussing today.

1 Q. That is the --

2 A. Let me.

3 The IPRs that we're discussing today,
4 specifically the Nintendo and Roku/VIZIO IPRs.

5 Q. And did you submit expert reports in the
6 HTC case as well?

7 A. No, sir. I have not submitted expert
8 reports in the HTC case.

9 Q. Do you intend to submit reports in that
10 case?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: As I sit here, I have no
13 clear intention about it. My understanding is
14 that the case is ongoing, and so it may happen
15 that I, ultimately, do submit reports. But, as I
16 sit here today, I have no clear intention one way
17 or another about it.

18 BY MR. CRUDO:

19 Q. And same question for the TCL district
20 court litigation, did you submit reports in that
21 case?

22 MR. GOSSE: Object to the form.

1 THE WITNESS: I do not recall having
2 submitted any reports in any district court case
3 involving TCL or TCT.

4 BY MR. CRUDO:

5 Q. Did the LG Samsung case involve the
6 Hellman prior art reference at issue here?

7 A. My recollection is that the Hellman prior
8 art reference was involved in one of those cases,
9 either the LG case or the Samsung case. As I sit
10 here, I can't remember clearly which one it was.

11 Q. Did those cases also involve the Chou
12 prior art reference in issue here?

13 A. Yes. The Chou reference at issue in
14 today's IPRs was also raised in one or more of the
15 two district court cases that we've discussed,
16 that is LG and Samsung.

17 Q. Did those cases also involve the Schneck
18 prior art reference in issue here?

19 A. As I sit here today, I don't recall them
20 having been -- I don't recall Schneck having been
21 involved in those cases, but I'm not entirely
22 confident about that. It's possible that they

1 were present in some manner in those cases.

2 Q. And just so the record is clear, when
3 we're talking about those cases, we're referring
4 to LG, Samsung, HTC, and TCL district court
5 cases?

6 A. Well, I was referring specifically to the
7 LG and Samsung cases, given my previous testimony
8 that I never filed any reports in any of the other
9 cases that you've mentioned in your question.

10 Q. Understood.

11 Do you know if the same prior art at
12 issue here is also at issue in HTC and the TCL
13 district court cases?

14 A. As I sit here today, no, I do not know.

15 Q. Are you aware of anything in the expert
16 reports that you submitted in any of those cases
17 that is inconsistent with any position that you've
18 taken or that Ancora has taken in these IPRs?

19 MR. GOSSE: Object to the form.

20 THE WITNESS: As I sit here today, no,
21 I'm not aware of any way in which my analysis of
22 the rebuttal reports in the cases we've been

1 discussing is inconsistent with any of my analysis
2 in the Nintendo, Roku, and VIZIO IPRs that we're
3 discussing today.

4 BY MR. CRUDO:

5 Q. You referred specifically to your
6 rebuttal reports in those cases.

7 Is your answer the same with regard to
8 your infringement reports in those cases?

9 MR. GOSSE: Object to the form.

10 THE WITNESS: Yes, I would agree, I'm not
11 aware of having taken any -- undertaken any
12 analysis in my previously submitted infringement
13 reports that is inconsistent with any of the
14 analysis that I have undertaken with respect to
15 the IPRs concerned in today's deposition.

16 BY MR. CRUDO:

17 Q. Did the district court in the LG case
18 construe the term "agent" in the '941 patent?

19 MR. GOSSE: Object to the form.

20 BY MR. CRUDO:

21 Q. Actually, we can turn to page 28 of your
22 declaration.

1 A. Thank you.

2 Q. You've provided a chart that categorizes
3 the claim construction?

4 A. Yes, I do recall having provided this
5 chart.

6 I'm not sure whether to consider this a
7 stand-alone construction of the term "agent". But
8 what I recall, and I find on page 28 and 29 of my
9 declaration, is that in the LG case, the district
10 court construed a larger term, the term being,
11 "using an agent to set up a verification structure
12 in the erasable, non-volatile memory of the BIOS,
13 as plain and ordinary meaning, wherein the plain
14 and ordinary meaning of agent is a software
15 program or routine."

16 So in that sense, yes, the court did
17 describe the meaning of agent.

18 Q. As a software program or routine,
19 correct?

20 A. Yes, as I just explained, the court
21 described the plain and ordinary meaning of agent
22 is a software program or routine as part of the

1 court's construction of a longer term.

2 Q. Did you apply that construction in your
3 infringement report in the LG case?

4 MR. GOSSE: Object to the form.

5 THE WITNESS: Yes, my recollection in the
6 LG case is that I was fully aware of the court's
7 constructions, and that I applied them all in my
8 infringement analysis, including the term "agent"
9 as we have just discussed, and the larger term in
10 which the word agent appears. That is, using an
11 agent to set up a verification structure...

12 BY MR. CRUDO:

13 Q. Did you apply that same construction in
14 your validity report submitted in the LG case?

15 MR. GOSSE: Object to the form.

16 THE WITNESS: Yes, I used consistent
17 constructions between all of my reports in the LG
18 case.

19 BY MR. CRUDO:

20 Q. When you say you used "consistent
21 construction between all of your reports", do you
22 mean you used the same constructions between all

1 of the reports?

2 MR. GOSSE: Object to the form.

3 THE WITNESS: That is what I meant in my
4 answer that I did, as I sit here today trying to
5 recall this, use the same construction in all of
6 my reports in the district court litigation for LG
7 and Samsung.

8 My only hesitation is whether there was a
9 moment of some claim construction dispute, and I
10 do not recall any such moment.

11 So, again, as I sit here today, my
12 recollection is that I had used the same
13 constructions given by the court in all of my
14 analysis in those cases.

15 BY MR. CRUDO:

16 Q. And with regard to the agent term, is it
17 your understanding that the court adopted Ancora's
18 proposed construction?

19 MR. GOSSE: Objection to the form.

20 THE WITNESS: I do not recall one way or
21 another whether it could be characterized as the
22 court adopting Ancora's construction or not.

1 BY MR. CRUDO:

2 Q. Do you know which party proposed that
3 construction in the LG litigation?

4 A. As I sit here today, I don't recall.

5 This is an easy question to answer by
6 simply looking at the documents you're asking
7 about, but I don't recall sitting here today.

8 Q. As you were preparing your declaration in
9 these IPRs, did you review any litigation
10 materials from the LG case?

11 MR. GOSSE: Objection to the form.

12 THE WITNESS: I guess I'm not sure what
13 you mean by "litigation materials".

14 Can you please narrow that question for
15 me?

16 BY MR. CRUDO:

17 Q. Sure. Let's start with the transcripts
18 from your deposition in the LG case.

19 Did you review those?

20 A. No, sir. I did not.

21 Q. Did you review any of the reports that
22 you submitted in the LG case?

1 A. Correct, I do not clearly remember having
2 reviewed any of the reports in the LG case, as I
3 sit here today.

4 Q. Did you review any of the parties'
5 briefing in the LG case?

6 A. I have no recollection of reviewing
7 briefing in the LG case in my work on the IPRs
8 that we're discussing today.

9 Q. Did you review any of Ancora's source
10 code in connection with preparing for these IPR
11 proceedings?

12 A. I do recall having reviewed -- reviewed
13 is probably too strong a word.

14 I momentarily looked at some Ancora
15 source code related to the most appropriate
16 priority date for the '941 patent, and I do recall
17 having mentioned that in my declaration. Let me
18 find the place.

19 Q. I can direct you there. It's paragraph
20 41 of your declaration.

21 A. That is what I was recalling. In this
22 paragraph 41, I state, "In other work related to

1 the '941 patent, I have reviewed Ancora source
2 code productions that, in my professional opinion,
3 establish a priority date of at least March 31,
4 1997. My analysis of the issues in this
5 proceeding would be the same under either priority
6 date."

7 So when I wrote this, I remember having
8 glanced briefly at that source code production
9 that I previously looked at.

10 But as I conclude in this paragraph, the
11 opinions elsewhere expressed in this declaration
12 do not, as far as I understand it, depend on which
13 priority date is taken to be correct.

14 Q. Your reference to "other work related to
15 the '941 patent" in paragraph 41 of your
16 declaration, is referring to the LG case?

17 A. Yes, what I'm recalling related to the LG
18 and Samsung case.

19 And now that this has come up, I'm
20 recalling that a lot of our previous questions and
21 answers you've been asking about the LG case, and
22 I guess it's a little unclear whether we're

1 talking about LG or LG and Samsung.

2 My recollection is that was one
3 engagement -- of course, it was two different
4 cases with different defendants, but, yes, it
5 was -- my review of the software was in relation
6 to the LG and Samsung cases.

7 Q. Understood.

8 And so that the record is clear, I was
9 referring to LG to include Samsung. So LG/Samsung
10 cases.

11 With that clarification in mind, are
12 there any answers that you've provided that you
13 would clarify in any way?

14 A. I'll tell you, it's very difficult to
15 remember all the questions and answers. But I can
16 say that I don't recall any topic we were
17 discussing where I feel like the answer would have
18 been meaningfully different if you had phrased the
19 question with respect to the Samsung case instead
20 of the LG case.

21 Q. Understood.

22 But just to be clear, you did not

1 undertake an additional review of Ancora source
2 code for this proceeding, correct?

3 A. That is correct. I did not undertake an
4 additional review of Ancora source code for the
5 analysis in this declaration for this
6 proceeding.

7 Q. Aside from your expert engagement with
8 Ancora in the cases that we've just discussed,
9 have you ever performed consulting work for
10 Ancora?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: Could you repeat the
13 question, please?

14 BY MR. CRUDO:

15 Q. Yes.

16 Aside from your expert engagement with
17 Ancora in the cases that we've just discussed,
18 have you ever performed non-litigation consulting
19 with Ancora?

20 MR. GOSSE: Object to the form.

21 THE WITNESS: As I sit here today, I
22 can't recall any consulting work that I've done

1 for Ancora that I would consider to be unrelated
2 to litigation involving the '941 patent.

3 BY MR. CRUDO:

4 Q. And is your answer the same with regard
5 to Beeble, Inc.?

6 MR. GOSSE: Object to the form.

7 THE WITNESS: I do not recall having any
8 relationship with Beeble, Inc.

9 BY MR. CRUDO:

10 Q. Dr. Martin, I see from your CV that you
11 were a city counselor for Ames, Iowa from 2018 to
12 2021; is that right?

13 A. Yes, sir. That's correct.

14 Q. Did you run for that position?

15 A. Yes, I did.

16 Q. Did Ancora contribute money or resources
17 to your campaign in any way?

18 A. No, sir. They did not.

19 Q. Understood.

20 Did any of the lawyers who represent
21 Ancora in either this proceeding or the LG case
22 contribute to the campaign in any way?

1 A. Certainly not that I'm aware of. I would
2 be very surprised if that had been the case. I
3 would -- yes, I'm not aware of any such
4 contributions from any interests outside the
5 community of Ames, Iowa.

6 Q. And same answer I assume for the named
7 inventors of the '941 patent?

8 A. That's correct. I'm not aware of any
9 contribution towards my campaign activities from
10 any of, what I would call, my clients, including
11 Ancora in particular.

12 Q. Understood. Thank you for clarifying.
13 Prior to these IPRs and your work in the
14 LG/Samsung case, had you ever met or communicated
15 with either of the named inventors of the '941
16 patent?

17 MR. GOSSE: Object to the form.

18 THE WITNESS: Prior to my initial
19 engagement of Ancora, I'm not ever aware of having
20 met either of the inventors of the '941 patent.

21 BY MR. CRUDO:

22 Q. Had Ancora or Beeble ever funded any of

1 your research?

2 MR. GOSSE: Object to the form.

3 THE WITNESS: No. Ancora and Beeble have
4 never provided any funding outside of the
5 engagements that we've discussed so far involving
6 litigation around the '941 patent.

7 BY MR. CRUDO:

8 Q. Have you ever heard of Ancora before
9 being retained in litigation involving the '941
10 patent?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: As I sit here today, I
13 don't recall having been aware of that name Ancora
14 before contact involving the '941 patent and
15 related litigation.

16 BY MR. CRUDO:

17 Q. To your knowledge, has your testimony
18 ever been excluded or stricken by any court or
19 administrative agency?

20 A. I'm not sure exactly how to answer that
21 because there are many different levels at which
22 it could be considered. I will say that I have

1 submitted many reports and declarations over the
2 past years.

3 And I am recalling some instances in
4 which some of my reports -- parts of my reports
5 have been struck due to what I would understand to
6 be legal issues in the case, rather than any
7 issues having to do with the reliability or
8 methodology of the work that I have done.

9 Q. When you reference "legal issues in the
10 case", what do you mean by that?

11 A. I'm recalling one case. For example, it
12 was an antitrust case. It was called, I believe,
13 the Apple, iPod, iTunes litigation. And I filed
14 reports in that case regarding some technical
15 aspects of some of the products and services at
16 issue in that case.

17 And the judge, having narrowed the issues
18 that would be considered under the relevant
19 antitrust law, determined that certain paragraphs
20 of my expert report were no longer relevant to the
21 proceedings, and therefore, were excluded on that
22 basis.

1 So that's an example of what I would
2 characterize as a legal reason to simplify a case
3 by not having an expert testify about matters that
4 are no longer relevant to the case. That's one
5 example.

6 Q. Do you recall other examples?

7 A. I do recall one other example in which I
8 filed an expert report, and a dispute arose about
9 whether the infringement contentions in that case,
10 for which I was not personally responsible, had
11 been filed in a manner that -- that was
12 permissible under the court's rules.

13 And since -- you know, my recollection is
14 that my report touched on some of those issues in
15 dispute about the infringement contentions. The
16 judge excluded some parts of my report. I can't
17 remember how much.

18 Again, I understand that as being an
19 issue as to the legal proceedings in the case,
20 rather than the reliability or methodology that I
21 used in reaching my opinions.

22 Q. I see that prior to serving as city

1 counselor, you were employed by Boston Software
2 Forensics from 2005 to 2008; is that right?

3 A. I wouldn't describe it as being an
4 employee of the firm Boston Software Forensic. I
5 was a cofounder of this firm. This was a
6 partnership. And this, on page 134 of my
7 Exhibit 2018 where I mention this, describes the
8 work that we did in our partnership.

9 Q. Were you employed from 2008 to 2018?

10 MR. GOSSE: Object to the form.

11 THE WITNESS: I guess it depends on what
12 exactly you mean by "employed".

13 Can you please clarify that for me?

14 BY MR. CRUDO:

15 Q. Sure.

16 What were you doing professionally during
17 the time period between 2008 and 2018?

18 A. Could you repeat the dates again, please?

19 Q. Yes.

20 What were you doing professionally during
21 the time period between 2008 and 2018?

22 A. During that time, I was self-employed as

1 a software consultant.

2 Q. When you say "software consultant", were
3 you provided consulting services for litigation?

4 A. Yes, sir. I was providing consulting
5 services for software litigation during that
6 period 2008 through 2018.

7 Q. And are you still providing consulting
8 services?

9 A. Yes, sir. I am. Hence, the declaration
10 and the deposition today.

11 Q. Do you have anybody working with you or
12 at your direction on this proceeding?

13 MR. GOSSE: Object to the form.

14 THE WITNESS: I can say that I have no
15 employees or subcontractors that I have been
16 directing in this -- in the proceedings of the
17 Nintendo, Roku, and VIZIO IPRs.

18 BY MR. CRUDO:

19 Q. If you would, Dr. Martin, could you
20 please turn to page 11 of your declaration?

21 MR. GOSSE: Richard, if we're shifting
22 gears, we've been going for about 65 minutes, give

1 or take. Any time for the break would be
2 appropriated. Let's go ahead and do that.

3 MR. CRUDO: Sure. Absolutely. I only
4 have a couple of questions, and then we can take a
5 ten minute break, if that works?

