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Transcript of David Martin, Ph.D.

Date: July 14, 2022

Case: Nintendo Co., Ltd., et al. -v- Ancora Technologies, Inc. (PTAB)

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Conducted on July 14, 2022

1 (1 to 4)

<p style="text-align: center;">1</p> <p>1 UNITED STATES PATENT AND TRADEMARK OFFICE</p> <p>2 -----</p> <p>3 BEFORE THE PATENT TRIAL AND APPEAL BOARD</p> <p>4 -----</p> <p>5 NINTENDO CO., LTD., and</p> <p>6 NINTENDO OF AMERICA, INC.,</p> <p>7 Petitioners,</p> <p>8 v.</p> <p>9 ANCORA TECHNOLOGIES, INC.,</p> <p>10 Patent Owner,</p> <p>11 -----</p> <p>12 Case No. IPR2021-01338</p> <p>13 U.S. Patent No. 6,411,941 B</p> <p>14</p> <p>15 *** CONFIDENTIAL ***</p> <p>16 DEPOSITION OF DAVID MARTIN, PhD</p> <p>17 Thursday, July 14, 2022</p> <p>18 8:00 a.m. PST</p> <p>19</p> <p>20 Job No.: 455629</p> <p>21 Pages: 1 - 188</p> <p>22 Reported By: Cara Foster, RPR, CSR No. 11973</p>	<p style="text-align: center;">3</p> <p>1 A P P E A R A N C E S</p> <p>2</p> <p>3 FOR THE PETITIONERS, NINTENDO CO., LTD., and</p> <p>4 NINTENDO OF AMERICA, INC.:</p> <p>5 PERKINS COIE LLP</p> <p>6 By: Kyle R. Canavera, Esq.</p> <p>7 1201 3rd Avenue</p> <p>8 Number 4900</p> <p>9 Seattle, Washington 98101</p> <p>10 (206) 359-8664</p> <p>11</p> <p>12 FOR THE PETITIONERS, ROKU and VIZIO:</p> <p>13 STERNE KESSLER GOLDSTEIN AND FOX</p> <p>14 By: Jon Wright, Esq.</p> <p>15 By: Richard Crudo, Esq.</p> <p>16 By: Dohm Chankong, Esq.</p> <p>17 100 New York Avenue</p> <p>18 NW Suite 600</p> <p>19 Washington, DC 20005</p> <p>20 (202) 371-2600</p> <p>21</p> <p>22 FOR THE PATENT OWNER, ANCORA TECHNOLOGIES, INC.:</p> <p>23 FITCH, EVEN, TABIN & FLANNERY LLP</p> <p>24 By: David A. Gosse, Esq.</p> <p>25 120 S La Salle Street</p> <p>26 Unit 2100</p> <p>27 Chicago, Illinois 60603</p> <p>28 (312) 577-7000</p>								
<p style="text-align: center;">2</p> <p>1 Confidential Deposition of DAVID MARTIN,</p> <p>2 PhD, conducted virtually via Zoom videoconference.</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8 Pursuant to notice, before Cara Foster,</p> <p>9 Registered Professional Reporter and Stenographic</p> <p>10 Certified Shorthand Reporter Number 11973, in and</p> <p>11 for the State of California.</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p>	<p style="text-align: center;">4</p> <p>1 I N D E X</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <table><thead><tr><th></th><th>PAGE</th></tr></thead><tbody><tr><td>DAVID MARTIN, PhD</td><td></td></tr><tr><td>Examination by Mr. Crudo.....</td><td>6</td></tr><tr><td>Examination by Mr. Gosse.....</td><td>92</td></tr></tbody></table> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p style="text-align: center;">E X H I B I T S</p> <p style="text-align: center;">(none marked)</p>		PAGE	DAVID MARTIN, PhD		Examination by Mr. Crudo.....	6	Examination by Mr. Gosse.....	92
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<p style="text-align: right;">5</p> <p>1 PROCEEDINGS</p> <p>2 ***</p> <p>3 THE STENOGRAPHER: We are on the record.</p> <p>4 The time is 8:01 a.m.</p> <p>5 I would like to first introduce myself.</p> <p>6 My name is Cara Foster. I am your California</p> <p>7 Certified Shorthand Reporter for today. My</p> <p>8 license number is 11973.</p> <p>9 Before I swear in the witness, will</p> <p>10 Counsel place your appearances on the record and</p> <p>11 whom you represent?</p> <p>12 MR. CRUDO: Richard Crudo from Sterne,</p> <p>13 Kessler, Goldstein, and Fox, PLLC, on behalf of</p> <p>14 Petitioners Roku, Inc., and VIZIO, Inc.</p> <p>15 Also on the phone are my colleagues</p> <p>16 Jon Wright and Dohm Chankong also from Sterne and</p> <p>17 Kessler.</p> <p>18 MR. CANAVERA: Kyle Canavera from</p> <p>19 Perkins Coie on behalf of the Nintendo</p> <p>20 Petitioners.</p> <p>21 MR. GOSSE: This is David Gosse on behalf</p> <p>22 of Ancora Technologies, Inc., from the Fitch,</p>	<p style="text-align: right;">7</p> <p>1 Petitioners Roku and VIZIO; does that sound right?</p> <p>2 A. Yes, sir.</p> <p>3 Q. And the other proceeding involves</p> <p>4 Petitioner Nintendo; is that correct?</p> <p>5 A. That's correct.</p> <p>6 Q. And you were involved with both of</p> <p>7 them?</p> <p>8 A. That's correct. My recollection, I was</p> <p>9 retained on behalf of both of those sets of</p> <p>10 companies. I'm sorry, I said that very badly.</p> <p>11 I was retained by Ancora in regard to the</p> <p>12 petitions that you described.</p> <p>13 Q. Understood.</p> <p>14 You understand that your testimony today</p> <p>15 will be used in both of those IPR proceedings,</p> <p>16 right?</p> <p>17 A. Yes, I do.</p> <p>18 Q. And where are you testifying from</p> <p>19 today?</p> <p>20 A. I am in Bismarck, North Dakota.</p> <p>21 Q. In your home office?</p> <p>22 A. Yes, sir. That's correct.</p>
<p style="text-align: right;">6</p> <p>1 Even, Tabin, and Flannery Law Firm.</p> <p>2</p> <p>3 DAVID MARTIN, PhD,</p> <p>4 was called for examination, and after having been</p> <p>5 duly sworn under penalty of perjury by the</p> <p>6 stenographic certified shorthand reporter, was</p> <p>7 examined and testified as follows:</p> <p>8</p> <p>9 EXAMINATION</p> <p>10 BY MR. CRUDO:</p> <p>11 Q. Good morning, Dr. Martin.</p> <p>12 A. Good morning.</p> <p>13 Q. You understand you are being deposed</p> <p>14 today in two IPR proceedings involving one of</p> <p>15 Ancora's patents; right?</p> <p>16 A. That sounds correct to me. Yes, sir.</p> <p>17 Q. And that patent is U.S. Patent Number</p> <p>18 6,411,941; does that sound right?</p> <p>19 A. Yes, sir.</p> <p>20 Q. And I'll refer to that patent as the '941</p> <p>21 patent for simplicity today.</p> <p>22 One of the proceedings at issue involves</p>	<p style="text-align: right;">8</p> <p>1 Q. There's nobody else physically in the</p> <p>2 room with you, correct?</p> <p>3 A. That's correct.</p> <p>4 Q. And you're not communicating with anyone</p> <p>5 electronically, such as through chat, instant</p> <p>6 message, texting, or anything like that, right?</p> <p>7 A. No, I'm not.</p> <p>8 Q. You have on your screen the Zoom session</p> <p>9 by which we are conducting this deposition.</p> <p>10 You don't have any other screens open on</p> <p>11 your monitor at this time; is that right?</p> <p>12 A. That's not quite right. I have two other</p> <p>13 windows open.</p> <p>14 I can describe them if you'd like?</p> <p>15 Q. Please.</p> <p>16 A. I have one volume control application</p> <p>17 just to facilitate the remote deposition. And</p> <p>18 then I have another file browser window open that</p> <p>19 has folders in it. And these folders contain the</p> <p>20 files that I downloaded from the PTAB website</p> <p>21 corresponding to the two petitions.</p> <p>22 Q. So the browser that you've described has</p>