6 MR. GOSSE: Sure.

7 THE WITNESS: That's fine with me.

8 BY MR. CRUDO:

9 Q. Okay. Great.

10 Dr. Martin, are you at page 11 of your
11 declaration?

12 A. I am.

13 Q. Do you see that this page has a heading
14 entitled "Relevant Legal Principles"?

15 A. I do.

16 I'm looking at Exhibit 2018 in the case
17 number 1338, and I am not aware of whether all of
18 the page numbering is identical between these two
19 declarations or not. I just wanted to clarify
20 what I'm looking at.

21 Q. That's a helpful clarification.

22 So when comparing apples-to-apples, do

1 you mind just looking at the declaration,
2 Exhibit 2018, from IPR 2021-01406?

3 A. Sure. I can do that.

4 Okay. I'm looking at that now, yes.

5 Q. Okay. You see on page 11 there's a
6 heading titled "Relevant Legal Principles"?

7 A. I do see that.

8 Q. Does the section of your declaration here
9 set forth legal principles that you applied in
10 your analysis?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: Well, as I state here in
13 paragraph 18 in the last sentence, "This section
14 of my expert report provides my understanding of
15 the legal principles that I have used in
16 formulating my opinions." So these are legal
17 principles that I used in formulating my
18 opinions.

19 BY MR. CRUDO:

20 Q. And please turn to paragraph 36 of your
21 declaration.

22 A. I see it.

1 Q. In paragraph 36, you refer to, "The
2 presumption that an allowed patent claim is
3 valid."

4 What is your reference to a "presumption"
5 mean here?

6 MR. GOSSE: Object to the form.

7 THE WITNESS: To answer this, I'd like to
8 look elsewhere in my declaration to see whether I
9 discuss this presumption in particular. The
10 easiest way for me to do this is by searching my
11 declaration.

12 So what I would like to do is open up
13 Exhibit 2018 from IPR 2021-01406 on my desktop
14 here and see if I can find an explanation.

15 BY MR. CRUDO:

16 Q. Before we do that, sitting here reading
17 paragraph 36, do you know what you meant by a
18 "presumption that an allowed patent claim is
19 valid"?

20 MR. GOSSE: Object to the form.

21 THE WITNESS: I'm unclear. You're asking
22 me if I can be -- this sounds sort of like a

1 memory test rather than a question about the basis
2 for my opinions.

3 BY MR. CRUDO:

4 Q. You testified that you applied these
5 legal principles in formulating your opinions,
6 right?

7 A. I testified that this section of my
8 expert report provides my understanding of the
9 legal principles that I have used in formulating
10 my opinions.

11 Q. And one of those legal principles is the
12 "presumption that an allowed patent claim is
13 valid", right?

14 MR. GOSSE: Object to the form.

15 THE WITNESS: I do make reference in an
16 aside in paragraph 36 to the presumption that an
17 allowed patent is valid by way of explanation of
18 what I'm saying in paragraph 36.

19 And I -- otherwise, in paragraph 36, I
20 basically say, "It is my understanding that it is
21 necessary to show that a reference" -- and going
22 on to page 19 -- "satisfies both of these

1 conditions A and B that I describe on paragraph
2 19."

3 That's the extent to which the
4 presumption that an allowed patent claim is valid
5 is relevant to what I'm describing in paragraph
6 36.

7 BY MR. CRUDO:

8 Q. What does that term "presumption that an
9 allowed patent claim is valid" mean to you?

10 MR. GOSSE: Object to the form.

11 THE WITNESS: To answer that question, I
12 would like to search through my declaration to see
13 whether I took up that issue.

14 BY MR. CRUDO:

15 Q. Did you presume that the '941 patent is
16 valid in your analysis?

17 MR. GOSSE: Objection to the form.

18 THE WITNESS: My understanding is that
19 the current state of the '941 patent is that it is
20 valid as a matter of law. However, there are ways
21 in which it can be shown to be invalidated, and
22 one of those ways involves the current IPR

1 proceedings.

2 So it's more simply a recognition that
3 the intent of these IPR proceedings, as I
4 understand it, by the petitioners is to show that
5 the '941 patent is invalid, given the current
6 circumstance where it would otherwise consider to
7 be valid.

8 MR. CRUDO: Understood.

9 I think we can break now if that works
10 for everyone. Meet back here, let's just say,
11 12:30 Eastern to make it easy

12 THE WITNESS: Okay.

13 MR. GOSSE: Bottom of the hour then.
14 Sounds good.

15 (Off the record 9:13 a.m. - 9:29 p.m.)

16 THE STENOGRAPHER: Back on the record at
17 9:29 a.m. Pacific.

18 BY MR. CRUDO:

19 Q. Dr. Martin, did you speak with your
20 counsel during the break?

21 A. No, I did not.

22 Q. I just wanted to circle back to one thing

1 you mentioned before the break.

2 You referred to a Sony litigation for
3 which you were retained on behalf of Ancora.

4 Do you recall that?

5 A. Yes, sir.

6 Q. Was that an IPR proceeding?

7 A. Yes. My recollection is that was an IPR.
8 That's what I was recalling.

9 Q. Were you ever retained by Ancora in a
10 district court litigation involving Sony?

11 A. I don't clearly recall. It's possible
12 that I was, but I don't recall clearly.

13 Q. Were you retained by Ancora in a district
14 court litigation involving Lenovo?

15 A. Again, it's possible I was. I don't
16 recall anything specific about a Lenovo litigation
17 related to the '941 patent.

18 Q. In any of the cases that we discussed,
19 did you submit any declaration or report
20 addressing claim construction?

21 MR. GOSSE: I'll object to the form of
22 that question.

1 THE WITNESS: Yes, you said any of the
2 litigation we've discussed.

3 Are you referring just to the Sony and
4 Lenovo, or are you referring to something broader?

5 BY MR. CRUDO:

6 Q. Sony. Lenovo. I believe you addressed
7 LG, Samsung, HTC, and TCL?

8 A. As I sit here today, I don't recall
9 clearly if I have submitted any declaration
10 regarding claim construction issues in any of the
11 district court proceedings. I guess, it's
12 possible that I did, and I'm not recalling it.

13 However, I would expect if I had
14 submitted a declaration, that would be publicly
15 available through the court dockets.

16 Q. You don't recall opining in any of those
17 cases as to what the term "agent" means?

18 MR. GOSSE: Object to the form.

19 THE WITNESS: The way you phrased that
20 sounded like a follow-on to my previous answer,
21 but are you asking about declarations did I file
22 on terms of claim construction or, specifically,

1 anything that I've ever said about what an agent
2 is?

3 BY MR. CRUDO:

4 Q. Let's start with declarations filed?

5 A. Again, I do not recall filing any claim
6 construction and/or declarations in the district
7 court matters that we've discussed. I'm not 100
8 percent confident about that, but I don't recall
9 them sitting here today.

10 Q. Okay. We can move on then.

11 Dr. Martin, would you please turn to
12 paragraph 62 of your declaration?

13 A. I am looking at paragraph 62, yes.

14 Q. And here in the first sentence you state,
15 "BIOS at the time of the invention was understood
16 to be the set of an essential software routine
17 that test hardware at startup, start the operating
18 system, and support the transfer of data among
19 hardware devices."

20 Do you see that?

21 A. Yes, I do. There's also a citation to
22 the Exhibit 2009 that we discussed earlier.

1 Q. You anticipated my question. Thank you
2 for clarifying that.

3 When you referred to "software routines"
4 in this sentence, what are you referring to?

5 A. I don't understand the question beyond
6 what this quotation clearly describes about those
7 software routines.

8 So if you're asking something about
9 what's described here, I need help understanding
10 it.

11 Q. Sure.

12 What is a software routine? Let's start
13 there.

14 MR. GOSSE: Object to the form.

15 THE WITNESS: As used in this quotation
16 in paragraph 62 of my declaration, a software
17 routine, is -- it is a program that's encoded in
18 the software.

19 BY MR. CRUDO:

20 Q. What types of software routines are
21 included in BIOS?

22 MR. GOSSE: Object to the form.

1 THE WITNESS: I'm looking at the
2 constructions of BIOS that have been entered in
3 the district court cases. These are on pages 24
4 and 25 of my declaration. So this is the
5 understanding of BIOS that I used in my analysis.
6 They're largely consistent.

7 For example, the LG case definition,
8 which is at the top of page 25 of my declaration
9 states regarding the term "BIOS" that its
10 definition is a plain and ordinary meaning, where
11 the plain and ordinary meaning is "An acronym for
12 basic input/output system. It is a set of
13 essential start-up operations that begin to run
14 automatically when a computer is turned on, which
15 tests hardware, starts the operating system, and
16 supports the transfer of data among hardware
17 devices."

18 So in this construction, they're
19 described as essential start-up operations. And
20 those operations correspond to software routines
21 that carry them out, as I describe in paragraph 62
22 of my declaration.

1 BY MR. CRUDO:

2 Q. And just so I understand, the
3 construction that you were reading from at the top
4 of page 25 of your declaration from the LG case,
5 is that the construction that you applied in your
6 analysis?

7 MR. GOSSE: Object to the form.

8 THE WITNESS: I would say that I applied
9 the plain and ordinary meaning of BIOS as informed
10 by these constructions, so I certainly considered
11 them.

12 And the plain and ordinary meaning is
13 consistent with each one of these constructions,
14 and I'm not aware of any way in which my opinions
15 vary based on which exact construction is used
16 here. They're quite similar.

17 BY MR. CRUDO:

18 Q. Can BIOS include anything other than
19 software routines?

20 MR. GOSSE: Object to the form.

21 THE WITNESS: That really depends on what
22 context we're discussing BIOS in. The claims at

1 issue are used in a particular way, but there are
2 other ways that one can be discussing BIOS as
3 well.

4 BY MR. CRUDO:

5 Q. Is there any way or any example in which
6 BIOS would include something other than software
7 routines?

8 MR. GOSSE: Object to the form.

9 THE WITNESS: So you're now outside the
10 context of the '941 patent, is there any way that
11 BIOS could refer to anything other than software
12 routines as described among the source materials
13 that I've cited?

14 BY MR. CRUDO:

15 Q. Correct, as a general matter. Yes?

16 A. I suppose I could imagine someone in
17 informal conversation outside the context of the
18 '941 patent talking about BIOS as -- as a
19 different sort of entity than merely the software
20 routines within it that carry out specific
21 functions.

22 Q. Can BIOS include a data table, for

1 example?

2 MR. GOSSE: Object to the form.

3 THE WITNESS: Without knowing anything
4 more about the BIOS you're discussing, for
5 example, how it's applied in the patents at issue
6 in this case, I see no reason why the name "BIOS"
7 would categorically exclude a data table from
8 being something that could be encompassed by
9 someone's use of the term "BIOS".

10 BY MR. CRUDO:

11 Q. BIOS itself is not hardware; is that
12 correct?

13 MR. GOSSE: Object to the form.

14 THE WITNESS: Again, it really depends on
15 the context we're discussing. The '941 patent
16 uses the term "BIOS" in its claims in a very
17 specific way.

18 BY MR. CRUDO:

19 Q. What is that way?

20 A. For example, in Claim 1, the preamble
21 recites, "A method of restricting software
22 operation within a license for use with a

1 computer, including an erasable, non-volatile
2 memory area of a BIOS of a computer", among other
3 things in the preamble.

4 And then the term "BIOS" appears later in
5 Claim 1 as the erasable, non-volatile memory of
6 the BIOS in two different places.

7 So Claim 1 describes specifically a
8 memory, an erasable, non-volatile memory of the
9 BIOS.

10 Q. Is BIOS stored in that memory?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: I guess I don't understand
13 the context in which you're asking that question.
14 For example, are you asking if -- well, I just
15 don't understand which BIOS you're referring to
16 when you say, "Is the BIOS stored in the memory of
17 the BIOS."

18 BY MR. CRUDO:

19 Q. Does the claim recite more than one
20 BIOS?

21 A. I don't believe so. No, sir.

22 Q. In paragraph 61 of your declaration, you

1 quote the '941 patent, and this is on page 36 of
2 your declaration.

3 When you quote the '941 patent's
4 reference to "A conventional BIOS module in which
5 a key was embedded at the ROM section thereof and
6 a second non-volatile section of the BIOS."

7 Do you see that?

8 A. I do.

9 Q. And right below that you excerpt Figure 1
10 for the '941 patent.

11 Do you see that?

12 A. Yes.

13 Q. Correct.

14 Can you point to where in Figure 1 is the
15 ROM section of the BIOS module?

16 A. I am looking at column five of the '941
17 patent that is discussing Figure 1, starting at
18 line nine. And at line 12 of column five, it
19 states, "This computer processor (internally)
20 contains a first non-volatile memory area 4, EG,
21 the ROM section of the BIOS."

22 So when I look at Figure 1, what I see it

1 describing with respect to this embodiment is the
2 area described as first, non-volatile memory
3 labeled 4 in Figure 1, which is identified here in
4 column five, for example, as to the ROM section of
5 the BIOS.

6 So I think that is what column five is
7 intending to express to the reader as a
8 possibility for this area -- memory area 4.

9 Q. Is BIOS stored in the memory area 4?

10 MR. GOSSE: Object to the form.

11 THE WITNESS: A person reading this
12 section of the patent where memory area 4 is
13 identified as, for example, the ROM section of the
14 BIOS, would think that part of the BIOS may be
15 stored in this ROM section. But it doesn't
16 clearly require that all of the instructions of
17 the BIOS be stored in this ROM section, for
18 instance. It simply characterizes this as a ROM
19 section of the BIOS.

20 BY MR. CRUDO:

21 Q. But would you read that to mean that some
22 BIOS must be stored in memory space 4?

1 MR. GOSSE: Object to the form.

2 THE WITNESS: Well, I don't think I would
3 use the word "must" at least because we're in a
4 section in column five called "Detailed
5 description of a preferred embodiment." So it is
6 merely an embodiment, it is not an overall
7 requirement of every use of the term "BIOS" within
8 the entire patent merely by being -- because
9 what's expressed in this section.

10 And, again, I don't see this
11 parenthetical stating EG, the ROM section of the
12 BIOS, clearly indicating that some of the
13 instructions that are executed on behalf of the
14 BIOS must be contained in area 4, even in this
15 single embodiment. As I said, it may be that they
16 are there, but I don't see that clear requirement.

17 I'm also, as I sit here, not aware of any
18 further requirement in the discussion of this
19 preferred embodiment that would require BIOS
20 instructions to be -- that is the executable BIOS
21 instructions to be stored within non-volatile
22 memory 4.

1 BY MR. CRUDO:

2 Q. So is it your view that the ROM section
3 of the BIOS doesn't necessarily need to have
4 stored the BIOS software routines themselves?

5 MR. GOSSE: Object to the form.

6 THE WITNESS: My testimony is a little
7 different. I'm saying that this description of
8 non-volatile memory area 4 does not clearly state
9 that the instructions of the BIOS must be stored
10 in non-volatile memory area 4.

11 They -- some of them may be stored there,
12 but I don't see how this parenthetical absolutely
13 requires that the instructions be stored in the
14 BIOS, given that they're -- as I recall the
15 instruction here, that there is no further
16 discussion or consequence of the location of the
17 instructions constituting that part of the BIOS.

18 Ultimately, this feels like a claim
19 construction debate and not one that I'm aware of
20 or considered in the preparation of my
21 declaration.

22 BY MR. CRUDO:

1 Q. Understood.

2 And I'm just trying to get an
3 understanding of what you understand the term
4 "BIOS" to mean, which you use, of course,
5 throughout your declaration in forming your
6 validity opinions.

7 And I'm just going to --

8 MR. GOSSE: Counsel, you are pushing the
9 edge of relevance with respect to this
10 declaration.

11 If you want to ask about infringement
12 claim construction positions, that might be
13 something for a different deposition. So I just
14 counsel you, if you want to know what he's
15 thinking it means great, but he's given you some
16 testimony on that.

17 MR. CRUDO: Thank you. I appreciate
18 that.

19 We're not trying to probe infringement
20 construction positions. Rather, we're trying to
21 understand what the term -- what Dr. Martin
22 understands the term "BIOS" to mean in paragraph

1 61 and 62 of his declaration.

2 BY MR. CRUDO:

3 Q. Dr. Martin, you just quoted from, I
4 believe it was column five, line 11 of the '941
5 patent. And that passage referred to the ROM
6 section of the BIOS.

7 What do you understand the term "section
8 of the BIOS" to mean?

9 MR. GOSSE: Object to the form.

10 THE WITNESS: I can see the term ROM
11 section of the BIOS here in column five at line --
12 I guess it's, 13.

13 What that indicates to me is that this
14 passage is communicating that the BIOS has a ROM
15 section. There is a ROM component of the BIOS,
16 but that it's not the only part or section of the
17 BIOS.

18 BY MR. CRUDO:

19 Q. I apologize. I'm genuinely confused
20 here, and I'm trying to resolve that.

21 But just a moment ago you testified that
22 BIOS was software, that it contains software

1 routines. And just now --

2 MR. GOSSE: Object to the form.

3 BY MR. CRUDO:

4 Q. Just now you referred to BIOS as having a
5 ROM section, which to me suggests hardware.

6 Can you clarify what you mean by BIOS?

7 A. Again, I need to know what context we're
8 discussing. Here we've been discussing column
9 five, and what it is communicating to a reader.

10 Previously, I was discussing Claim 1 and
11 its use of the term "erasable, non-volatile memory
12 of the BIOS", which is not exactly what is being
13 discussed here in column five.

14 So maybe that explains why there seems to
15 be a disconnect. If we can narrow down to which
16 thing we're talking about, I'm happy to take up
17 the question.

18 Q. Well, let's start with Figure 1.

19 When we're talking about memory of the
20 BIOS, what does that phrase mean to you in the
21 context of Figure 1?

22 MR. GOSSE: Object to the form.

1 THE WITNESS: When I think of the term
2 "memory of the BIOS", I think of Claim 1 and its
3 use of that phrase. It recites erasable,
4 non-volatile memory of a BIOS or memory area of a
5 BIOS.

6 And now taking that term and looking at
7 Figure 1, I see Figure 1 being described in column
8 five as having both the first non-volatile area 4
9 EG, the ROM section of the BIOS, and a second
10 non-volatile area 5 EG, the E²PROM section of the
11 BIOS. And further a volatile memory area 6.

12 So given this description that identifies
13 two different non-volatile memory areas and
14 associates them both with sections of the BIOS,
15 those seem to be the closest thing that comes to
16 mind for the term "memory of the BIOS" looking at
17 Figure 1, armed with this self-incrimination
18 column five, you would think of one of those two
19 areas or both of them.

20 BY MR. CRUDO:

21 Q. Is BIOS stored in the memory space
22 labeled 5 in Figure 1?

1 MR. GOSSE: Object to the form.

2 THE WITNESS: I don't see the description
3 of Figure 1 in column five as answering that
4 question. It may be; it may not be. It doesn't
5 seem to be relevant to the description of the
6 preferred embodiment in column five.

7 BY MR. CRUDO:

8 Q. If BIOS is not stored in either of the
9 memory space labeled 4 or the memory space labeled
10 5, then how are those memory spaces memory of the
11 BIOS?

12 MR. GOSSE: Object to the form.

13 THE WITNESS: As I think I explained
14 before, a person of ordinary skill reading this
15 passage from column five about Figure 1, would
16 likely imagine that some instructions of the BIOS
17 may be stored in the ROM area. However, this
18 passage in column five does not appear to strictly
19 require that.

20 Another possibility is that the
21 constructions to the BIOS could be stored in the
22 second non-volatile memory labeled 5 but, again,

1 this passage does not strictly require that.

2 However, these memory areas could also
3 contain configuration or control information that
4 determines how the operations of the BIOS are
5 carried out.

6 That is a way in which -- an additional
7 way in which they may be considered memory of the
8 BIOS.

9 BY MR. CRUDO:

10 Q. Is it possible for BIOS routines to be
11 stored in both memory space 4 and memory space
12 5?

13 A. I am not aware of any reason why the
14 description in the '941 patent would exclude that
15 possibility. It does seem like constructions
16 corresponding to the BIOS could be stored in
17 either area 4 or area 5 or both or elsewhere.

18 Q. And memory space 5 also includes license
19 records labeled element 9, I believe, in Figure 1;
20 is that right?

21 A. I do see that area labeled 9 with the
22 caption "license records". This is described

1 starting at line 25 of column five where it's
2 described as a licensed record area 9.

3 Q. What is a licensed record?

4 MR. GOSSE: Object to the form.

5 THE WITNESS: Again, I'm looking at my
6 declaration starting on page 25, which discusses
7 the constructions of the term "license record".
8 And we have four different constructions and four
9 different proceedings identified here on 25 going
10 into page 26. I will read just one of them from
11 the LG case.

12 It's the second to last row on page 25
13 where the court construed license record as "Data
14 associated with the licensed program with
15 information for verifying that licensed program".

16 BY MR. CRUDO:

17 Q. So assume for the purposes of my next
18 question that BIOS is stored in memory space 5
19 shown in Figure 1.

20 Would that BIOS occupy the entirety of
21 memory space 5?

22 A. You're asking me to assume something

1 about it, so you have to tell me whether it does
2 or it doesn't.

3 MR. GOSSE: Object to the form.

4 BY MR. CANAVERA:

5 Q. That's fair. Let me rephrase the
6 question.

7 If there were BIOS stored in memory space
8 5, that BIOS could not occupy the same area as the
9 license record 9; is that right? Is that a fair
10 characterization?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: I do not understand what
13 you're getting at. It sounds like you're
14 asking -- no, I don't understand what you're
15 asking exactly, and I can't respond.

16 BY MR. CRUDO:

17 Q. Memory space 5 accommodates both license
18 record 9 and BIOS; is that correct?

19 A. I think that's basically fair. Column
20 five describes non-volatile memory area 5 as being
21 EG the E²PROM section of the BIOS, while also at
22 line 25, column five identifies a licensed record

1 area 9, which is depicted in Figure 1, also being
2 in non-volatile memory area 5. So 5 can
3 accommodate both of these constraints.

4 Q. In paragraph 62 of your declaration, you
5 refer to BIOS memory.

6 Do you see that?

7 A. I do. Yes.

8 Q. And are you using the phrase "BIOS
9 memory" to refer to memory of the BIOS?

10 MR. GOSSE: Object to the form.

11 THE WITNESS: I was not intending to
12 specifically address the meaning of the term
13 "memory of the BIOS" or "memory area of the BIOS"
14 as contained in Claim 1, but there is significant
15 overlap between the concepts.

16 In paragraph 62, I am talking about what
17 was typically done at the time reflected by the
18 definition that I quoted from the Microsoft
19 definition.

20 BY MR. CRUDO:

21 Q. When you say that there is significant
22 overlap between BIOS memory and memory of the

1 BIOS, what do you mean by that?

2 MR. GOSSE: Object to the form.

3 THE WITNESS: I mean, for example, that
4 the memory of the BIOS as recited in Claim 1 could
5 include code. That is the instructions of the
6 BIOS as I -- and then in 62, I also mention that
7 BIOS memory, therefore, was typically used for
8 storing code. So that's an overlap.

9 And in addition, in paragraph 62, I say
10 that BIOS memory, therefore, was typically used
11 also for other configuration data that assisted in
12 the start up and operation of a computer.

13 Those are also aspects of what can be
14 held in memory of the BIOS. So that's another
15 significant overlap.

16 BY MR. CRUDO:

17 Q. And just to make sure that I understand
18 your testimony, going back to Figure 1, BIOS
19 routines and license records could both be stored
20 in memory space 5 shown in Figure 1; is that
21 correct?

22 A. As I look at Figure 1, I see that it

1 literally shows license record area 9 being within
2 the non-volatile memory area 5. So we start from
3 that, and now I think that there is nothing in
4 this first paragraph of the detailed embodiment of
5 a preferred -- sorry.

6 In this first paragraph of the detailed
7 description of a preferred embodiment of column
8 five that excludes the possibility of having
9 instructions of the BIOS stored also in this
10 non-volatile memory area 5.

11 Q. So BIOS routines and license records
12 could both be stored in memory space 5, correct?

13 MR. GOSSE: Object to the form.

14 THE WITNESS: As I look at Figure 1 and
15 the description of this paragraph of column five,
16 starting at line 11 and going through about line
17 16 -- oh, sorry. Going through about line 27 or
18 28, I think this description of Figure 1 allows
19 for the possibility of storing both instructions
20 of the BIOS and the license record area 9 within
21 non-volatile memory 5.

22 BY MR. CRUDO:

1 Q. Okay. And earlier today I believe you
2 referenced E²PROM or E²PROM.

3 Do you recall that?

4 A. Yes, I do.

5 Q. What is E²PROM?

6 A. It's written E with a superscript 2 in
7 the patent, and that's why I've been calling it
8 E²PROM. Sometimes people will simply call it E²,
9 and this refers to other electronically erasable
10 programmable, read memory only.

11 Q. Can BIOS be stored in E²PROM?

12 MR. GOSSE: Object to the form.

13 THE WITNESS: I'm not aware of any
14 description in this area of the '941 patent in
15 column five that would exclude the possibility of
16 storing instructions that constitute the software
17 part of the BIOS in the E² memory.

18 However, I also, as I recall the '941
19 patent, I don't -- I don't clearly recall it
20 teaching that's where it would or should go. It's
21 more that I don't recall it saying that it cannot
22 go there. That BIOS instructions, individual

1 instructions, could not go in an E²PROM memory.

2 BY MR. CRUDO:

3 Q. Setting aside the '941 patent for just a
4 moment.

5 As a general matter can BIOS be squared
6 in E²PROM?

7 MR. GOSSE: Object to the form.

8 THE WITNESS: Well, as a general matter,
9 it seems possible to me that individual
10 instructions corresponding to the operations of
11 the BIOS is consistent with the claim
12 constructions of BIOS that we've previously
13 discussed. Those individual instructions could
14 generally be stored in E²PROM memory under
15 appropriate circumstances.

16 BY MR. CRUDO:

17 Q. Would you expect a general purpose
18 computer in 1998 to have E²PROM?

19 MR. GOSSE: Object to the form.

20 THE WITNESS: This is sort of an awfully
21 broad category. And it's difficult to answer
22 generally about a general computer, and what my

1 expectation would be, whether it does or does not,
2 that's a binary decision, have E²PROM in it.

3 But I will note that this '941 patent
4 filed in 1998, discusses E²PROM, and that is
5 consistent with my recollection that E²PROM was
6 not extremely unusual at that time in 1998.
7 However, I haven't undertaken a survey of all
8 existing computers in 1998 to answer the question
9 you asked.

10 BY MR. CRUDO:

11 Q. Understood.

12 But you do recall computers in 1998 --
13 some computers in 1998 having E²PROM, right?

14 A. That's my understanding, yes, and it's
15 consistent with my recollection.

16 I didn't particularly research 1998
17 computers in preparation for this deposition, you
18 know, other than -- well, I'll just end there.

19 Q. Sure. Understood.

20 To the best of your recollection and
21 knowledge, would a general purpose computer in
22 1998 have a single E²PROM?

1 MR. GOSSE: Object to the form.

2 THE WITNESS: This is a topic that I have
3 not recalled in having considered in the
4 preparation of my declaration. I did not see how
5 it would be relevant for my opinions to research
6 the -- a method of counting individual E²PROM
7 devices on computers in 1999, 1998.

8 BY MR. CRUDO:

9 Q. Are you aware of any computers that had a
10 single EEPROM in 1998?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: As I sit here today, I do
13 not clearly recall a specific computer that I can
14 testify with certainty had a single E²PROM in it
15 that I would also describe as a general purpose
16 computer, because I did not find that relevant for
17 the opinions in my declaration.

18 However, also, as I sit here today, I
19 would not be the least bit surprised to determine
20 that such computers did exist. I may have even
21 used such computers.

22 BY MR. CRUDO:

1 Q. So assume for my next question that a
2 computer has more than one E²PROM.

3 Is it possible that BIOS would be
4 distributed across each of those E²PROMs?

5 MR. GOSSE: Object to the form.

6 THE WITNESS: This is not a question that
7 I considered in preparation of my declaration
8 because I don't see it being my opinions there.

9 However, as I sit here, considering the
10 constructions for BIOS in play, I don't see any
11 reason why it would be impossible for the
12 essential start-up operations that begin to run
13 automatically when a computer is turned on, which
14 tests hardware, starts the operating system, and
15 support the transfer of data among hardware
16 devices, why those operations could not have been
17 encoded in more than one E²PROM memory.

18 BY MR. CRUDO:

19 Q. Does the prior art reference Hellman at
20 issue in these proceedings disclose BIOS?

21 MR. GOSSE: Object to the form.

22 MR. CRUDO: And, David, just so I know

1 specifically, what is the basis for the form
2 objection there?

3 MR. GOSSE: The meaning of BIOS is a
4 little bit unclear here. I'm not sure what you
5 intend by that.

6 And, certainly, if you want to direct the
7 witness to some relevant portion of his report or
8 his declaration, that might help the discussion.

9 BY MR. CRUDO:

10 Q. Dr. Martin, we've spent quite a bit of
11 time talking about BIOS today, correct?

12 A. We have had a number of questions on the
13 topic, of course.

14 Q. So with the understanding of BIOS that
15 you have conveyed during today's deposition, does
16 Hellman disclose BIOS?

17 A. So I'm bringing up my Exhibit 2018 where
18 I discuss Hellman in a couple of different places.
19 This is the 1406 declaration, and I am trying to
20 find the section where I discuss Hellman with
21 respect to BIOS.

22 Q. Maybe we could short circuit. If you go

1 to paragraph 143 of your declaration.

2 A. Yes, I see it.

3 Q. You say here that, "Hellman does not
4 disclose any BIOS or any other operating system or
5 OS level software."

6 Is that your opinion that Hellman does
7 not disclose any BIOS?

8 A. This sounds correct to me, as I stated it
9 in paragraph 143. This is a summary, of course,
10 because -- actually, I'd like to look at my other
11 references to Hellman as well on this term BIOS,
12 so I'm doing that now.

13 I also make a similar statement in
14 paragraph 178 with reference back to paragraph
15 143. And this is specifically what I say in 178
16 as stated above in paragraph 143, "Hellman does
17 not disclose an operating system or a BIOS."

18 That's consistent with my recollection of
19 Hellman. I don't -- I certainly don't recall
20 Hellman using the term "BIOS", nor do I recall
21 Hellman addressing the substance of the claim
22 construction of BIOS

1 Q. Does Hellman disclose storing data in
2 BIOS?

3 A. Again, my recollection is that Hellman is
4 silent on the question of BIOS. I discussed this,
5 for example, in paragraph 183 and 182.

6 So given no indication that I'm aware of
7 in Hellman or that I understand has been raised in
8 this case that I was responding to, I don't see
9 how Hellman would be considered to be storing data
10 in BIOS.

11 Q. Does the prior art reference Chou
12 disclose BIOS?

13 MR. GOSSE: And I'll object to the
14 form.

15 THE WITNESS: Chou as described in
16 Exhibit 1005, does mention BIOS many times in its
17 disclosure.

18 BY MR. CRUDO:

19 Q. You would agree that Chou also mentions
20 E²PROM, correct?

21 A. Yes. For example, in my paragraph 144
22 introducing Chou, I quote from Chou at column

1 three where it mentioned BIOS EEPROM 15. That's
2 another way to spell E²PROM.

3 Q. Understood. I'd like to switch gears a
4 little bit.

5 Dr. Martin, would you like to take
6 another break or are you okay to keep going?

7 A. I'm happy to go for a while longer.
8 Thank you for asking.

9 Q. Sure. No problem.

10 And, David, that's fine with you?

11 MR. GOSSE: Sure. Yeah.

12 BY MR. CRUDO:

13 Q. Dr. Martin, I would like for you to turn
14 to paragraph 129 of your declaration.

15 A. I'm looking at it, yes.

16 Q. And specifically the last sentence of
17 paragraph 129, which appears on page 78 of your
18 declaration.

19 And that sentence says, "Consistent with
20 these statements, a person of ordinary skill in
21 the art would recognize that the plain regent must
22 run at the OS level and be capable of writing to

1 memory of the BIOS."