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<p>9</p> <p>1 essentially the docket from the IPR proceedings?</p> <p>2 A. Plus the exhibits. Yes, sir.</p> <p>3 Q. Okay. And did you receive a box of</p> <p>4 papers and exhibits that we've sent to you?</p> <p>5 A. Yes, I did.</p> <p>6 Q. Do you have that box with you today?</p> <p>7 A. Yes, I do.</p> <p>8 Q. I'll go ahead and ask you to close the</p> <p>9 browser, and we will focus on the paper copies of</p> <p>10 the documents. If needed, I can certainly share</p> <p>11 my screen, and we can look at any electronic</p> <p>12 version of the document together; is that okay?</p> <p>13 A. Well, it may be okay, depending on how</p> <p>14 this goes. I actually find it much easier to work</p> <p>15 with the electronic documents, since that's the</p> <p>16 form in which I have worked in this entire matter.</p> <p>17 So I actually may prefer to use these</p> <p>18 publicly available documents when it comes to me,</p> <p>19 but, certainly, we can begin with the paper</p> <p>20 form.</p> <p>21 Q. Sure.</p> <p>22 And no other electronic documents or</p>	<p>11</p> <p>1 They weren't all patent infringement cases.</p> <p>2 Q. When was the last time you were</p> <p>3 deposed?</p> <p>4 A. I believe it was about two weeks ago.</p> <p>5 Q. And that deposition was a remote</p> <p>6 deposition, I assume?</p> <p>7 A. Yes, sir.</p> <p>8 Q. Okay. Was that deposition in a patent</p> <p>9 infringement case?</p> <p>10 A. It was in a patent IPR case.</p> <p>11 Q. Did that case involve Ancora?</p> <p>12 A. No, sir. It didn't.</p> <p>13 Q. So you're familiar with how these things</p> <p>14 work, but I'll just briefly go over the ground</p> <p>15 rules particularly because we're doing this</p> <p>16 remotely.</p> <p>17 You understand that you are under oath</p> <p>18 today, correct?</p> <p>19 A. Of course. Yes, sir.</p> <p>20 Q. You understand that it's the same oath</p> <p>21 you would take if you were appearing in a court of</p> <p>22 law to testify, right?</p>
<p>10</p> <p>1 anything open on your computer, correct?</p> <p>2 A. That's correct.</p> <p>3 Q. And other than the box of hard copy</p> <p>4 documents that we sent to you, you don't have any</p> <p>5 other hard copy documents, notes, anything like</p> <p>6 that in front of you?</p> <p>7 A. I actually do have one document. It is</p> <p>8 Exhibit 1001 from the Nintendo petition. This is</p> <p>9 the '941 patent. This may not be the only copy in</p> <p>10 the room. We'll find out when I open the box.</p> <p>11 Q. Understood.</p> <p>12 And based on your CV, it seems that you</p> <p>13 have been deposed before; is that correct?</p> <p>14 A. I have. Yes, sir.</p> <p>15 Q. How many times have you been deposed?</p> <p>16 A. I don't have a firm number in mind. I</p> <p>17 would expect it to be in the dozens, depending on</p> <p>18 how you count.</p> <p>19 Q. And those were all patent infringement</p> <p>20 cases, or were there other types of cases</p> <p>21 involved?</p> <p>22 A. There were some other cases, as well.</p>	<p>12</p> <p>1 A. It seems likely it would be the same</p> <p>2 oath, yes.</p> <p>3 Q. I'll be asking you questions today. If I</p> <p>4 ask you a question that you don't understand,</p> <p>5 please let me know.</p> <p>6 Conversely, if I asked you a question and</p> <p>7 you provide an answer, I will assume that you</p> <p>8 understand the question.</p> <p>9 Is that fair?</p> <p>10 A. Yes, that seems appropriate.</p> <p>11 Q. And you understand that any</p> <p>12 communications you have during a break that we</p> <p>13 take are discoverable; meaning, that I can ask you</p> <p>14 about those communications after the break,</p> <p>15 right?</p> <p>16 A. Yes, I do.</p> <p>17 Q. Can we agree that while we are on the</p> <p>18 record, you'll have no off-the-record</p> <p>19 communications via texting or anything like</p> <p>20 that?</p> <p>21 A. Yes, we can. I do.</p> <p>22 Q. Okay. Can you please open the box that</p>