2 Do you see that?

3 A. I do see that sentence.

4 Q. Is that the definition that you used of
5 agent in your analysis?

6 A. I wouldn't say that is the definition of
7 agent that I used. However, it is a constraint
8 upon the agent that is -- that I've applied in my
9 analysis as discussed in this section of my report
10 that starts back on page 74 at paragraph 121 with
11 many citations to many findings and rulings about
12 the agent in question.

13 Q. But is that the meaning of the word
14 "agent" that you applied in your analysis?

15 A. This is an aspect of agent that I applied
16 in my analysis. However, it's not the only aspect
17 of agent that I applied in my analysis.

18 As we've previously discussed, there is
19 also the description of agent within LG court's
20 construction of the longer term using an agent to
21 set up a verification structure that I also
22 applied in the analysis in my declaration.

1 Q. This sentence that we just read in
2 paragraph 129, do you believe that is consistent
3 with the construction for agent that Ancora has
4 advanced in this IPR?

5 MR. GOSSE: Object to the form.

6 THE WITNESS: Could you refer me
7 specifically to the construction that Ancora has
8 advanced so that I can address your question?

9 BY MR. CRUDO:

10 Q. Sitting here now, do you know which --
11 let me strike that.

12 Sitting here today, are you aware that
13 Ancora has advanced a construction for the term
14 "agent" in this IPR?

15 A. I do not, sitting here today, recall what
16 Ancora's briefing in this IPR may have said about
17 the term "agent" in perfect detail. So I could
18 not recite to you, for example, a proposed
19 construction of agent from memory.

20 To the extent that it has been proposed,
21 I'm sure we could find it in materials in the box
22 or in the folder.

1 Q. So it's possible that your understanding
2 of the word agent is inconsistent with the
3 arguments that Ancora has made in these IPRs?

4 MR. GOSSE: Objection to the form.
5 You're mischaracterizing the witness's testimony.
6 Come on. Show him the papers or move on.

7 BY MR. CRUDO:

8 Q. Can you answer the question,
9 Dr. Martin?

10 A. Can you repeat it for me, please?

11 Q. Is it possible that your understanding of
12 the word agent is inconsistent with the arguments
13 that Ancora has made in these IPRs?

14 MR. GOSSE: Same objection.

15 THE WITNESS: I can't answer -- I can't
16 answer that question without reference to the
17 construction that you're referring to. Otherwise,
18 it would just be speculation.

19 BY MR. CRUDO:

20 Q. Okay. Turning back to this last sentence
21 in paragraph 129, do you believe that this
22 understanding set forth in this sentence of the

1 word agent is narrower than the district court's
2 construction in the LG case?

3 MR. GOSSE: Object to the form.

4 THE WITNESS: My recollection of the
5 construction in the LG case is that we have the
6 words that I put in my declaration on page 28 from
7 the LG case, but there is the court's description
8 of the requirements of the agent in that case.

9 And as a legal matter, I don't know
10 whether that is part of the construction or rather
11 it's -- whether it's a separate constraint that
12 the court was intending to enforce on that term.

13 When I prepared my declaration, I only
14 pasted these words in this box. I did not paste
15 in the court's entire discussion of this.
16 However, I did cite -- I recall that I did cite to
17 some such discussion in my declaration here in
18 this section beginning on page 74.

19 BY MR. CRUDO:

20 Q. I'd like to just focus on the court's
21 construction set forth on pages 28 and 29 of your
22 declaration.

1 On those pages, you have quoted the court
2 as saying, "The plain and ordinary meaning of
3 agent is a software program or routine"; is that
4 correct?

5 MR. GOSSE: Object to the form.

6 THE WITNESS: That is part of the
7 description of the construction of using an agent
8 to set up a verification structure in the
9 erasable, non-volatile memory of the BIOS.

10 My recollection is there is no
11 stand-alone construction of the term "agent" in
12 the LG case. Rather, there is this sort of
13 embedded explanation within a longer term together
14 with the court's other reasoning in its opinions
15 in that case.

16 BY MR. CRUDO:

17 Q. Would you agree that a software program
18 or routine is broader than OS level software
19 program or routine?

20 A. Generally speaking, I would agree that if
21 you're discussing simply a software routine
22 without any further constraints on it, that I

1 think could colloquially be described as broader
2 than a software routine that does have constraints
3 on it, such as the constraint that the software
4 routine runs at the OS level.

5 However, in this case and regarding the
6 history of this term "agent", as you know, the
7 situation is complicated due to all of the
8 previous court rulings on this matter.

9 Q. But you would agree, there's some types
10 of software programs or routines that are not OS
11 level software programs or routines, right?

12 A. Yes, I would agree that it is possible to
13 have a software program or a routine without any
14 indication that it is an OS level software program
15 or a routine. It may be best described as
16 something that is not OS level.

17 Q. And we've been talking about OS level. I
18 just want to back up a little bit.

19 By OS, are you referring to Operating
20 System?

21 A. That's the abbreviation that I've been
22 using as OS, meaning Operating System.

1 Q. Does OS differ from BIOS?

2 A. Generally speaking, yes. OS does differ
3 from BIOS. We have previously discussed
4 constructions of the term "BIOS". I'm not aware
5 of there being constructions of the term
6 "operating system".

7 However, the plain and ordinary meaning
8 of operating system is not what I would understand
9 to be associated with the definitions given for
10 the term "BIOS" in this case.

11 Q. How is OS different from BIOS?

12 A. One of the ways that we can see this is
13 that in the construction of BIOS, we have three
14 different, but similar, constructions that I
15 discuss or identify on the bottom of page 24 into
16 page 25 of my declaration.

17 And in that construction of BIOS, one of
18 the operations of the BIOS being discussed is
19 starting the operating system. So this
20 differentiates the BIOS itself from one of the
21 things it does, mainly starting the operating
22 system.

1 And that is indeed one of the essential
2 operations of the BIOS, to start an operating
3 system, which then continues running to provide
4 services for the user of the computer.

5 Q. Can the operating system be running while
6 BIOS is running?

7 MR. GOSSE: Object to the form.

8 THE WITNESS: That really depends on the
9 context in which we're discussing BIOS. So I
10 would say that my recollection of the '941 patent
11 is that the operation of the BIOS being discussed
12 there, is something that essentially perceives the
13 running of the operating system. As we just
14 discussed, the BIOS is -- one of its operations is
15 to start the operating system.

16 So to the extent that I recall the '941
17 patent discussing BIOS, it's with respect to that
18 activity that perceives the running of the
19 operating system.

20 BY MR. CRUDO:

21 Q. Does the '941 patent disclose an
22 operating system?

1 A. I'm looking at the patent now to find the
2 best reference.

3 So I don't recall the '941 patent using
4 the term "operating system" directly. However, it
5 references the BIOS do indicate that there's a
6 phase of execution of the computer that is not
7 BIOS, and that would refer to the operating
8 system.

9 Again, with reference to these
10 constructions that were entered in that case, that
11 is the understanding that a person in the ordinary
12 skill of the art would have.

13 Further, I think I recall the file
14 history of the '941 patent discussing operating
15 system, but I would have to consult that to be
16 sure.

17 Q. I'd like to just unpack your answer
18 there.

19 You said that the '941 patent references
20 the BIOS, which indicates that there's a phase of
21 execution of the computer that is not BIOS.

22 Can you explain what you mean by that?

1 A. Yes. I'm referring to the understanding
2 of the term "BIOS" as represented by the claim
3 constructions that we've been discussing, which,
4 of course, those constructions are derived from
5 the evidence in the '941 patent and its file
6 history. And as we've discussed, one of the
7 responsibilities of BIOS is to start an operating
8 system.

9 So by discussing BIOS in the '941 patent,
10 it is implying that there is an operating system
11 to start.

12 And this is also -- it's relevant to
13 column three of the '941 patent that discusses
14 the -- at the top starting at line four, stating
15 that "The required level of system programming
16 expertise that is necessary to intercept or modify
17 commands interacting with the BIOS is
18 substantially higher than those needed for
19 tampering with data residing in volatile memory
20 such as a hard disc." And it goes on to discuss
21 other difficulties.

22 This is referring not to what a

1 programmer would do, but rather what techniques
2 are available to someone who is running on an
3 operating system rather than the BIOS.

4 Q. Other than the '941 patent's reference to
5 BIOS, is there any other disclosure that would
6 indicate that the '941 patent discloses an
7 operating system?

8 MR. GOSSE: Object to the form.

9 THE WITNESS: On column five, starting at
10 line 29, there's a description stating, by way of
11 example, said fields stand for application names,
12 EG, Lotus 1-2-3, vendor name Lotus, Inc., and a
13 number of licensed copies, one, for stand-alone
14 usage. Greater than one for a number of users for
15 a network application.

16 A person in the ordinary skill of the art
17 would recognize this Lotus application 1-2-3 as
18 one that runs on an operating system. It's not a
19 BIOS program. So that's one example.

20 In Claim 18 of the '941 patent that's on
21 column eight, the claim recites a method for
22 accessing an application software program. And

1 how -- I'm not -- I'm not aware of this Claim 18
2 being directly at issue in this IPR proceeding.

3 However, this use of the term
4 "application software program" is consistent with
5 what I just identified involving Lotus 1-2-3 as an
6 example. So those are some of the ways that I can
7 see right now.

8 BY MR. CRUDO:

9 Q. Understood.

10 Did you complete your answer?

11 A. Yes. Those are some of the ways I can
12 see right now. Although, I haven't read every
13 program of the 941 in order to answer your
14 question, that was something I wasn't prepared for
15 in this deposition because I didn't offer an
16 opinion about it in my declaration.

17 Q. You would agree that operating systems
18 were well known as of 1998, right?

19 A. Yes, I do.

20 MR. GOSSE: Object to form.

21 THE WITNESS: I do agree that operating
22 systems generally were well known to people of

1 ordinary skill in the art in 1998.

2 BY MR. CRUDO:

3 Q. Okay. Now going back to that last
4 sentence in paragraph 129 in your declaration.
5 You refer to OS level.

6 Do you see that?

7 A. I do.

8 Q. What do you mean by "OS level"?

9 A. It's the beginning of paragraph 129. I
10 referred back to my paragraphs 83 through 84, 96
11 and 104 through 106.

12 And those paragraphs, for example in
13 paragraph 96, I quote the examiner of the '941
14 patent as having distinguished the asserted art
15 because it failed to teach "licensed programs at
16 the OS level interacting with a program
17 verification structure stored in the BIOS."

18 So my understanding of the term "OS
19 level" is consistent with what I cited in those
20 paragraphs I just named, and relates to programs
21 that are running that use the running operating
22 system services, as part of their operation.

1 I have not, in my declaration, attempted
2 to create a stand-alone definition of the OS
3 level. But that explanation that I just gave is
4 consistent with -- I believe with how I used the
5 term in my declaration, and with what I understand
6 these previous references by the examiner and
7 applicants and other parties to have meant.

8 Q. So I'd like to just unpack that to make
9 sure I understand.

10 A. Yes.

11 Q. OS level software is not itself the OS;
12 is that correct?

13 A. When I used the term "OS level" and when
14 I understood others to be using the term "OS
15 level" as cited in my report, I agree that they
16 were not referring to simply only the software
17 that is considered strictly part of the operating
18 system. So to that extent I agree.

19 Q. Does OS level software operate through
20 the operating system?

21 MR. GOSSE: Object to the form.

22 THE WITNESS: Yes, I would agree that as

1 I've used the term "OS level", and as I've
2 understood others to be using the term as cited in
3 my report, OS level software can be thought of as
4 running through the operating system.

5 I think that's consistent with what I've
6 previously explained as that the software in
7 question is relying on operating system services
8 and is doing so after the operating system is
9 running.

10 BY MR. CRUDO:

11 Q. How would one determine whether any
12 particular program is an OS level program?

13 A. Well, if you give me your program and the
14 environment in which it runs, then I would look to
15 see how that program is coupled to the environment
16 in order to determine whether -- when it runs, it
17 is running so in a manner that makes it OS level.
18 Consistent with my previous explanation of what OS
19 level connotes.

20 Q. You've referred previously to Lotus 1-2-3
21 referenced in the '941 patent.

22 Is Lotus 1-2-3 an OS level program?

1 A. As the term has been used in these
2 proceedings to date, and as I've used the term in
3 my declaration, I would consider Lotus 1-2-3 to be
4 an application program that does run at the OS
5 level, in that it relies on the OS services for
6 its operation, and those services which are
7 available because the operating system has
8 started.

9 Q. Does the OS level differ from BIOS
10 level?

11 A. As I would use those terms, yes, I would
12 consider them to be different in the context of
13 this proceeding because, as we've previously
14 discussed, one of the BIOS's operations, one of
15 its essential start-up operations, is to start the
16 operating system.

17 And so there is, in that sense, a moment
18 of transition when the operating system first
19 starts running, its services become available, and
20 then an application could rely on those services.
21 When they do so, they're relying on the OS level
22 services, not the BIOS configuration utility that

1 may launch when the computer is first turned on,
2 for example.

3 Q. And just to be clear, if the program runs
4 at the OS level, does that mean it's an OS level
5 program?

6 MR. GOSSE: Object to the form.

7 THE WITNESS: Yeah, I would want to look
8 more specifically at the phrasing used in
9 question. That sounds like there's something
10 special going on in the phrasing that I don't
11 understand. So it's difficult for me to
12 understand.

13 BY MR. CRUDO:

14 Q. Oh, sure.

15 So the last sentence of paragraph 129 of
16 your declaration, you refer to that an agent must
17 run at the OS level. So that's your terminology.

18 And we've been talking about OS level
19 programs generally. So I'm just trying to confirm
20 that they're one in the same?

21 A. I don't see my description of OS -- or I
22 don't see the last sentence of paragraph 129 and

1 the use of the term "OS level" as being
2 inconsistent with what we've just been discussing
3 about what constitutes OS level.

4 So, again, an application can run at the
5 OS level in that it relies on OS services. So
6 software that relies on the OS services that are
7 available because the operating system has
8 started. That is what I have understood as the
9 term "OS level" to mean. Both in my declaration
10 and in the materials cited.

11 Q. And if you turn to Figure 1 of the '941
12 patent that we were looking at.

13 A. Yes.

14 Q. There is an element there labeled 16,
15 license program.

16 Do you see that?

17 A. I do.

18 Q. Is that license program an OS level
19 program?

20 A. At column five, we were previously
21 discussing Lotus 1-2-3 and that section of column
22 five starting at line 25, the specification

1 identifies a license program 16, having license
2 record fields 13 through 15 appended thereto. And
3 then it describes what's in those license record
4 fields. That's where we came up with Lotus as an
5 example.

6 So I would understand this description of
7 Figure 1 to -- as we've previously discussed,
8 relates to software Lotus 1-2-3 that would run at
9 the OS level. There's much other software that
10 would run at the OS level as well, but Lotus 1-2-3
11 could be an example of that.

12 Q. Does the claimed agent run on the user's
13 computer?

14 MR. GOSSE: Object to the form.

15 THE WITNESS: I'm trying to think of the
16 best place in my declaration that might address
17 this.

18 I would say that the agent that is
19 claimed in the '941 patent claims does run on the
20 computer recited, for example, in Claim 1.

21 And one way we can see this is that in
22 the construction of using an agent to set up a

1 verification structure -- and I have that on page
2 28 and 29 of my declaration -- we have the agent
3 being a software program or a team so it has to
4 run on some computer.

5 And, additionally, it's clear that this
6 agent has to set up the verification structure in
7 the erasable, non-volatile memory of the BIOS.

8 So to that extent, yes, the agent must
9 run, at least in part, on the computer that is
10 recited in Claim 1.

11 BY MR. CRUDO:

12 Q. Can the agent run on a computer other
13 than the one recited in Claim 1?

14 A. It seems to me possible that the -- let
15 me rephrase.

16 Yes, the agent can run a computer other
17 than the computer cited in Claim 1. That is,
18 there is nothing that I see in Claim 1 that says
19 that the agent must not rely on any information
20 from elsewhere as part of its operation as an
21 agent.

22 However, if we think back to paragraph

1 129 of my declaration, my understanding is that in
2 the discussion of its agent and needing to run at
3 the OS level, that refers to the portion of the
4 agent that is running on the computer holding the
5 BIOS with the erasable, non-volatile memory as
6 opposed to any other computer.

7 Q. Is it your view that an agent can be
8 contributed across more than one computer?

9 A. As I sit here today, I can imagine
10 someone identifying an agent that is -- that has
11 running parts on more than one computer that
12 otherwise fulfills the requirement of agent in
13 Claim 1, because the portion of the agent running
14 on the computer with the erasable, non-volatile
15 memory area is running at the OS level.

16 So with that constraint, also that it be
17 a software program or routine, I don't see any
18 further constraints saying that you could not
19 characterize the agent as also running in some
20 sort of distributed fashion on another computer.

21 MR. GOSSE: I don't want to interrupt the
22 flow here too much, but we've been going now for

1 an hour and 45 minutes. I can see the court
2 reporter at least is tired, and I know my tail is
3 tired. Whenever you hit on a good opportunity,
4 maybe in a question or two.

5 MR. CRUDO: Yes, absolutely. I was going
6 to ask one more question, and we can go on a lunch
7 break, if that's okay with everybody.

8 BY MR. CRUDO:

9 Q. Dr. Martin, would you agree that OS level
10 programs, as you understand that term, were known
11 in the art as of 1998?

12 A. Yes, I do agree that in 1998, it was
13 known that programs could run that would rely on
14 operating system services that are available
15 because the operating system has been started.
16 And so in that sense, yes, OS level programs were
17 known at that time.

18 MR. CRUDO: Understood. Great.

19 I think now is a good time for lunch, if
20 that's okay with everybody?

21 THE WITNESS: Works for me.

22 THE STENOGRAPHER: I will take us off the

1 record. The time is 11:15 a.m.

2 (Off the record 11:15 a.m. - 12:00 p.m.)

3 THE STENOGRAPHER: We are on the record.

4 The time is 12:00 p.m.

5 BY MR. CRUDO:

6 Q. Welcome back, Dr. Martin.

7 A. Thank you.

8 Q. Before the break, we were discussing
9 whether an agent can be distributed across more
10 than one computer.

11 Do you recall that?

12 A. Yes, I do.

13 Q. And I want to make sure I understand your
14 answer. And please correct me if I'm wrong.

15 But you seem to suggest that, as long as
16 a portion of the agent is running on the computer
17 having erasable, non-volatile memory at the OS
18 level, that would qualify as an agent even if it
19 includes other portions on other computers; is
20 that an accurate characterization of your
21 testimony?

22 A. It's close, but I don't think it's quite

1 right.

2 Q. Okay.

3 A. Let me see how I can explain this.

4 First, I don't recall having specifically
5 considered the question of whether the agent
6 that's claimed is itself something that would be
7 present on multiple computers or part of a
8 distributed program.

9 However, when I look at the claim
10 language and the construction for agent, I see the
11 constraint that it be a software program or
12 routine. And I see that the further constraint
13 that it run at the OS level.

14 And I understand that to mean that at
15 least that portion of the agent must run at the OS
16 level on the device that contains the recited
17 erasable, non-volatile memory area of the BIOS of
18 the computer.

19 So it may be possible that the agent also
20 has separate components that are running on
21 different computers that it's in communication
22 with, such as by a distributed program. I don't

1 recall that specifically having been addressed
2 before.

3 And I realize in this discussion, this
4 may come down to a claim construction issue that
5 hasn't been squarely addressed in my recollection
6 anyway.

7 I also want to mention that Claim 3
8 appears to be relevant here too because Claim 3
9 recites a method that's dependent on Claim 1 that
10 says, "Wherein setting up a verification structure
11 further comprising the steps of establishing
12 between the computer and the bureau, a two-way
13 communications linkage", and there's many further
14 limitations of what happens over that
15 communications linkage.

16 That Claim 2 is providing a further
17 constraint on how the setting up of the
18 verification structure happens, and that is an
19 action of the agent.

20 So, certainly, Claim 3 indicates that the
21 setting up of the verification structure may
22 involve multiple computers.

1 And I see a way in which the agent may be
2 identified as comprising both of those parts or
3 maybe only part of that two-computer
4 communication. Anyway, I think this might come
5 down to a claim construction issue.

6 Q. You referenced Claim 3 of the '941 patent
7 which refers to a bureau?

8 A. Yes.

9 Q. Is that the License Authentication Bureau
10 recited in Claim 2?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: My reading of Claim 3 in
13 its mention of the bureau, I do understand it to
14 be referring to the Licensing Authentication
15 Bureau, which is described in Claim 2, which is
16 further dependent on Claim 1.

17 BY MR. CRUDO:

18 Q. What is the License Authentication
19 Bureau?

20 MR. GOSSE: Object to the form.

21 THE WITNESS: There's a description of it
22 in the '941 patent on -- at least on page three.

1 I also see it on page -- I'm sorry, column three.
2 And I also see it on column five. It's in column
3 four as well.

4 So there's a fairly long description of
5 the bureau and some of its capabilities. It's the
6 entity described in the patent along those lines.
7 We can go down to details, if you'd like.

8 BY MR. CRUDO:

9 Q. The License Authentication Bureau is
10 hardware, correct?

11 If it would help, I could direct you to
12 column three, line 42 of the 941 patent.

13 A. Yes, I see that.

14 However, I'm not aware of this term
15 having been construed or proposed for construction
16 in any of the cases so far. Maybe it has been.

17 This -- the bureau is described in the
18 patent primarily in terms of its behavior rather
19 than a description that I think is intended to say
20 that it is hardware rather than software or vice
21 versa for that matter.

22 So, I guess the short answer is, I'm not

1 positive based on the entirety of the disclosure
2 that one would consider in interpreting that term.

3 However, it stands to reason that any
4 such telecommunications accessible processor
5 having the behavior described and ascribed to the
6 bureau, would be running on a piece of hardware
7 that could be identified.

8 Q. When you just referred to
9 "telecommunications accessible processor", you
10 were quoting column three, line 42 of the '941
11 patent?

12 A. That's correct. That's a place it
13 appears.

14 Q. And a processor is hardware, correct?

15 A. I think a person in the ordinary skill of
16 the art would understand this particular use of
17 the processor of column three, line 42 that is
18 likely referring to hardware.

19 But, like I said, the term of the License
20 Authentication Bureau as a whole, whether that
21 refers specifically to hardware or not, I think is
22 something I don't have a firm opinion on today.

1 Q. Dr. Martin, could you please turn to
2 paragraph 174 of your declaration -- I'm sorry,
3 paragraph 171?

4 A. Yes, I do see that.

5 Q. And do you see here in the first sentence
6 of paragraph 171, you refer to the fact that
7 Hellman's disclosure "would not bring to mind a
8 pure software implementation"?

9 A. Yes, I do see that.

10 Q. What do you mean by "pure software
11 implementation"?

12 A. What I'm referring to here is, for
13 example, a general purpose computer, which could
14 accommodate any number of programs running on it,
15 would not have a record player as part of that
16 computer. That would be considered a separate
17 hardware device.

18 So I was simply pointing out the
19 distinction between a general purpose computer
20 that -- whose behavior really revolves around the
21 software in the general purpose computer, and a
22 record player, which is not generally part of a

1 general purpose computer.

2 Q. A general purpose computer has hardware,
3 correct?

4 A. Yes, a general purpose computer, as I am
5 referring to it here, has hardware consistent with
6 the general purpose nature of that computer.

7 Q. Can that hardware be included as part of
8 an agent?

9 MR. GOSSE: I'm going to object to the
10 form.

11 THE WITNESS: As I have used the term
12 agent in my analysis, and as I understand the
13 courts have considered agent, it is software -- a
14 software program or routine, among other
15 constraints.

16 And so from that standpoint, it doesn't
17 make sense to me to simply identify a piece of
18 hardware that's not known to be software, it's
19 simply hardware instead, and say that satisfies
20 the requirements of agent. That doesn't make
21 sense to me.

22 BY MR. CRUDO:

1 Q. But can an agent include a combination of
2 hardware and software?

3 MR. GOSSE: Object to the form.

4 THE WITNESS: Sitting here today, I guess
5 I would have difficulty looking at an
6 identification of some entity that includes
7 hardware and say that, yes, that entity, including
8 hardware, is a software program or routine. That
9 sounds difficult to me.

10 BY MR. CRUDO:

11 Q. But if the hardware were to run software,
12 would the hardware/software combination be an
13 agent?

14 MR. GOSSE: Object to the form.

15 MR. CRUDO: Let me rephrase that.

16 BY MR. CRUDO:

17 Q. If hardware were running software, can
18 the hardware/software combination be an agent?

19 MR. GOSSE: Object to the form.

20 THE WITNESS: Again, I'm having trouble
21 with the idea of looking at an entity that
22 explicitly includes hardware and saying that that

1 entity is software. Now -- yes, I don't see how
2 you can do that and, actually, be faithful to the
3 constraints of agent.

4 Now, agent is used in the claims. There
5 are other things going on in the claims. I don't
6 see why it would be required to do what you are
7 proposing. But, again, I don't see how something
8 that is known to be hardware could satisfy the
9 constraint of actually being software.

10 BY MR. CRUDO:

11 Q. So just to make sure I understand.

12 It sounds like, in your view, agent is OS
13 level software and no hardware; is that correct?

14 A. Well, the claimed agent must run at the
15 OS level, and it must be a software program or a
16 routine at least that -- that's the combination of
17 constraints that I applied in my analysis of what
18 can satisfy the term agent or not.

19 Q. Sorry. I'm not sure you answered my
20 question.

21 My question is, is agent limited to OS
22 level software such that it can include no

1 hardware?

2 MR. GOSSE: Object to the form.

3 THE WITNESS: I'm not sure how to answer
4 this differently than I have before.

5 The understanding of agent that I used
6 and that I've explained, does not have a negative
7 limitation in it saying, furthermore, it cannot be
8 hardware. However, the construction and
9 understanding that I used does say that it is
10 software.

11 So if you have an entity that is known to
12 be hardware and not software, then that is an
13 entity that I would not consider to be satisfying
14 those requirements of the term.

15 BY MR. CRUDO:

16 Q. But if you had an entity that is known to
17 be hardware and software, could that entity be an
18 agent?

19 MR. GOSSE: Object to the form. This has
20 been asked and answered three times now.

21 MR. CRUDO: I'm not sure that I'm getting
22 a straight answer, so I just want to make sure I

1 understand this.

2 MR. GOSSE: Maybe ask a different
3 question.

4 BY MR. CRUDO:

5 Q. Dr. Martin, are you able to answer that
6 question?

7 A. It's going to sound like a previous
8 answer that I gave. Namely, since you included
9 hardware in the description of the entity in
10 question, I would have difficulty looking at that
11 entity, seeing the hardware there, and saying that
12 hardware is software.

13 So that's why I would find it difficult
14 to conclude that the entity you've described
15 satisfies the constraints of agent.

16 Q. I'm sorry. There must be a
17 misunderstanding here.

18 I'm not asking you to assume that
19 hardware is software. Rather, I'm asking, if an
20 entity has both hardware and software, could that
21 entity be an agent?

22 MR. GOSSE: Object to the form.

1 THE WITNESS: I am having trouble
2 understanding this question any differently than
3 previous ones along these lines.

4 If the entity in question includes both
5 hardware and software, then it includes hardware,
6 and it would be difficult for me to conclude that
7 it meets the constraint as a whole of being a
8 software program or routine, which I understand to
9 be one of the constraints associated with agent
10 that I've applied in my analysis.

11 BY MR. CRUDO:

12 Q. So it sounds that from your answer, if an
13 entity contains any hardware at all, then it
14 cannot be an agent; is that correct?

15 MR. GOSSE: Object to the form.

16 THE WITNESS: Sitting here today, I don't
17 understand how an entity containing software can
18 meet the constraint of -- pardon me, I think I
19 better start over.

20 I don't understand, sitting here today,
21 how an entity can -- containing hardware can meet
22 the constraint of being software. And so to that

1 extent, I just don't see how a mixed
2 hardware/software entity could constitute an
3 agent.

4 BY MR. CRUDO:

5 Q. Understood.

6 A. However, a mixed software/hardware entity
7 does have a software component. And it may be
8 possible to analyze the software component without
9 the hardware, but it depends on the specific
10 circumstance.

11 Q. Setting aside the '941 patent just for a
12 moment, do you agree that as a general matter the
13 word "agent" could refer to software, hardware, or
14 the combination of the two?

15 A. This is something that I would need to
16 analyze separately and specifically. None of my
17 work into this matter has been in analyzing the
18 term "agent" outside of the context of the '941
19 patent, and so I'm not really prepared to do that
20 here.

21 There, of course, are many general world
22 uses of the term "agent" that have nothing to do

1 with the '941 patent. And so I'm very hesitant to
2 offer an opinion that is outside of this specific
3 context.

4 Q. In the context of computer science, and
5 again putting aside the '941 patent for the
6 moment, do you agree that as a general matter the
7 word "agent" could refer to software, hardware, or
8 the combination of the two?

9 MR. GOSSE: Object to the form.

10 THE WITNESS: As a general computer
11 science matter, I don't fully know the answer to
12 that question.

13 However, sitting here today, I am having
14 difficulty remembering usages of the word "agent"
15 that referred to hardware in the computer science
16 sphere generally.

17 There may be some, of course, but this is
18 not something that I researched in preparation for
19 my declaration or this deposition or that comes to
20 mind readily upon this question.

21 BY MR. CRUDO:

22 Q. In the context of computer science, and

1 again putting aside the '941 patent for a moment,
2 do you agree as a general matter of the word
3 "agent" can refer to non-OS level software?

4 A. I have two thoughts on that.

5 First, I'm having trouble thinking
6 specifically of an example of non-OS level
7 software that I would consider to be an agent
8 outside of the context of the '941 patent.

9 This is, again, not something I prepared
10 for in my deposition or declaration.

11 But furthermore, I feel very
12 uncomfortable attempting to do what I understand
13 to be the court's job of claim construction with
14 respect to that term simply because I know that
15 this has been argued and looked at repeatedly by
16 many -- by the parties in various cases and
17 various courts, and I want to respect that
18 procedure. I just don't feel that I can offer an
19 opinion on that specifically today.

20 Q. You offered an opinion as to the meaning
21 of the word "agent" in your declaration in these
22 proceedings, right?

1 A. I did discuss and offer opinions on
2 interpretation of the term "agent" as used in the
3 '941 patent, not generally as a computer science
4 matter outside the scope of the '941 patent and
5 the issues at play here.

6 Q. In your declaration, do you cite to any
7 claim language that you contend supports your
8 interpretation of the word "agent"?

9 A. I don't recall whether I do that in my
10 declaration or not.

11 Q. Okay. I would like to turn to Claim 1 of
12 the '941 patent, which again is Exhibit 1001.

13 Just let me know when you have that up?

14 A. I see it. Yes.

15 Q. And I'd like to focus on that second
16 claim limitation in the body of the claim
17 reciting, "Using an agent to set up a verification
18 structure in the erasable, non-volatile memory of
19 the BIOS, the verification structure accommodating
20 data that includes at least one license record."

21 Do you see that limitation?

22 A. I do.

1 Q. Does the claim specify what is performing
2 that claim's step?

3 A. I don't see a direct attribution to the
4 actor that is required to perform that claim step
5 in Claim 1, the using an agent to set up a
6 verification structure step. There may be an
7 indirect requirement that's not coming to mind,
8 but I don't see anything directly stated here.