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<p>13</p> <p>1 we sent to you with the papers and exhibits?</p> <p>2 A. Sure.</p> <p>3 Yes, papers and exhibits. That's what I</p> <p>4 see.</p> <p>5 Q. Okay. Great. From time to time, I will</p> <p>6 ask you to pull out certain documents. But I ask</p> <p>7 that during breaks, you don't -- that you look at</p> <p>8 only the documents that we've used and that have</p> <p>9 been marked as exhibits; is that fair?</p> <p>10 A. I can tell you, I have no plans to</p> <p>11 deviate from that. I understand your instruction</p> <p>12 and request.</p> <p>13 Q. Okay. Is there any reason that you don't</p> <p>14 believe you can provide full-and-complete</p> <p>15 testimony today?</p> <p>16 A. No, sir.</p> <p>17 Q. And is there any reason that you don't</p> <p>18 believe you can provide truthful testimony</p> <p>19 today?</p> <p>20 A. No, sir.</p> <p>21 Q. What did you do to prepare for today's</p> <p>22 deposition?</p>	<p>15</p> <p>1 A. Yes, I did.</p> <p>2 Q. And when was that?</p> <p>3 A. My recollection is it was Friday of last</p> <p>4 week.</p> <p>5 Q. Any other person in the room or on the</p> <p>6 phone or in video at that meeting?</p> <p>7 A. Not that I was aware of.</p> <p>8 Q. Any other meetings?</p> <p>9 A. Nothing comes to mind. No, sir.</p> <p>10 Q. And did you review your declaration</p> <p>11 before today's deposition?</p> <p>12 A. Yes, sir. I did.</p> <p>13 Q. Did you review the deposition transcript</p> <p>14 of Petitioner expert Dr. Wolfe?</p> <p>15 A. I recall having -- I glanced at it very</p> <p>16 briefly.</p> <p>17 Q. Did you review the deposition transcript</p> <p>18 of Mr. Miki Mullor?</p> <p>19 A. No, sir.</p> <p>20 Q. If you would, Dr. Martin, will you please</p> <p>21 pull out the exhibits marked Exhibit 2018 in each</p> <p>22 IPR proceeding from the box?</p>
<p>14</p> <p>1 A. I spent some time in conversation with</p> <p>2 counsel for Ancora, and I reviewed the materials</p> <p>3 on the docket, including some of the exhibits.</p> <p>4 And I think that fairly characterizes the extent</p> <p>5 of my preparations.</p> <p>6 Q. How many hours would you say, roughly</p> <p>7 ballpark, that you've spent preparing for today's</p> <p>8 deposition?</p> <p>9 A. I would guess five hours, give or take.</p> <p>10 Q. And you stated just now that you met with</p> <p>11 counsel to prepare for the deposition.</p> <p>12 When was the last time that you met with</p> <p>13 counsel?</p> <p>14 A. That was yesterday.</p> <p>15 Q. And who was involved in those meetings?</p> <p>16 A. Mr. Gosse was there and myself.</p> <p>17 Q. Anyone else present either in the room or</p> <p>18 on the phone or video?</p> <p>19 A. I was not aware of anyone else being</p> <p>20 present.</p> <p>21 Q. Did you meet with Mr. Gosse before</p> <p>22 yesterday?</p>	<p>16</p> <p>1 A. Yes, I can find those. I recognize that</p> <p>2 exhibit number as my declaration, so I'll look for</p> <p>3 those.</p> <p>4 Q. Sure.</p> <p>5 A. The box is a little bit difficult to</p> <p>6 manage.</p> <p>7 Q. There are quite a few documents in there.</p> <p>8 I think it's broken up into an exhibit tab, and</p> <p>9 then a Nintendo tab which will have corresponding</p> <p>10 exhibits for the case, if that helps.</p> <p>11 A. Well, maybe I misheard you. I found one</p> <p>12 folder labeled "Exhibit 2018".</p> <p>13 Is there supposed to be more than one?</p> <p>14 Q. So the version that you have is the</p> <p>15 version that was submitted in the Roku/VIZIO case;</p> <p>16 is that correct?</p> <p>17 A. It does appear to be labeled that way.</p> <p>18 Yes, sir.</p> <p>19 Q. Okay. There should be one more</p> <p>20 declaration in the box. I think it's under a</p> <p>21 Nintendo tab. And that is the corresponding</p> <p>22 declaration that you've submitted in the Nintendo</p>

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<p>17</p> <p>1 proceeding.</p> <p>2 A. I see. Yes.</p> <p>3 Okay. Yes. I see Exhibit 2018 also from</p> <p>4 the Nintendo proceeding. I have both exhibits,</p> <p>5 2018, now.</p> <p>6 Q. Great.</p> <p>7 And you recognize these documents as the</p> <p>8 declarations that were used in those</p> <p>9 proceedings?</p> <p>10 A. On the basis of the cover page of these</p> <p>11 documents, that looks like what they are.</p> <p>12 Q. If you turn to the last page of each</p> <p>13 document, you will see a signature there.</p> <p>14 Is that your signature?</p> <p>15 A. My signature is actually on page 132 of</p> <p>16 the document, not on the last page, but I do see</p> <p>17 it on page 132. I just looked in the Nintendo</p> <p>18 declaration. And I see it similar in the Roku and</p> <p>19 VIZIO declaration.</p> <p>20 Q. And as far as you know, are these two</p> <p>21 declarations identical?</p> <p>22 A. I don't think that they are strictly</p>	<p>19</p> <p>1 it's very difficult to be accurate.</p> <p>2 I did not track that effort from the</p> <p>3 first word ever written that appears here towards,</p> <p>4 you know, the last word that ever appears in the</p> <p>5 declarations.</p> <p>6 Q. Understood.</p> <p>7 And before you drafted your declaration</p> <p>8 or during the drafting process, did you review</p> <p>9 Ancora's patent owner response?</p> <p>10 MR. GOSSE: Object to the form.</p> <p>11 THE WITNESS: I do not recall during the</p> <p>12 preparation of either of these declarations having</p> <p>13 reviewed in any substantive way a patent owner</p> <p>14 response in one of the two proceedings that we're</p> <p>15 discussing.</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. In preparing for today's deposition, did</p> <p>18 you review the board's institution decisions?</p> <p>19 A. I don't recall having done that. I</p> <p>20 haven't -- yeah, in preparation of the deposition,</p> <p>21 I don't recall having reviewed the institution</p> <p>22 decisions.</p>
<p>18</p> <p>1 identical. I can see on the cover page that they</p> <p>2 are different. There may be some different</p> <p>3 exhibit numbering. The stamps are different.</p> <p>4 There may be other differences.</p> <p>5 Q. Are you aware of any substantive</p> <p>6 differences in the body of the declarations?</p> <p>7 A. As I sit here today, I'm not aware of</p> <p>8 intending to have expressed any substantive</p> <p>9 differences in these two declarations other than,</p> <p>10 as I mentioned, the numbering and stamps and so</p> <p>11 forth.</p> <p>12 Q. Understood.</p> <p>13 Did you draft these declarations?</p> <p>14 A. Yes, but I don't want to mislead. I did</p> <p>15 not perform all of the drafting of all of the text</p> <p>16 in both declarations solely by myself.</p> <p>17 Q. How long would you say that you spent</p> <p>18 preparing each declaration?</p> <p>19 A. I can't give you a firm estimate. I can</p> <p>20 say that I expect that it would have been many</p> <p>21 dozens of hours all told in working on the</p> <p>22 material that appears in these declarations, but</p>	<p>20</p> <p>1 Q. After reviewing your declarations in</p> <p>2 preparation for this deposition, did you find any</p> <p>3 errors that you wished to correct?</p> <p>4 A. I did notice one issue with an exhibit.</p> <p>5 I believe it's Exhibit Number 2009. One moment.</p> <p>6 Yes, in both of the declarations, I</p> <p>7 referred to Exhibit 2009 for a definition that</p> <p>8 was, I believe, mistakenly omitted from that</p> <p>9 exhibit. My understanding is that this is -- this</p> <p>10 will be corrected or that's underway. That's one</p> <p>11 thing I recalled.</p> <p>12 I noticed a typo elsewhere in my</p> <p>13 declaration that I don't believe would confuse</p> <p>14 anyone.</p> <p>15 Q. Do you know which definition was omitted</p> <p>16 from Exhibit 2009?</p> <p>17 A. I can easily find it. And the most</p> <p>18 efficient way for me to do that is to consult the</p> <p>19 electronic forms of my declaration on my desktop</p> <p>20 so that's what --</p> <p>21 Q. It's okay. We'll get there in just a</p> <p>22 minute. Moving on.</p>