9 Q. The actor or claim that performs that
10 claim step is not itself the agent; is that
11 correct?

12 MR. GOSSE: Object to the form.

13 THE WITNESS: That's a circumstance I've
14 never considered before. I don't know the answer
15 to that question.

16 BY MR. CRUDO:

17 Q. Well, can an agent use itself to set up a
18 verification structure?

19 MR. GOSSE: Object to the form.

20 THE WITNESS: Again, I don't know that's
21 a circumstance I've never considered in the
22 analysis I've undertaken here.

1 BY MR. CRUDO:

2 Q. Do you know --

3 A. I will say that it sounds like a somewhat
4 strange scenario, but otherwise, I don't recall
5 having considered it.

6 Q. Do you know if the claim or actor that
7 performs that claim's step is software, hardware,
8 or a combination of software and hardware?

9 MR. GOSSE: Object to the form.

10 THE WITNESS: I don't know the extent to
11 which that claim limitation of using an agent to
12 set up a verification structure includes
13 specifically hardware, software, or a combination
14 of hardware or software or an entity such as a
15 person or a company who may be performing this
16 step of the claim.

17 The way you phrased it, I'm hearing a
18 legal question about what kinds of entities are
19 bound by steps of method claims. And my focus was
20 really more on the technical aspects of these
21 limitations.

22 BY MR. CRUDO:

1 Q. And to be clear, I'm asking you about
2 your understanding of the claim limitation as a
3 person in the skill and the art.

4 MR. GOSSE: I'm sorry, is that a
5 question?

6 MR. CRUDO: It isn't, no.

7 MR. GOSSE: Then I won't object to it.

8 BY MR. CRUDO:

9 Q. Can other components or software be used
10 along with the agent to set up the verification
11 structure?

12 MR. GOSSE: Object to the form.

13 THE WITNESS: The way I read this
14 limitation in Claim 1 of using an agent to set up
15 a verification structure, it requires the use of
16 the agent to set up the verification structure as
17 described in the limitations. But it does not
18 exclude the possibility of using additional other
19 entities or operations in service of using an
20 agent to set up a verification structure.

21 BY MR. CRUDO:

22 Q. In your response, you referred to

1 entities for operations.

2 What do you mean by that?

3 A. I'm sorry, I don't remember the exact
4 phrase that I used where that appeared. So maybe
5 if you could rephrase the question?

6 Q. Sure.

7 In response you said, "The claims don't
8 preclude the possibility of using additional other
9 entities or operations in service of using an
10 agent to set up a verification structure."

11 And my question is, what did you mean by
12 "other entities or operations"?

13 A. What I meant was, while the limitation of
14 using an agent to set up a verification structure
15 does require, obviously, the use of the agent to
16 set up the verification structure.

17 There may be other entities that are also
18 involved in setting up the verification structure,
19 in addition to the agent being recited here.
20 Those would not necessarily have to be considered
21 part of the agent that is used to set up a
22 verification structure.

1 Q. You use the word "entities" again in that
2 response.

3 What would be an example of an entity?

4 A. I'm thinking, for example, of a -- one
5 thing that comes to mind is a subroutine that is
6 also software, but is simply not described as
7 being part of the agent that is identified as
8 satisfying this claim.

9 It's software that is used in the process
10 of setting up the verification structure but is
11 not identified as being in the agent itself.
12 That's an example of one of the entities that I
13 was referring to.

14 Q. Is it possible for hardware to be used to
15 set up a verification structure?

16 MR. GOSSE: Object to the form.

17 THE WITNESS: As I read this limitation,
18 I don't see anything precluding the use of
19 hardware in setting up the verification structure.

20 However, that hardware is not something
21 that would be part of the agent that is recited in
22 this limitation as well, along the lines of our

1 previous discussion about hardware, software, and
2 agents.

3 BY MR. CRUDO:

4 Q. Understood. Thank you.

5 Can you please turn to paragraph 128 of
6 your declaration?

7 A. I see it, yes.

8 Q. Now in this paragraph, you are quoting a
9 passage from the '941 patent specification column
10 one, line 65 to column two, line nine.

11 Do you see that?

12 A. I do.

13 Q. And that passage is describing the agent
14 setting up a verification structure using EEPROM
15 manipulation commands to store, add, and modify
16 items in the erasable, non-volatile memory of the
17 BIOS.

18 Do you see that?

19 A. Yes, I do see that portion of paragraph
20 128.

21 Q. That passage of the '941 patent doesn't
22 refer specifically to -- let me scratch that.

1 That passage of the '941 patent does not
2 refer specifically to OS level implementation,
3 correct?

4 MR. GOSSE: Object to the form.

5 THE WITNESS: I don't see this section
6 column one, line 65 through column two, line nine
7 specifically describing the OS level nature of an
8 agent.

9 I understand that is covered elsewhere in
10 the file history and the previous proceedings
11 related to the '941 patent.

12 BY MR. CRUDO:

13 Q. And this particular passage of the '941
14 patent, doesn't refer to the word "agent" at all,
15 right?

16 A. That's correct. I don't see the word
17 "agent" being referred to in the same passage of
18 the '941 patent.

19 It is described elsewhere in the
20 specification and named in the claims and in the
21 file history and in the previous proceedings.

22 Q. The '941 patent specification doesn't use

1 the word "agent" at all, correct?

2 A. I just searched the '941 patent, and I
3 only see the term "agent" being used in the claims
4 of the '941 patent and together to describe the
5 attorney agent forum on the cover page of the '941
6 patent, which I think is a different term of that
7 use word "agent".

8 Q. Other than the claims, the '941 patent
9 specification doesn't use the word "agent",
10 right?

11 A. That is my understanding. And based on
12 this brief search, I do think I recall the term
13 "agent" being used in the file history, but I do
14 not see it otherwise in the specification of the
15 '941 patent.

16 Q. And does the specification of the '941
17 patent refer to OS level software?

18 MR. GOSSE: Object to the form. We've
19 discussed this.

20 THE WITNESS: I'm looking.

21 My quick search of the patent, I haven't
22 seen that phrase OS level being used. As we've

1 previously discussed it, it is used in the file
2 history of the '941 patent and other proceedings
3 related to the '941.

4 BY MR. CRUDO:

5 Q. And turning back to paragraph 128 of your
6 declaration, and in particular to this phrase
7 E²PROM manipulation commands.

8 Do you see that?

9 A. Yes.

10 Q. What is the relationship between E²PROM
11 manipulation commands and agent?

12 A. I didn't catch the end of that
13 sentence.

14 Q. What is the relationship between E²PROM
15 manipulation commands and agent?

16 MR. GOSSE: Object to the form.

17 THE WITNESS: That's an awfully broad
18 question. And I'm not sure I can characterize a
19 single relationship between those two terms that
20 gets at what you're asking. I'm not sure I
21 understand what you're asking.

22 BY MR. CRUDO:

1 Q. Understood. Let me see if I can break it
2 down a little.

3 Are the E²PROM manipulation commands
4 referenced here in paragraph 128 of your
5 declaration themselves the agent?

6 A. I don't understand. Which agent are you
7 referring to?

8 Q. So in paragraph 128, first sentence you
9 say, "The claims recite agent in several examples
10 summarized above"?

11 A. Yes.

12 Q. But the term "agent" does not
13 otherwise -- I think the word appeared to be
14 omitted in the '941 patent. And then you say,
15 "The specification describes the agent's
16 prescribed actions."

17 Do you see that?

18 A. Yes.

19 Q. And one of the actions that you refer to
20 is using E²PROM manipulation commands to store,
21 add, and modify items in the erasable,
22 non-volatile memory of the BIOS.

1 Do you see that?

2 A. Yes, I do.

3 Q. So are you contending here that the agent
4 performs in the E²PROM manipulation command?

5 MR. GOSSE: Object to the form.

6 THE WITNESS: No. I would say more
7 specifically that setting up the verification
8 structure action, which is attributed to an agent
9 in Claim 1, is described in the patent in the
10 cited section column one, line 65 through column
11 two, line nine by in part using E²PROM
12 manipulation commands to store, add, and modify
13 items in the other erasable, non-volatile memory
14 of the BIOS.

15 BY MR. CRUDO:

16 Q. Do you contend that that passage of the
17 '941 patent specification supports your
18 interpretation of the word "agent"?

19 A. I would say that this passage, column
20 one, line 65 through column two, line nine of the
21 '941 patent, supports the understanding of the
22 term "agent" that I used in my analysis. And that

1 we've previously discussed, in that it's
2 consistent with how the term "agent" is used, for
3 example, in Claim 1.

4 Although, I'm not saying that this
5 passage alone covers every aspect of the term
6 "agent".

7 Q. In your view, does that passage describe
8 an OS level program?

9 A. Ultimately, I would say, yes, that this
10 passage column, line 65 through column two, line
11 nine, does describe an OS level activity.

12 Although, it doesn't describe it
13 directly, it is -- you can see this perhaps has
14 for shadowing that aspect of the agent's operation
15 that is made clear elsewhere in the disclosures
16 for the '941 patent, but I think it's discussing
17 the same thing.

18 Q. Is there a particular aspect of that
19 passage of the '941 patent that suggests OS level
20 software?

21 A. When I look at this passage, one at line
22 65 through two at line nine, I don't see a

1 specific mention of OS level software or an
2 indication -- a direct indication of that
3 constraint.

4 However, as I explained, this is an
5 introductory passage. And an ordinary person in
6 the prior skill of art would consider more
7 disclosure in '941 than simply this passage.

8 Q. What other closer in the '941 patent
9 would a person in the skill of the art consider as
10 supporting your interpretation of the word
11 "agent"?

12 MR. GOSSE: Object to the form.

13 THE WITNESS: As I sit here today, I
14 don't recall a clear identification specifically
15 of the agent running at the OS level in the
16 specification of the '941 patent.

17 However, my understanding is that in
18 determining the plain and ordinary meaning, a
19 person of ordinary skill in the art would also
20 look to the file history of the '941 patent. And
21 I understand that the file history does discuss
22 the relationship between the term "agent" and the

1 OS level.

2 In addition, I know that the federal
3 circuit has also decided issues related to the
4 '941 patent and specifically mentioned an
5 operating system.

6 So I think it might be misleading to
7 focus only on the specification of the '941 patent
8 for the source of the proper understanding of the
9 term.

10 BY MR. CRUDO:

11 Q. Understood.

12 Okay. I think we're just about done --
13 let me rephrase. I think we can go on break for
14 just a moment. But I do want to ask one more
15 question just to make sure that I've properly
16 understood your position as to what the word
17 "agent" means in the '941 patent.

18 In your view, the agent operates at the
19 OS level; is that correct?

20 A. As I have described it, I said the
21 claimed agent must run at the OS level.

22 Q. And the claimed agent must be capable of

1 writing to memory of the BIOS, correct?

2 A. Yes, that is a property required of the
3 agent as well.

4 Q. And the agent includes only software and
5 no hardware; is that correct?

6 MR. GOSSE: Object to the form.

7 THE WITNESS: As according to our
8 previous discussion on this, I don't see how an
9 entity that is hardware could be considered to be
10 software instead. So to that extent, I don't see
11 how such an entity could meet the constraints of
12 the term "agent".

13 BY MR. CRUDO:

14 Q. Are there any other constraints that you
15 were imposing on the term "agent" other than those
16 three that we just listed?

17 A. There are different ways to phrase those
18 constraints that are consistent with them. So
19 other than that, I'm not sure that I would insist
20 that any other description is -- would be any
21 different, as long as it's consistent with what
22 I've said.

1 Of course, the agent is required to do
2 specific things in Claim 1 and dependent claims of
3 '941 patent. So for satisfying those larger
4 limitations more will be required.

5 But for the term "agent" alone, as I sit
6 here today, that seems like a reasonable
7 description of the properties required as I've
8 used that term and analysis in my declaration.

9 MR. CRUDO: Understood. Thank you.

10 I think now would be a good time to
11 break.

12 Do you want to say 15 minutes?

13 THE WITNESS: Sure.

14 THE STENOGRAPHER: We are off the record.
15 The time is 12:59 p.m. Pacific.

16 (Off the record 12:59 p.m. - 1:15 p.m.)

17 THE STENOGRAPHER: We are on the record.
18 The time is 1:15 p.m.

19 BY MR. CRUDO:

20 Q. Dr. Martin, you referred repeatedly to
21 claim constructions from district court
22 proceedings.

1 Are you aware that those constructions
2 are not binding on the board?

3 (Zoom audio interruption.)

4 BY MR. CRUDO:

5 Q. Let me reframe the question.

6 Dr. Martin, you referred repeatedly to
7 claim constructions from different court
8 proceedings.

9 Are you aware that those constructions
10 are not binding on the board in these IPR
11 proceedings?

12 A. Generally, yes. My understanding is
13 consistent with what you said. I, for instance,
14 in paragraph 127 of my report in the last sentence
15 I state, "I understand that the PTAB is not
16 obligated to follow these decisions. But I
17 recognize them as further evidence of the
18 technical baseline of agent, the term that's being
19 discussed, otherwise in this paragraph.

20 Q. Okay. I'd like to focus on Hellman,
21 which is Exhibit 1004. And, specifically, I would
22 like to discuss Hellman's update unit 36.

1 Hellman's update unit 36 is part of its
2 base unit 12; is that correct?

3 A. Yes, that's my understanding. I'm
4 looking for an example at Figure 8 that depicts
5 update unit 36 and the large box is also labeled
6 12. So, yes, I would agree.

7 Q. In your view, is Hellman's update unit
8 hardware, software, or a combination of hardware
9 and software?

10 A. I'm looking at paragraph 169 of my report
11 where I state that "Hellman discloses that the
12 update unit 36 is a hardware unit that is
13 connected by wires to switches."

14 My recollection is that Hellman really
15 only ever characterizes it as a hardware-type
16 component, and does not give any hints that it
17 would have a software presence.

18 In the following paragraph 170, I
19 describe how Hellman teaches away from
20 implementing its intention in software. And then
21 I describe how the abstract of Hellman describes
22 the base unit as a "computer video game base unit,

1 record player, video recorder, or video disk
2 player", clearly indicating the base unit a
3 hardware device. The update unit is, of course,
4 contained within the base unit.

5 Q. The base unit can be a computer,
6 correct?

7 A. That is one of the possibilities listed
8 for the base unit in the abstract of Hellman.

9 Q. And would you agree that computers as of
10 1998 contained processors?

11 A. Yes, I would agree that in 1998 a
12 processor would be present in something described
13 as a computer.

14 Q. Do you agree that computers in 1998 ran
15 software?

16 A. Yes, in 1998 a computer is a device that
17 generally would be understood as running software;
18 although, it may be characterized as a firmware
19 form of software or comparable, but still there
20 would be software associated with the device.

21 Q. Can two components within a computer
22 communicate with each other without software?

1 MR. GOSSE: Object to the form.

2 THE WITNESS: I would say, yes, for two
3 components within a computer to communicate with
4 each other in a way that does not involve what I
5 would understand as software. And so such
6 components I would consider also to be hardware
7 components.

8 BY MR. CRUDO:

9 Q. You would agree that Hellman discloses
10 non-volatile memory, right?

11 A. I do see, for example, non-volatile
12 memory described as item 37 in Figure 8 of
13 Hellman.

14 Q. You would agree that Hellman discloses
15 that the non-volatile memory can be EEPROM,
16 right?

17 A. Yes, I see on column ten, at line --
18 starting at line one, a description of Hellman
19 indicating that non-volatile memory 37 could be an
20 EEPROM.

21 Q. Hellman discloses a single EEPROM,
22 right?

1 MR. GOSSE: Object to the form.

2 THE WITNESS: I guess, I don't know what
3 you mean by "single"?

4 Are you -- is the point of the question
5 that it identifies one and only one or simply that
6 it identifies an EEPROM?

7 BY MR. CRUDO:

8 Q. Well, let me see if I can reframe it.

9 Hellman refers to a couple types of
10 memory, including in the passage that you just
11 read, an EEPROM or a CMOS memory, right?

12 A. Yes, I see that.

13 Q. But it only refers to EEPROM a single
14 time; is that correct?

15 A. Well, if my search capability is working
16 correctly, I'll say that it only shows that one
17 reference to EEPROM.