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<p style="text-align: right;">21</p> <p>1 Did you identify any other errors in your</p> <p>2 declaration beyond Exhibit 2009 and the typo that</p> <p>3 you just referred to?</p> <p>4 A. Other than the typo I referred to and the</p> <p>5 errors involving the citations to the Microsoft</p> <p>6 dictionary for the term "BIOS", I can't think of</p> <p>7 any other comparable issues that I noticed in</p> <p>8 review of my declarations.</p> <p>9 Q. And as of today, do you have any plan to</p> <p>10 supplement your declaration?</p> <p>11 A. Can you repeat that, please?</p> <p>12 MR. GOSSE: Object to the form.</p> <p>13 BY MR. CRUDO:</p> <p>14 Q. Yes.</p> <p>15 As of today, do you have any plan to</p> <p>16 supplement your declarations?</p> <p>17 MR. GOSSE: Object to the form.</p> <p>18 THE WITNESS: As I sit here today, I do</p> <p>19 not have a plan to supplement either declaration.</p> <p>20 I'm not sure what circumstances would arise where</p> <p>21 that might be appropriate, but sitting here today,</p> <p>22 I'm not aware of any.</p>	<p style="text-align: right;">23</p> <p>1 what I'm recalling now.</p> <p>2 Q. Were other law firms involved?</p> <p>3 A. Yes. I do recall there was other counsel</p> <p>4 for Ancora present.</p> <p>5 Q. And when you say, "other counsel for</p> <p>6 Ancora", are you referring to Ancora's district</p> <p>7 court litigation counsel?</p> <p>8 A. I'm not sure if that's a precise enough</p> <p>9 way to characterize the counsel. It may be yes.</p> <p>10 It may be no. Maybe you could clarify the</p> <p>11 question for me.</p> <p>12 Q. Who was the other counsel that contacted</p> <p>13 you regarding this case?</p> <p>14 A. I also recall having communicated with</p> <p>15 Andres Healy at Susman Godfrey in this matter as</p> <p>16 well.</p> <p>17 Q. And when were these communications?</p> <p>18 A. I'm recalling that the communications I'm</p> <p>19 referring to regarding these two IPR proceedings</p> <p>20 would have been sometime early in this calendar</p> <p>21 year... January, February, or something like</p> <p>22 that.</p>
<p style="text-align: right;">22</p> <p>1 BY MR. CRUDO:</p> <p>2 Q. Sitting here today, do you have any plan</p> <p>3 to change any of your plans set forth in your</p> <p>4 declarations?</p> <p>5 A. As I sit here today, no, I do not have</p> <p>6 any plans to change opinions that I've expressed</p> <p>7 in the declarations.</p> <p>8 Q. How did you become involved in these</p> <p>9 proceedings?</p> <p>10 MR. GOSSE: Object to the form.</p> <p>11 THE WITNESS: Can you clarify by what you</p> <p>12 mean "involved in"?</p> <p>13 BY MR. CRUDO:</p> <p>14 Q. Did Ancora approach you about serving as</p> <p>15 a witness in these proceedings?</p> <p>16 A. My recollection is that I received</p> <p>17 contact from attorneys for Ancora. That was when</p> <p>18 I first became aware of these proceedings.</p> <p>19 Q. And when you say, "attorneys from</p> <p>20 Ancora", are you referring to Mr. Gosse and his</p> <p>21 firm?</p> <p>22 A. I do believe Mr. Gosse was involved in</p>	<p style="text-align: right;">24</p> <p>1 Q. Did you have a pre-existing relationship</p> <p>2 with either Mr. Gosse or the Susman Godfrey</p> <p>3 attorneys?</p> <p>4 MR. GOSSE: Object to the form.</p> <p>5 THE WITNESS: I'm not sure what you mean</p> <p>6 by "relationship". Can you clarify, please?</p> <p>7 BY MR. CRUDO:</p> <p>8 Q. Had you worked with either Mr. Gosse or</p> <p>9 the Susman Godfrey attorney on any other case</p> <p>10 prior to this one?</p> <p>11 A. Yes, sir. I had.</p> <p>12 Q. How many cases?</p> <p>13 MR. GOSSE: I will object to the form of</p> <p>14 that question.</p> <p>15 THE WITNESS: I do not recall having</p> <p>16 worked with Mr. Gosse before this engagement. I</p> <p>17 do recall having worked with Mr. Healy on what I</p> <p>18 consider to be two different engagements</p> <p>19 previously. I'm not exactly sure about that. I</p> <p>20 can think of at least those two engagements.</p> <p>21 BY MR. CRUDO:</p> <p>22 Q. And did either of those engagements</p>

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<p>25</p> <p>1 involve Ancora?</p> <p>2 A. Yes, sir. They did.</p> <p>3 Q. Did both of them involve Ancora?</p> <p>4 A. The ones I'm recalling did involve</p> <p>5 Ancora, yes.</p> <p>6 Q. Did both of those cases involve the '941</p> <p>7 patent at issue here?</p> <p>8 A. That is my recollection, yes. Both of</p> <p>9 those cases, I was previously engaged on,</p> <p>10 concerned the '941 patent.</p> <p>11 Q. One of those cases involved LG</p> <p>12 Electronics and Samsung as defendants, right?</p> <p>13 A. That is correct. That is one of the</p> <p>14 cases I had in mind in my previous answer.</p> <p>15 Q. And what is the other case?</p> <p>16 A. The other case that I was referring to is</p> <p>17 a case involving HTC.</p> <p>18 Q. And neither of these cases are listed in</p> <p>19 your CV; is that correct?</p> <p>20 A. I don't recall. I would have to consult</p> <p>21 my CV to answer that question.</p> <p>22 Q. Is there a reason they would have been</p>	<p>27</p> <p>1 engagements in my CV.</p> <p>2 However, those engagements were -- I</p> <p>3 don't -- I don't recall that as having been</p> <p>4 omitting them. Rather, it was just that is not</p> <p>5 one of the examples that I put in my CV.</p> <p>6 BY MR. CRUDO:</p> <p>7 Q. Have you been retained by Ancora in any</p> <p>8 other case other than the LG and the HTC cases?</p> <p>9 A. I am recalling some other engagements.</p> <p>10 Yes, sir.</p> <p>11 Q. What are those engagements?</p> <p>12 A. I am remembering some IPR engagements.</p> <p>13 For example, there was one with Sony and the '941</p> <p>14 patent. I believe there was also one with TCL or</p> <p>15 TCT and the '941 patents. My recollection is that</p> <p>16 there may have been an engagement related to TCL</p> <p>17 or TCT, and a district court case involving the</p> <p>18 '941 as well. That's all I can remember at this</p> <p>19 moment.</p> <p>20 Q. Were you deposed in any of those cases?</p> <p>21 A. Yes, sir. I was.</p> <p>22 Q. How many times were you deposed across</p>
<p>26</p> <p>1 omitted from the CV?</p> <p>2 MR. GOSSE: Object to the form.</p> <p>3 THE WITNESS: I just remembered my CV is</p> <p>4 actually attached to Exhibit 2018, so I'm looking</p> <p>5 at it now.</p> <p>6 And the area in my CV, for example on --</p> <p>7 I'm looking at the Nintendo Exhibit 2018, on page</p> <p>8 135. And this is where I list what I describe as</p> <p>9 "Representative Testifying Expert Engagements".</p> <p>10 So my intent in my CV has never been to</p> <p>11 list every one of my business relationships or</p> <p>12 testifying engagements or consulting engagements,</p> <p>13 but rather to identify those that I considered to</p> <p>14 be representative.</p> <p>15 BY MR. CRUDO:</p> <p>16 Q. But in so doing, you omitted the two</p> <p>17 cases that involve the same patent owner and the</p> <p>18 same patent at issue here, right?</p> <p>19 MR. GOSSE: Object to the form.</p> <p>20 THE WITNESS: Well, I wouldn't phrase it</p> <p>21 like that. It is true that neither of those cases</p> <p>22 are listed, as what I describe, as representative</p>	<p>28</p> <p>1 all those cases?</p> <p>2 A. I'm not going to be able to recall, for</p> <p>3 example, how many deposition notices there were</p> <p>4 that -- that I responded to and testified because</p> <p>5 of.</p> <p>6 However, I do remember that in the LG and</p> <p>7 Samsung matters, I'm recalling that I testified</p> <p>8 both with respect to infringement and validity on</p> <p>9 both of those -- on both of those cases. So for</p> <p>10 both LG and Samsung, at least two depositions</p> <p>11 each.</p> <p>12 Q. Are you aware of any testimony that you</p> <p>13 provided in any of those cases that is</p> <p>14 inconsistent with the position you or Ancora are</p> <p>15 taking in these IPRs?</p> <p>16 A. No, sir. I'm not.</p> <p>17 Q. Did you submit expert declarations or</p> <p>18 reports in any of those other cases?</p> <p>19 A. Yes, sir. I did.</p> <p>20 Q. Do you know approximately how many</p> <p>21 declarations or reports you've submitted?</p> <p>22 A. I do recall one declaration in the Sony</p>

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<p style="text-align: right;">29</p> <p>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.</p>	<p style="text-align: right;">31</p> <p>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</p>
<p style="text-align: right;">30</p> <p>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.</p>	<p style="text-align: right;">32</p> <p>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</p>

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<p>33</p> <p>1 discussing is inconsistent with any of my analysis</p> <p>2 in the Nintendo, Roku, and VIZIO IPRs that we're</p> <p>3 discussing today.</p> <p>4 BY MR. CRUDO:</p> <p>5 Q. You referred specifically to your</p> <p>6 rebuttal reports in those cases.</p> <p>7 Is your answer the same with regard to</p> <p>8 your infringement reports in those cases?</p> <p>9 MR. GOSSE: Object to the form.</p> <p>10 THE WITNESS: Yes, I would agree, I'm not</p> <p>11 aware of having taken any -- undertaken any</p> <p>12 analysis in my previously submitted infringement</p> <p>13 reports that is inconsistent with any of the</p> <p>14 analysis that I have undertaken with respect to</p> <p>15 the IPRs concerned in today's deposition.</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. Did the district court in the LG case</p> <p>18 construe the term "agent" in the '941 patent?</p> <p>19 MR. GOSSE: Object to the form.</p> <p>20 BY MR. CRUDO:</p> <p>21 Q. Actually, we can turn to page 28 of your</p> <p>22 declaration.</p>	<p>35</p> <p>1 court's construction of a longer term.</p> <p>2 Q. Did you apply that construction in your</p> <p>3 infringement report in the LG case?</p> <p>4 MR. GOSSE: Object to the form.</p> <p>5 THE WITNESS: Yes, my recollection in the</p> <p>6 LG case is that I was fully aware of the court's</p> <p>7 constructions, and that I applied them all in my</p> <p>8 infringement analysis, including the term "agent"</p> <p>9 as we have just discussed, and the larger term in</p> <p>10 which the word agent appears. That is, using an</p> <p>11 agent to set up a verification structure...</p> <p>12 BY MR. CRUDO:</p> <p>13 Q. Did you apply that same construction in</p> <p>14 your validity report submitted in the LG case?</p> <p>15 MR. GOSSE: Object to the form.</p> <p>16 THE WITNESS: Yes, I used consistent</p> <p>17 constructions between all of my reports in the LG</p> <p>18 case.</p> <p>19 BY MR. CRUDO:</p> <p>20 Q. When you say you used "consistent</p> <p>21 construction between all of your reports", do you</p> <p>22 mean you used the same constructions between all</p>
<p>34</p> <p>1 A. Thank you.</p> <p>2 Q. You've provided a chart that categorizes</p> <p>3 the claim construction?</p> <p>4 A. Yes, I do recall having provided this</p> <p>5 chart.</p> <p>6 I'm not sure whether to consider this a</p> <p>7 stand-alone construction of the term "agent". But</p> <p>8 what I recall, and I find on page 28 and 29 of my</p> <p>9 declaration, is that in the LG case, the district</p> <p>10 court construed a larger term, the term being,</p> <p>11 "using an agent to set up a verification structure</p> <p>12 in the erasable, non-volatile memory of the BIOS,</p> <p>13 as plain and ordinary meaning, wherein the plain</p> <p>14 and ordinary meaning of agent is a software</p> <p>15 program or routine."</p> <p>16 So in that sense, yes, the court did</p> <p>17 describe the meaning of agent.</p> <p>18 Q. As a software program or routine,</p> <p>19 correct?</p> <p>20 A. Yes, as I just explained, the court</p> <p>21 described the plain and ordinary meaning of agent</p> <p>22 is a software program or routine as part of the</p>	<p>36</p> <p>1 of the reports?</p> <p>2 MR. GOSSE: Object to the form.</p> <p>3 THE WITNESS: That is what I meant in my</p> <p>4 answer that I did, as I sit here today trying to</p> <p>5 recall this, use the same construction in all of</p> <p>6 my reports in the district court litigation for LG</p> <p>7 and Samsung.</p> <p>8 My only hesitation is whether there was a</p> <p>9 moment of some claim construction dispute, and I</p> <p>10 do not recall any such moment.</p> <p>11 So, again, as I sit here today, my</p> <p>12 recollection is that I had used the same</p> <p>13 constructions given by the court in all of my</p> <p>14 analysis in those cases.</p> <p>15 BY MR. CRUDO:</p> <p>16 Q. And with regard to the agent term, is it</p> <p>17 your understanding that the court adopted Ancora's</p> <p>18 proposed construction?</p> <p>19 MR. GOSSE: Objection to the form.</p> <p>20 THE WITNESS: I do not recall one way or</p> <p>21 another whether it could be characterized as the</p> <p>22 court adopting Ancora's construction or not.</p>