18 Q. Is there any indication in Hellman that
19 Hellman's system contains more than one EEPROM?

20 A. I guess my recollection of Hellman is
21 that it's describing the possibility of there
22 being multiple base units, each of which may have

1 an EEPROM. So in that sense, Hellman does
2 disclose multiple EEPROMs.

3 However, I don't remember Hellman making
4 a point of the number of EEPROMs in its disclosure
5 or description of the system as a whole.

6 Q. Would you agree that Hellman's update
7 unit reads and writes data to its non-volatile
8 memory 37?

9 A. I think this passage in column ten,
10 starting at line eight is largely consistent with
11 that summary. It reads "The update unit 36 adds
12 M&N and applies a single representing M plus N to
13 the non-volatile memory 37. So that M plus N
14 replaces the old number M, and the non-volatile
15 member 37 has the number of uses of the software
16 package, which had been paid for."

17 So that sounds like a right operation.
18 Immediately before this passage, there is a
19 separate signal described that -- that is
20 described as an interrogatory signal that I think
21 could be fairly characterized as a read-type
22 operation to the non-volatile memory 37.

1 Q. And, actually, that passage that you were
2 reading from in Hellman, I believe, refers to
3 Figure 6 of Hellman; is that correct?

4 A. I do see a reference to Figure 6 at
5 column nine, line 29 that appears to begin this
6 larger section.

7 And my understanding is that the entity
8 labeled, for example 36 and 37, is done
9 essentially consistently throughout all the
10 figures of Hellman that is referring to the same
11 component.

12 Q. And why don't we walk through Figure 6 so
13 I have a better understanding of how you
14 understand Hellman to be operating.

15 Is it correct that Figure 6 shows what
16 happens when a user request for additional usages
17 of a software package is granted?

18 MR. GOSSE: Object to the form.

19 THE WITNESS: The description given of
20 Figure 6, in column five, at line 21 states that
21 "Figure 6 is a block diagram of a base unit during
22 verification of authorization of additional

1 software uses in a paid per use software control
2 system of Figure 1."

3 So I think that's pretty consistent with
4 what you said. Although, this description relates
5 more to the verification of the additional uses.

6 BY MR. CRUDO:

7 Q. Understood.

8 And if we look at Figure 6, there's a box
9 34 called "Crypto Check Unit".

10 Do you see that?

11 A. Yes I do.

12 Q. And there's an input A into that box.

13 Do you see that?

14 A. Yes, I do.

15 Q. What is A?

16 A. First, A is an authorization signal that
17 is identified on column nine, line 51. And my
18 recollection here is that there are a couple of
19 alternatives for the form of A that are suggested
20 in prior columns of Hellman.

21 Q. And what is the crypto check unit deal
22 within value A?

1 A. Well, I'm just reading from the patent
2 specification here. Column nine, line 54, it
3 states, "In a manner to be described shortly, the
4 cryptographic check unit 34 determines if the
5 authorization A is valid for the software package
6 17 being presented to the base unit 12 for the
7 current authorization request."

8 Q. Okay. And Figure 6 shows that the output
9 of the crypto check unit comprises N and H.

10 Do you see that?

11 A. Figure 6 does show an arrow labeled N, H
12 going from the crypto check unit to update unit
13 36.

14 Q. And what are values N and H?

15 A. I'm looking at column six, line 31 of the
16 Hellman patent that describes software package 21,
17 which is applied as an input signal to one-way
18 hash function generator 22 to produce an output
19 signal H.

20 This output signal H is used as an
21 "abbreviation" or name for describing software
22 package 21. So that is an H, such as what is

1 depicted in Figure 6.

2 You also asked about N, I believe,
3 correct?

4 Q. Yes.

5 A. I'm looking at column five, line 65,
6 which states that N is the number of additional
7 uses of software requested.

8 Q. Okay. And Figure 6 also shows the update
9 unit sending a signal with the age value to
10 non-volatile memory 37.

11 Do you see that?

12 A. I do.

13 Q. What is that H value used to do in the
14 non-volatile memory 37?

15 A. I'm looking at column ten now starting at
16 line 38, which states "The signal H is transmitted
17 to update unit 36 to indicate which software
18 package is being used. Update unit 36 uses H as
19 an address to non-volatile memory 37, which
20 responds with a signal representing M, the number
21 of uses of package 17, which are still available."

22 Q. And then the update unit then adds M to N

1 and stores that value back into non-volatile
2 memory of 37; is that correct?

3 MR. GOSSE: Object to the form.

4 THE WITNESS: I'll just point out that
5 when I previously cited at line 33 of column ten,
6 that was relating more towards use of the software
7 rather than an update of the number of authorized
8 usages.

9 But the overall pattern of representing
10 the value H to the non-volatile memory and
11 receiving M in response, also happens during the
12 authorization increase phase that we're discussing
13 here in Figure 6.

14 With that in mind, during the steps being
15 described as Figure 6, after the update unit
16 receives the value M from the non-volatile memory,
17 it describes the number of remaining software uses
18 on the device.

19 The update unit applies a signal
20 representing M plus N to the non-volatile memory
21 37 so that M plus N replaces the old number M in
22 the non-volatile memory.

1 BY MR. CRUDO:

2 Q. Would Hellman's update unit 36 be able to
3 perform the functions that you just articulated
4 without software?

5 A. As far as I understand those functions,
6 yes, I believe so. A hardware unit could receive
7 quantities such as N and H. It could pass them
8 along to a non-volatile memory. It could perform
9 an addition, and it could return such a value as
10 an instruction to non-volatile memory 37 to write
11 that value being implemented as a hardware unit.

12 Q. And update unit 36, could do all that
13 without running any software?

14 A. The way I'm imaging this right now, it
15 does not appear to be required to have a software
16 program, something that I would describe as
17 software, within update unit 36 to accomplish
18 those relatively straightforward operations.

19 Q. Is it possible for the M value to be
20 equal to zero?

21 A. Hellman does teach a scenario where M
22 might be equal to zero. This is described in

1 column ten at line 50. And this relates now to
2 the base unit's behavior during use of a software
3 package rather than in verification of an
4 authorization for increased usage.

5 Q. If M is equal to zero, then value M plus
6 N will just be equal to N, right?

7 A. As a general matter, if M is equal to
8 zero, then I would say mathematically, M plus N is
9 equal to N.

10 Q. And the scenario where M is equal to zero
11 indicates that the user is not currently
12 authorized to use the software package; is that
13 correct?

14 A. That sounds basically correct. This is
15 described, again, at column ten, line 50 where
16 it's characterized as the user being prevented
17 from using software for which he does not have
18 current authorized use.

19 Q. Earlier you referenced Figure 8 of
20 Hellman, and I just want to very briefly go
21 through that figure.

22 And this is the situation as you noted

1 where the user is using the licensed package; is
2 that correct?

3 A. Yes, column five, line 28 describes
4 Figure 8 as a block diagram of a base unit during
5 use of software and a paid per use software
6 control system of Figure 1.

7 Q. And in that case, the update unit will
8 send a signal H to non-volatile memory just as
9 before as we were discussing in Figure 6, right?

10 MR. GOSSE: Object to the form.

11 THE WITNESS: The scenario is a little
12 different in Figure 8 than in Figure 6, but I
13 agree that the step of presenting H to the
14 non-volatile memory 37 results in the delivery of
15 M back to the update unit in both cases.

16 BY MR. CRUDO:

17 Q. And after the update unit receives M, it
18 decrements M by one and sends that back to the
19 non-volatile memory 37; is that correct?

20 A. If M is greater than zero as described at
21 line 44 of column ten, yes, ultimately, it would
22 decrement M to minus one and store this new value

1 in address H in non-volatile memory 37.

2 Q. Does Hellman disclose any embodiment in
3 which the number of uses would not need to be
4 decremented?

5 A. In line 55, starting column ten, it does
6 describe a variant in which one value of M could
7 be used to represent infinity.

8 And this would be understood as a
9 scenario in which the user is authorized to an
10 unlimited or infinite number of uses.

11 Q. And in that case, the M value would not
12 need to be decremented; is that correct?

13 A. In this case, where Hellman only has this
14 property of selling or authorizing uses of
15 software for an infinite number of uses, then
16 there would be no need for the functionality of
17 the update unit to decrement the number of
18 remaining uses.

19 Q. Okay. I would like to turn to paragraph
20 170 of your declaration -- excuse me, paragraph
21 171 on page 103 of your declaration.

22 A. I see it, yes.

1 Q. In there you are referring to a record
2 player as a hardware device.

3 Do you see that?

4 A. I do.

5 Q. And a record player is referenced in
6 Hellman, right?

7 A. That's my recollection, yes.

8 Q. And we've referenced this sentence
9 earlier today, but you say that that disclosure
10 would not bring to mind a pure software
11 implementation, right?

12 A. That's correct.

13 Q. You agree that Hellman's system can also
14 apply to computers more generally, right?

15 A. I don't know exactly what you mean.

16 Q. Hellman's system is not limited to record
17 players; is that correct?

18 A. I would say that that's correct. Hellman
19 does not require that there always be a record
20 player present as part of the system. It provides
21 that as an alternative that is naturally
22 accommodated in the structure that Hellman

1 describes.

2 Q. And if you turn to paragraph 174 of your
3 declaration on page 105.

4 A. Yes.

5 Q. Here you are discussing whether a person
6 of skill in the art would have implemented Hellman
7 in software form; is that right?

8 A. Roughly speaking, yes, I'm considering
9 what happens in the scenario, as I understood it
10 being described from Dr. Wolfe, as one in which
11 the Hellman system was not realized using the
12 hardware components that it seems to describe.
13 But rather was reimagined as being implemented in
14 software together with adaptation that he applies
15 due to the addition of Schneck to the combination
16 and Chou to the combination.

17 Q. Okay. Got it.

18 In this paragraph, you refer to the fact
19 that a person with the skill in the art would have
20 to grapple.

21 With "The question of how a software
22 solution could isolate and protect itself from the

1 various software packages whose authorization is
2 at issue."

3 Do you see that?

4 A. I do.

5 Q. And what do you mean by this statement?

6 A. I'm referring to the problem of having a
7 software system that includes both the
8 authorization and authentication and enforcement
9 mechanisms for running a different set of software
10 while also allowing that different set of software
11 to run on the same system that is performing those
12 security functions. And I describe this by way of
13 example in the following paragraph starting in
14 175.

15 Q. And what is the problem that you identify
16 in paragraphs 174 and 175?

17 A. I am describing how it can be difficult
18 to properly engineer a system that has a layer of
19 software that is used to authenticate and
20 authorize and enforce constraints on another layer
21 of software that comes from an outside source,
22 where all or both of those pieces of software have

1 access to the same components as would generally
2 be expected in a general purpose computing system
3 or more, specifically, in the system that I
4 understood Dr. Wolfe to be describing as his
5 interpretation of the combination between Hellman,
6 Chou, and Schneck.

7 Q. In your response, you said that it can be
8 difficult to properly engineer such a system, but
9 is it possible to engineer such a system?

10 A. I would say it is not possible to
11 properly engineer a system without -- along those
12 lines without considering the risks of the aspect
13 of the system wherein the software that's
14 performing the enforcement mechanism is running in
15 the same manner as the software that is being
16 enforced on the system.

17 Certainly, people had undertaken an
18 engineering effort along those lines in the past.
19 However, that is an effort that needs specific
20 device and implementation that is not something
21 that I perceived in the description of the system
22 from Dr. Wolfe that deviates from the disclosure

1 in Hellman, as I understood it.

2 Q. Are you aware of any modifications that a
3 person of the skill in the art could make to
4 alleviate the risk that you've identified in
5 paragraphs 174 and 175 of your declaration?

6 A. It's difficult to answer that question.
7 I didn't understand it to be in the space of my
8 opinions to try to adapt a system that Dr. Wolfe
9 presented in a way that would be -- require
10 further changes, and may turn out to alleviate
11 some of the issues that I describe as being
12 problematic there.

13 I expect that there is a large universe
14 of issues that could arise. And certainly
15 engineering techniques could be undertaken to
16 attempt to address some of them, but I did not
17 understand that as being my role to undertake.

18 Q. Sitting here today though, are you able
19 to identify any modifications that a person in the
20 skill and art would take to alleviate the risks
21 that you've referenced?

22 A. When I think of the system that Dr. Wolfe

1 has described, it's difficult for me to envision
2 it in sufficient detail that I would know exactly
3 where to begin in order to make changes to that
4 system in order to make it resilient against the
5 sort of threats that I'm describing in these
6 paragraphs.

7 For example, Dr. Wolfe said nothing about
8 the memory protection architecture of a system
9 that would be appropriate or required. I guess
10 one of the things that I would wonder about is,
11 well, what is the memory protection architecture
12 of this system. That might be a starting point
13 but that didn't tell me what the solution is.

14 Q. And if you could just look at Figure 6 of
15 Hellman one more time. I apologize for going back
16 and forth.

17 A. I do see it.

18 Q. We've described several functions that
19 update unit 36 performs.

20 Specifically, reading and writing to
21 non-volatile memory 37, right?

22 A. I think we have covered instances both of

1 reading and writing to the non-volatile memory
2 37.

3 Q. Are any of those -- let me withdraw that.

4 Are there any such functions that we've
5 described that could not be achieved using a
6 software routine running on the base unit?

7 MR. GOSSE: Object to the form.

8 THE WITNESS: It depends on the
9 architecture of the base unit where the update
10 unit is running as software. I haven't seen that
11 specified anywhere.

12 BY MR. CRUDO:

13 Q. But there would be nothing that would
14 preclude software from performing those functions,
15 right?

16 A. Well, I don't see exactly how this is
17 directly related to Figure 6. As a general
18 matter, I can imagine software that is -- that
19 when run would be able to read and write values
20 from a non-volatile memory. Perhaps that answers
21 your question.

22 Q. It does. Thank you.

1 And in Figure 6, do you see at the top of
2 the figure there's a box labeled, "Software 17"?

3 A. I do.

4 Q. Is software 17 an OS level program?

5 A. I don't recall the Hellman patent ever
6 attempting to distinguish between an OS level
7 program and, for example, a BIOS level program or
8 any other level of program, simply because that
9 does not seem to be relevant to the aims of the
10 Hellman disclosure.

11 But even so, I don't understand Hellman's
12 description of the software to necessarily even be
13 a program. It's a little unusual.

14 But, for example, at the bottom of column
15 ten, Hellman explains that software player 42 will
16 vary from application to application.

17 For example, if the software is recorded
18 music, then software player 42 would be a record
19 player. So in that case, it's not clear that the
20 music would even be a computer program.

21 Q. But it -- the licensed software 17 would
22 be an OS level program, right?

1 A. I don't see Hellman taking a position on
2 whether it's an OS level or any other level
3 program, because that does not appear to be
4 relevant to Hellman's aims.

5 Hellman's role has to do with authorizing
6 use of software generally. And it, to my
7 knowledge, makes no distinction between the level
8 of software that is appropriate for such
9 authorization.

10 Q. In your response, you referred to an OS
11 level or any other level program.

12 What do you mean by "any other level
13 program"?

14 A. Well, for example, we've discussed the
15 difference between BIOS level and OS level. There
16 may be furthermore precise characterizations of
17 levels of software that are appropriate to a task
18 at hand. I'm not aware of any that are relevant
19 to the analysis issues in the '941 patent.

20 Q. Do you have any examples of other types
21 of levels?

22 MR. GOSSE: Object to the form.

1 THE WITNESS: You're asking just
2 generally, can software be described at any other
3 level than OS or BIOS?

4 BY MR. CRUDO:

5 Q. Yes, and whether you have examples of
6 those other types of levels?

7 A. One thing that comes to mind is that
8 often software might be characterized as being
9 high-level or a low-level software. That
10 typically refers to a general sense of the amount
11 of leverage the software has, the amount of other
12 software, or components that it controls.

13 So high-level software may be something
14 that is understood as controlling many other
15 pieces of software. And low-level software is
16 something that might be understood as having a
17 more narrow detailed role. That's one example
18 that comes to mind.