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<p>37</p> <p>1 BY MR. CRUDO:</p> <p>2 Q. Do you know which party proposed that</p> <p>3 construction in the LG litigation?</p> <p>4 A. As I sit here today, I don't recall.</p> <p>5 This is an easy question to answer by</p> <p>6 simply looking at the documents you're asking</p> <p>7 about, but I don't recall sitting here today.</p> <p>8 Q. As you were preparing your declaration in</p> <p>9 these IPRs, did you review any litigation</p> <p>10 materials from the LG case?</p> <p>11 MR. GOSSE: Objection to the form.</p> <p>12 THE WITNESS: I guess I'm not sure what</p> <p>13 you mean by "litigation materials".</p> <p>14 Can you please narrow that question for</p> <p>15 me?</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. Sure. Let's start with the transcripts</p> <p>18 from your deposition in the LG case.</p> <p>19 Did you review those?</p> <p>20 A. No, sir. I did not.</p> <p>21 Q. Did you review any of the reports that</p> <p>22 you submitted in the LG case?</p>	<p>39</p> <p>1 the '941 patent, I have reviewed Ancora source</p> <p>2 code productions that, in my professional opinion,</p> <p>3 establish a priority date of at least March 31,</p> <p>4 1997. My analysis of the issues in this</p> <p>5 proceeding would be the same under either priority</p> <p>6 date."</p> <p>7 So when I wrote this, I remember having</p> <p>8 glanced briefly at that source code production</p> <p>9 that I previously looked at.</p> <p>10 But as I conclude in this paragraph, the</p> <p>11 opinions elsewhere expressed in this declaration</p> <p>12 do not, as far as I understand it, depend on which</p> <p>13 priority date is taken to be correct.</p> <p>14 Q. Your reference to "other work related to</p> <p>15 the '941 patent" in paragraph 41 of your</p> <p>16 declaration, is referring to the LG case?</p> <p>17 A. Yes, what I'm recalling related to the LG</p> <p>18 and Samsung case.</p> <p>19 And now that this has come up, I'm</p> <p>20 recalling that a lot of our previous questions and</p> <p>21 answers you've been asking about the LG case, and</p> <p>22 I guess it's a little unclear whether we're</p>
<p>38</p> <p>1 A. Correct, I do not clearly remember having</p> <p>2 reviewed any of the reports in the LG case, as I</p> <p>3 sit here today.</p> <p>4 Q. Did you review any of the parties'</p> <p>5 briefing in the LG case?</p> <p>6 A. I have no recollection of reviewing</p> <p>7 briefing in the LG case in my work on the IPRs</p> <p>8 that we're discussing today.</p> <p>9 Q. Did you review any of Ancora's source</p> <p>10 code in connection with preparing for these IPR</p> <p>11 proceedings?</p> <p>12 A. I do recall having reviewed -- reviewed</p> <p>13 is probably too strong a word.</p> <p>14 I momentarily looked at some Ancora</p> <p>15 source code related to the most appropriate</p> <p>16 priority date for the '941 patent, and I do recall</p> <p>17 having mentioned that in my declaration. Let me</p> <p>18 find the place.</p> <p>19 Q. I can direct you there. It's paragraph</p> <p>20 41 of your declaration.</p> <p>21 A. That is what I was recalling. In this</p> <p>22 paragraph 41, I state, "In other work related to</p>	<p>40</p> <p>1 talking about LG or LG and Samsung.</p> <p>2 My recollection is that was one</p> <p>3 engagement -- of course, it was two different</p> <p>4 cases with different defendants, but, yes, it</p> <p>5 was -- my review of the software was in relation</p> <p>6 to the LG and Samsung cases.</p> <p>7 Q. Understood.</p> <p>8 And so that the record is clear, I was</p> <p>9 referring to LG to include Samsung. So LG/Samsung</p> <p>10 cases.</p> <p>11 With that clarification in mind, are</p> <p>12 there any answers that you've provided that you</p> <p>13 would clarify in any way?</p> <p>14 A. I'll tell you, it's very difficult to</p> <p>15 remember all the questions and answers. But I can</p> <p>16 say that I don't recall any topic we were</p> <p>17 discussing where I feel like the answer would have</p> <p>18 been meaningfully different if you had phrased the</p> <p>19 question with respect to the Samsung case instead</p> <p>20 of the LG case.</p> <p>21 Q. Understood.</p> <p>22 But just to be clear, you did not</p>

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<p style="text-align: right;">41</p> <p>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</p>	<p style="text-align: right;">43</p> <p>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</p>
<p style="text-align: right;">42</p> <p>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?</p>	<p style="text-align: right;">44</p> <p>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</p>

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<p style="text-align: right;">45</p> <p>1 submitted many reports and declarations over the 2 past years.</p> <p>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.</p> <p>9 Q. When you reference "legal issues in the 10 case", what do you mean by that?</p> <p>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.</p> <p>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.</p>	<p style="text-align: right;">47</p> <p>1 counselor, you were employed by Boston Software 2 Forensics from 2005 to 2008; is that right?</p> <p>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.</p> <p>9 Q. Were you employed from 2008 to 2018?</p> <p>10 MR. GOSSE: Object to the form.</p> <p>11 THE WITNESS: I guess it depends on what 12 exactly you mean by "employed".</p> <p>13 Can you please clarify that for me?</p> <p>14 BY MR. CRUDO:</p> <p>15 Q. Sure.</p> <p>16 What were you doing professionally during 17 the time period between 2008 and 2018?</p> <p>18 A. Could you repeat the dates again, please?</p> <p>19 Q. Yes.</p> <p>20 What were you doing professionally during 21 the time period between 2008 and 2018?</p> <p>22 A. During that time, I was self-employed as</p>
<p style="text-align: right;">46</p> <p>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.</p> <p>6 Q. Do you recall other examples?</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>22 Q. I see that prior to serving as city</p>	<p style="text-align: right;">48</p> <p>1 a software consultant.</p> <p>2 Q. When you say "software consultant", were 3 you provided consulting services for litigation?</p> <p>4 A. Yes, sir. I was providing consulting 5 services for software litigation during that 6 period 2008 through 2018.</p> <p>7 Q. And are you still providing consulting 8 services?</p> <p>9 A. Yes, sir. I am. Hence, the declaration 10 and the deposition today.</p> <p>11 Q. Do you have anybody working with you or 12 at your direction on this proceeding?</p> <p>13 MR. GOSSE: Object to the form.</p> <p>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.</p> <p>18 BY MR. CRUDO:</p> <p>19 Q. If you would, Dr. Martin, could you 20 please turn to page 11 of your declaration?</p> <p>21 MR. GOSSE: Richard, if we're shifting 22 gears, we've been going for about 65 minutes, give</p>

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<p style="text-align: right;">49</p> <p>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</p>	<p style="text-align: right;">51</p> <p>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</p>
<p style="text-align: right;">50</p> <p>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.</p>	<p style="text-align: right;">52</p> <p>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</p>

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<p style="text-align: right;">53</p> <p>1 conditions A and B that I describe on paragraph 2 19."</p> <p>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.</p> <p>7 BY MR. CRUDO:</p> <p>8 Q. What does that term "presumption that an 9 allowed patent claim is valid" mean to you?</p> <p>10 MR. GOSSE: Object to the form.</p> <p>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.</p> <p>14 BY MR. CRUDO:</p> <p>15 Q. Did you presume that the '941 patent is 16 valid in your analysis?</p> <p>17 MR. GOSSE: Objection to the form.</p> <p>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</p>	<p style="text-align: right;">55</p> <p>1 you mentioned before the break.</p> <p>2 You referred to a Sony litigation for 3 which you were retained on behalf of Ancora.</p> <p>4 Do you recall that?</p> <p>5 A. Yes, sir.</p> <p>6 Q. Was that an IPR proceeding?</p> <p>7 A. Yes. My recollection is that was an IPR.</p> <p>8 That's what I was recalling.</p> <p>9 Q. Were you ever retained by Ancora in a 10 district court litigation involving Sony?</p> <p>11 A. I don't clearly recall. It's possible 12 that I was, but I don't recall clearly.</p> <p>13 Q. Were you retained by Ancora in a district 14 court litigation involving Lenovo?</p> <p>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.</p> <p>18 Q. In any of the cases that we discussed, 19 did you submit any declaration or report 20 addressing claim construction?</p> <p>21 MR. GOSSE: I'll object to the form of 22 that question.</p>
<p style="text-align: right;">54</p> <p>1 proceedings.</p> <p>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.</p> <p>8 MR. CRUDO: Understood.</p> <p>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</p> <p>12 THE WITNESS: Okay.</p> <p>13 MR. GOSSE: Bottom of the hour then.</p> <p>14 Sounds good.</p> <p>15 (Off the record 9:13 a.m. - 9:29 p.m.)</p> <p>16 THE STENOGRAPHER: Back on the record at 17 9:29 a.m. Pacific.</p> <p>18 BY MR. CRUDO:</p> <p>19 Q. Dr. Martin, did you speak with your 20 counsel during the break?</p> <p>21 A. No, I did not.</p> <p>22 Q. I just wanted to circle back to one thing</p>	<p style="text-align: right;">56</p> <p>1 THE WITNESS: Yes, you said any of the 2 litigation we've discussed.</p> <p>3 Are you referring just to the Sony and 4 Lenovo, or are you referring to something broader?</p> <p>5 BY MR. CRUDO:</p> <p>6 Q. Sony. Lenovo. I believe you addressed 7 LG, Samsung, HTC, and TCL?</p> <p>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.</p> <p>13 However, I would expect if I had 14 submitted a declaration, that would be publicly 15 available through the court dockets.</p> <p>16 Q. You don't recall opining in any of those 17 cases as to what the term "agent" means?</p> <p>18 MR. GOSSE: Object to the form.</p> <p>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,</p>