19 MR. CRUDO: Okay. Dr. Martin, I'm happy
20 to take a break, if you would like, or we can --

21 THE WITNESS: That would suit me. Thank
22 you.

1 MR. CRUDO: We could do another ten
2 minute break.

3 MR. CRUDO: All right. Thank you.

4 THE STENOGRAPHER: We're off the record.
5 2:08 p.m. Pacific

6 (Off the record 2:08 p.m. - 2:20 p.m.)

7 THE STENOGRAPHER: We are on the record.
8 It is 2:20 p.m.

9 THE WITNESS: If I could add something
10 about a conversation we had previously today. I
11 don't want to overlook this. You had asked me
12 about my other engagements with Ancora. And I'm
13 pretty sure I did not recall engagements for
14 infringement litigation between Ancora and
15 Nintendo, Roku, and VIZIO.

16 So I have been engaged in those cases as
17 well. I just wanted to add that correction to the
18 record

19 BY MR. CRUDO:

20 Q. Thank you for that correction.

21 And when you're referring to engagements
22 for infringement litigation, are you referring to

1 district court litigation?

2 A. That's correct. Yes, sir.

3 And I'm not sure whether it's a
4 correction or not. I don't remember exactly what
5 you asked me. But it seems like this is something
6 that you would be asking about generally.

7 Q. Thank you. Yeah, I appreciate that.

8 A. You're welcome.

9 Q. And in the Nintendo, Roku, and VIZIO
10 cases, were you deposed?

11 A. No, sir.

12 Q. Did you admit expert reports in those
13 cases?

14 A. I have not submitted reports in those
15 cases, no.

16 Q. Thank you.

17 A. You're welcome.

18 Q. Dr. Martin, could you please turn to
19 paragraph 88 of your declaration?

20 A. I see it, yes.

21 Q. In this paragraph, you refer to a white
22 paper titled "Beeble hardware stamping

1 technology."

2 Do you see that?

3 A. I do. Yes, sir.

4 Q. Did you review that document before you
5 submitted your declaration?

6 A. I do recall doing so, yes.

7 Q. Do you -- well, why don't we pull out
8 that document. It's in the file history, which is
9 marked as Exhibit 2011.

10 A. Yes.

11 Q. Do you have an electronic version of that
12 document?

13 A. Correct.

14 Q. Okay.

15 A. If you could help me with a page number
16 -- well, I guess my report cites to the page,
17 doesn't it?

18 Q. Yes. And I can walk you through it.
19 Just let me know once you have the exhibit up.

20 A. I do have the exhibit open.

21 Q. Okay. And the first page of that exhibit
22 is labeled "ANC 8" in the bottom right-hand

1 corner.

2 Do you see that?

3 A. I do.

4 Q. Do you recognize this document as the
5 file history for the '941 patent?

6 A. It does appear to be so.

7 Q. Okay. If you would please turn to page
8 ANC 178.

9 A. Yes, I do see that page.

10 It appears on the PDF page number 171.

11 But, yes, I have ANC 178, the title page for the
12 Beeble paper.

13 Q. Is this the paper that you were citing in
14 paragraph 88 of your declaration?

15 A. Yes, it does appear to be so.

16 Q. And on page 178, the paper says on its
17 face, that it was published September 2021.

18 Do you see that?

19 A. Yes, sir.

20 Q. And if you look at the next page of the
21 footer, there's a confidential designation there
22 on page 179.

1 Do you see that?

2 A. I do.

3 Q. Do you know if this paper was publicly
4 available as of 1998?

5 MR. GOSSE: Objection to the form.

6 THE WITNESS: As I sit here today, I
7 can't recall whether I have known that or not. I
8 certainly don't know it today.

9 BY MR. CRUDO:

10 Q. And can you please turn to page 184 of
11 that document?

12 A. ANC 184?

13 Q. Yes, that's correct. Yes.

14 A. I see it, yes.

15 Q. There's a section here titled "EEPROM
16 writing".

17 Do you see that?

18 A. Yes, sir.

19 Q. And under that heading, the paper says
20 "Beeble will attempt to write license data by
21 utilizing the DMI function 52h, which is designed
22 to write DMI structures to EEPROM."

1 Do you see that?

2 A. Yes, sir.

3 Q. What do you understand the reference to
4 Beeble to mean?

5 MR. GOSSE: Object to the form.

6 THE WITNESS: I understand the term
7 Beeble in that sentence to be referring to the
8 Beeble Company's product that's being described in
9 this white paper.

10 BY MR. CRUDO:

11 Q. Is that product software?

12 A. I'm looking at ANC 185 at the bottom.
13 It's in the summary section under the bullet. It
14 says, "Low cost". There's a description that
15 says, "Beeble is a software product with no
16 production costs associated with it."

17 Certainly, the Beeble product, as I
18 understand it from this white paper, involves
19 software. It's also described more generally at
20 the top of this page in the first paragraph
21 following "summary", as a next generation software
22 licensing technology.

1 So it for sure includes a significant
2 software component. It may include some other
3 components typical with that of a software vendor
4 such as documentation, such as licenses for us of
5 it, and so on.

6 Q. And the sentence that I just read on page
7 184 refers to writing DMI structures to EEPROM,
8 right?

9 A. It does include that phrase, "write DMI
10 structures to EEPROM", yes.

11 Q. What do you understand that phrase to
12 mean?

13 A. First of all, DMI is the Desktop
14 Management Interface. And what's being referred
15 to as DMI function 52, if I recall correctly, is a
16 function that would allow for the storage of a
17 structure specified by the user of this function
18 into the EEPROM memory associated with the DMI
19 system and this function 52h.

20 Q. Is DMI function 52h an EEPROM
21 manipulation command?

22 A. As a high-level description of 52h, I

1 probably would not describe it as an EEPROM
2 manipulation command as such. However, my
3 recollection of the use of DMI function 52h does
4 provide the ability to manipulate EEPROM memory.

5 Q. Is DMI function 52h called from a
6 software program running at the OS level?

7 A. I'm looking at ANC 182. It's the
8 previous page -- two previous pages, I guess,
9 which shows, for example, the -- what it describes
10 as Figure 3 to be a licensed manager. And it
11 describes it above that figure as a Windows
12 control panel applet that allows to self-manage
13 Beeble licenses installed on their machine.

14 And at the bottom of the same page it
15 says "The control panel applet pictured above is
16 responsible for installation and removal of Beeble
17 licenses."

18 My understanding of this illustration and
19 explanation as a Windows control applet is that
20 this license manager applet is running at the OS
21 level because it's running as software that is
22 using Windows services after Windows has been

1 booted. And the description here also says that
2 it's responsible for installation and removal of
3 Beeble licenses.

4 Combining that with the ANC 184
5 discussion that we just had, I understand this as
6 indicating that the license manager, which is
7 running at the OS level, would use the DMI
8 function 52h as described at the beginning of this
9 paragraph.

10 And then the paragraph also describes
11 another technique to accomplish the writing of the
12 data under different circumstances.

13 Q. And when you refer to another technique
14 to accomplish the writing of data, are you
15 referring to this statement on page 184 of the
16 paper that Beeble will write to an EEPROM
17 generically?

18 A. It is part of that disclosure in here,
19 yes. It says, "If BIOS manufacturers do not
20 support DMI function 52h, then Beeble will write
21 to an EEPROM generically."

22 And then it describes a driver that it

1 uses with a library of different EEPROM chips and
2 proper instructions to accomplish that.

3 Q. Understood.

4 And also on page 184 of the paper,
5 there's a reference to Footnote 2 immediately
6 following the phrase, "DMI function 52h".

7 Do you see that?

8 A. I do. Yes.

9 Q. And there's a citation in Footnote 2 to
10 SM BIOS reference specifications version 2.2, 16
11 March 1998, page 11.

12 Do you see that?

13 A. I do.

14 Q. Are you familiar with the specifications
15 referenced in Footnote 2?

16 A. Generally, I am. I'm familiar with
17 function 52h. At least I have reviewed the SM
18 BIOS specification for it before.

19 I don't recall whether I reviewed
20 precisely this version 2.2 16 March 1998 or not.
21 However, I do think I've reviewed more than one
22 version of it, in which I saw the descriptions

1 were similar for the purposes of my analysis.

2 Q. Did you review the SM BIOS reference
3 specifications in connection with this case?

4 A. I don't recall whether I looked at them
5 in connection with this case. That is, these two
6 IPRs or not. I may have done so briefly, but I
7 can't clearly remember.

8 Q. Is there a reason that you don't cite to
9 the SM BIOS reference specifications in your
10 declaration?

11 MR. GOSSE: Object to the form.

12 THE WITNESS: As I sit here, I can't
13 remember any thought process that I had that led
14 to a decision whether to further cite to a
15 citation of something within the file history
16 here.

17 I just -- I don't remember there being a
18 decision process for that. It could have gone
19 either way.

20 BY MR. CRUDO:

21 Q. Is it fair to say that DMI function 52h
22 was known as of March 1998?

1 MR. GOSSE: Object to the form.

2 THE WITNESS: Well, assuming that this
3 footnote on ANC 184 has an accurate date
4 associated with this publication of the SM BIOS
5 reference specifications, then I would also expect
6 that the documentation being referred to here was
7 available at that time in 1998.

8 BY MR. CRUDO:

9 Q. Is it fair to say as a general matter,
10 writing data structures to EEPROM was known as of
11 March 1998?

12 A. Generally speaking, yes, it's fair to say
13 that it was known to read and write from EEPROM
14 generally.

15 Q. Okay. I think we're just about ready to
16 wrap up. We'll need 15 minutes to consult with
17 Nintendo's counsel, then we can go back on record.

18 THE WITNESS: Okay. I'll be back in 15
19 minutes.

20 MR. CRUDO: Thank you very much.

21 THE STENOGRAPHER: We're off the record.

22 The time is 2:38 p.m.

1 (Off the record 2:38 p.m. - 2:54 p.m.)

2 THE STENOGRAPHER: We are on the record.

3 The time is 2:54 p.m.

4 BY MR. CANAVERA:

5 Q. Dr. Martin, during any of the breaks that
6 we took today, did you speak to your counsel?

7 A. No, sir. I didn't.

8 MR. CRUDO: Petitioners Roku and VIZIO
9 don't have any further questions. So I will pass
10 it off to counsel for Ancora and Nintendo.

11 MR. CANAVERA: This is Kyle Canavera for
12 Nintendo. We do not have any separate
13 questioning.

14 MR. GOSSE: I may have just one or two
15 questions on redirect.

16

17 EXAMINATION

18 BY MR. GOSSEE:

19 Q. Dr. Martin, if you could turn back to
20 Exhibit 2018 from the 1406 matter that you've been
21 looking at today?

22 A. Yes.

1 Q. And do you mind skipping over to page 135
2 of that exhibit?

3 A. I do see page 135, yes.

4 Q. What's listed on page 135?

5 A. It's page three of the CV that I provided
6 in connection with this proceeding.

7 Q. And what is this category that begins
8 "Representative Testifying Expert Engagements"?

9 A. This is one of the professional
10 activities that I list in my CV. And as described
11 here, I list those expert -- testifying expert
12 engagements that I find to be representative
13 generally of the work that I do in this line of my
14 activities.

15 Q. And I think you testified earlier that
16 there may be a number of engagements that you have
17 not listed here?

18 A. That's correct.

19 Q. Do you have any sense for the number of
20 engagements that are not listed here?

21 A. When I think about my engagements, I
22 imagine that there's somewhere between a dozen and

1 two dozen, roughly, engagements that I have
2 undertaken that are not listed here.

3 Q. Okay. For instance, in the years 2018 --
4 well, 2019 and 2021, were you engaged in
5 professionally as a testifying expert witness?

6 A. Yes, sir. I was.

7 Q. And were some of the matters that you
8 were engaged in unrelated to Ancora?

9 A. Yes, sir. They were.

10 Q. And those were not listed here in your
11 representative matters, for example?

12 A. That is correct.

13 Q. Okay. What about the category that
14 begins numeral four, "Representative Consulting
15 Expert Engagements", how does that category differ
16 from the testifying expert engagements above?

17 A. The consulting expert engagements
18 category differs from the testifying expert
19 engagements representative category, simply in
20 that the cases listed here under item four
21 "Representative Consulting Expert Engagements",
22 are engagements where I was involved and performed

1 work on behalf of these engagements listed here.
2 But not in a testifying role, so I did not file a
3 declaration or an expert report or testify in
4 deposition, for example.

5 Q. Okay. Would the number of your
6 consulting expert engagements generally be greater
7 than or about the same as you're testifying expert
8 engagements?

9 A. I would generally say, if we are
10 distinguishing consulting between consulting and
11 testifying, then, as I sit here today, it seems to
12 me that it's about equal in terms of the number of
13 cases that I recall having provided testimony for
14 versus the number of cases that I did not provide
15 testimony or declaration or report for. But I'm
16 not super confident about the comparative level
17 between consulting versus testifying. That's not
18 something I specifically prepared.

19 Q. Sure.

20 In the context of your representative
21 consulting expert engagements, would there be a
22 similar number of engagements that are not shown

1 in this CV?

2 MR. CRUDO: Objection. Form.

3 MR. GOSSE: Strike that.

4 BY MR. GOSSE:

5 Q. With respect to category four, your
6 representative consulting engagement agreements,
7 do you have a sense for how many of your
8 engagements are not listed in the CV as shown
9 here?

10 A. It's difficult to say with any precision.
11 There are definitely several or more engagements
12 that I'm recalling as being more consulting
13 engagements than testifying engagements that are
14 not listed here.

15 But the -- my recollection simply isn't
16 as good with those compared to the expert
17 engagements where I actually testify, file a
18 report, or, you know, write a declaration. Those
19 are coming to mind easier at the moment.

20 Q. Sure.

21 In short, is it unusual in any way that
22 Ancora and your engagements with Ancora are not

1 listed in either category number three or category
2 number four on your CV?

3 MR. CRUDO: Objection. Leading.

4 THE WITNESS: According to my practice,
5 no, it's not unusual at all that my CV would not
6 include an engagement or some other engagement.

7 I can also recall having provided a CV
8 with the similar section 3 and 4 in other matters
9 this year that had nothing to do with Ancora.

10 And this is just how I manage my CV, as
11 my representation of the kind of work that I do.
12 Not every detail about every discrete item of work
13 that I've done.

14 MR. GOSSE: Okay. I don't have any
15 further questions for now.

16 Thank you, Dr. Martin.

17 THE WITNESS: You're welcome.

18 MR. CRUDO: Petitioners Roku and VIZIO
19 have no further questions. So I'll pass it to
20 Nintendo's counsel.

21 MR. CANAVERA: No further questions from
22 Nintendo.

1 THE STENOGRAPHER: Off the record at
2 p.m. ***

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22 CERTIFICATE OF STENOGRAPHIC REPORTER

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I, CARA M. FOSTER, a Stenographic
Certified Shorthand Reporter and Registered
Professional Reporter, hereby certify that the
witness in the foregoing deposition:

That DAVID MARTIN, PhD, the witness whose
deposition is hereinbefore set forth, was duly
sworn by me before the commencement of such
deposition and that such deposition was taken
before me and is a true record of the testimony
given by such witness.

I further certify that the deposition of
DAVID MARTIN, PhD, occurred remotely via
videoconference on Thursday, July 14, 2022,
commencing at 8:01 a.m. to 3:04 p.m.

I further certify that I am not related
to any of the parties to this action by blood or
marriage, I am not employed by or an attorney to
any of the parties to this action, and that I am

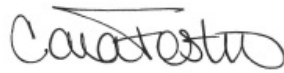
1 in no way interested, financially or otherwise, in
2 the outcome of this matter.

3

4 IN WITNESS WHEREOF, I have hereunto set my hand
5 this 19th day of July, 2022.

6

7

A handwritten signature in cursive script, appearing to read "Cara M. Foster".

8

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Cara M. Foster, CSR No. 11973 RPR

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Conducted on July 14, 2022

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Conducted on July 14, 2022

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