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<p>57</p> <p>1 anything that I've ever said about what an agent</p> <p>2 is?</p> <p>3 BY MR. CRUDO:</p> <p>4 Q. Let's start with declarations filed?</p> <p>5 A. Again, I do not recall filing any claim</p> <p>6 construction and/or declarations in the district</p> <p>7 court matters that we've discussed. I'm not 100</p> <p>8 percent confident about that, but I don't recall</p> <p>9 them sitting here today.</p> <p>10 Q. Okay. We can move on then.</p> <p>11 Dr. Martin, would you please turn to</p> <p>12 paragraph 62 of your declaration?</p> <p>13 A. I am looking at paragraph 62, yes.</p> <p>14 Q. And here in the first sentence you state,</p> <p>15 "BIOS at the time of the invention was understood</p> <p>16 to be the set of an essential software routine</p> <p>17 that test hardware at startup, start the operating</p> <p>18 system, and support the transfer of data among</p> <p>19 hardware devices."</p> <p>20 Do you see that?</p> <p>21 A. Yes, I do. There's also a citation to</p> <p>22 the Exhibit 2009 that we discussed earlier.</p>	<p>59</p> <p>1 THE WITNESS: I'm looking at the</p> <p>2 constructions of BIOS that have been entered in</p> <p>3 the district court cases. These are on pages 24</p> <p>4 and 25 of my declaration. So this is the</p> <p>5 understanding of BIOS that I used in my analysis.</p> <p>6 They're largely consistent.</p> <p>7 For example, the LG case definition,</p> <p>8 which is at the top of page 25 of my declaration</p> <p>9 states regarding the term "BIOS" that its</p> <p>10 definition is a plain and ordinary meaning, where</p> <p>11 the plain and ordinary meaning is "An acronym for</p> <p>12 basic input/output system. It is a set of</p> <p>13 essential start-up operations that begin to run</p> <p>14 automatically when a computer is turned on, which</p> <p>15 tests hardware, starts the operating system, and</p> <p>16 supports the transfer of data among hardware</p> <p>17 devices."</p> <p>18 So in this construction, they're</p> <p>19 described as essential start-up operations. And</p> <p>20 those operations correspond to software routines</p> <p>21 that carry them out, as I describe in paragraph 62</p> <p>22 of my declaration.</p>
<p>58</p> <p>1 Q. You anticipated my question. Thank you</p> <p>2 for clarifying that.</p> <p>3 When you referred to "software routines"</p> <p>4 in this sentence, what are you referring to?</p> <p>5 A. I don't understand the question beyond</p> <p>6 what this quotation clearly describes about those</p> <p>7 software routines.</p> <p>8 So if you're asking something about</p> <p>9 what's described here, I need help understanding</p> <p>10 it.</p> <p>11 Q. Sure.</p> <p>12 What is a software routine? Let's start</p> <p>13 there.</p> <p>14 MR. GOSSE: Object to the form.</p> <p>15 THE WITNESS: As used in this quotation</p> <p>16 in paragraph 62 of my declaration, a software</p> <p>17 routine, is -- it is a program that's encoded in</p> <p>18 the software.</p> <p>19 BY MR. CRUDO:</p> <p>20 Q. What types of software routines are</p> <p>21 included in BIOS?</p> <p>22 MR. GOSSE: Object to the form.</p>	<p>60</p> <p>1 BY MR. CRUDO:</p> <p>2 Q. And just so I understand, the</p> <p>3 construction that you were reading from at the top</p> <p>4 of page 25 of your declaration from the LG case,</p> <p>5 is that the construction that you applied in your</p> <p>6 analysis?</p> <p>7 MR. GOSSE: Object to the form.</p> <p>8 THE WITNESS: I would say that I applied</p> <p>9 the plain and ordinary meaning of BIOS as informed</p> <p>10 by these constructions, so I certainly considered</p> <p>11 them.</p> <p>12 And the plain and ordinary meaning is</p> <p>13 consistent with each one of these constructions,</p> <p>14 and I'm not aware of any way in which my opinions</p> <p>15 vary based on which exact construction is used</p> <p>16 here. They're quite similar.</p> <p>17 BY MR. CRUDO:</p> <p>18 Q. Can BIOS include anything other than</p> <p>19 software routines?</p> <p>20 MR. GOSSE: Object to the form.</p> <p>21 THE WITNESS: That really depends on what</p> <p>22 context we're discussing BIOS in. The claims at</p>

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<p>61</p> <p>1 issue are used in a particular way, but there are</p> <p>2 other ways that one can be discussing BIOS as</p> <p>3 well.</p> <p>4 BY MR. CRUDO:</p> <p>5 Q. Is there any way or any example in which</p> <p>6 BIOS would include something other than software</p> <p>7 routines?</p> <p>8 MR. GOSSE: Object to the form.</p> <p>9 THE WITNESS: So you're now outside the</p> <p>10 context of the '941 patent, is there any way that</p> <p>11 BIOS could refer to anything other than software</p> <p>12 routines as described among the source materials</p> <p>13 that I've cited?</p> <p>14 BY MR. CRUDO:</p> <p>15 Q. Correct, as a general matter. Yes?</p> <p>16 A. I suppose I could imagine someone in</p> <p>17 informal conversation outside the context of the</p> <p>18 '941 patent talking about BIOS as -- as a</p> <p>19 different sort of entity than merely the software</p> <p>20 routines within it that carry out specific</p> <p>21 functions.</p> <p>22 Q. Can BIOS include a data table, for</p>	<p>63</p> <p>1 computer, including an erasable, non-volatile</p> <p>2 memory area of a BIOS of a computer", among other</p> <p>3 things in the preamble.</p> <p>4 And then the term "BIOS" appears later in</p> <p>5 Claim 1 as the erasable, non-volatile memory of</p> <p>6 the BIOS in two different places.</p> <p>7 So Claim 1 describes specifically a</p> <p>8 memory, an erasable, non-volatile memory of the</p> <p>9 BIOS.</p> <p>10 Q. Is BIOS stored in that memory?</p> <p>11 MR. GOSSE: Object to the form.</p> <p>12 THE WITNESS: I guess I don't understand</p> <p>13 the context in which you're asking that question.</p> <p>14 For example, are you asking if -- well, I just</p> <p>15 don't understand which BIOS you're referring to</p> <p>16 when you say, "Is the BIOS stored in the memory of</p> <p>17 the BIOS."</p> <p>18 BY MR. CRUDO:</p> <p>19 Q. Does the claim recite more than one</p> <p>20 BIOS?</p> <p>21 A. I don't believe so. No, sir.</p> <p>22 Q. In paragraph 61 of your declaration, you</p>
<p>62</p> <p>1 example?</p> <p>2 MR. GOSSE: Object to the form.</p> <p>3 THE WITNESS: Without knowing anything</p> <p>4 more about the BIOS you're discussing, for</p> <p>5 example, how it's applied in the patents at issue</p> <p>6 in this case, I see no reason why the name "BIOS"</p> <p>7 would categorically exclude a data table from</p> <p>8 being something that could be encompassed by</p> <p>9 someone's use of the term "BIOS".</p> <p>10 BY MR. CRUDO:</p> <p>11 Q. BIOS itself is not hardware; is that</p> <p>12 correct?</p> <p>13 MR. GOSSE: Object to the form.</p> <p>14 THE WITNESS: Again, it really depends on</p> <p>15 the context we're discussing. The '941 patent</p> <p>16 uses the term "BIOS" in its claims in a very</p> <p>17 specific way.</p> <p>18 BY MR. CRUDO:</p> <p>19 Q. What is that way?</p> <p>20 A. For example, in Claim 1, the preamble</p> <p>21 recites, "A method of restricting software</p> <p>22 operation within a license for use with a</p>	<p>64</p> <p>1 quote the '941 patent, and this is on page 36 of</p> <p>2 your declaration.</p> <p>3 When you quote the '941 patent's</p> <p>4 reference to "A conventional BIOS module in which</p> <p>5 a key was embedded at the ROM section thereof and</p> <p>6 a second non-volatile section of the BIOS."</p> <p>7 Do you see that?</p> <p>8 A. I do.</p> <p>9 Q. And right below that you excerpt Figure 1</p> <p>10 for the '941 patent.</p> <p>11 Do you see that?</p> <p>12 A. Yes.</p> <p>13 Q. Correct.</p> <p>14 Can you point to where in Figure 1 is the</p> <p>15 ROM section of the BIOS module?</p> <p>16 A. I am looking at column five of the '941</p> <p>17 patent that is discussing Figure 1, starting at</p> <p>18 line nine. And at line 12 of column five, it</p> <p>19 states, "This computer processor (internally)</p> <p>20 contains a first non-volatile memory area 4, EG,</p> <p>21 the ROM section of the BIOS."</p> <p>22 So when I look at Figure 1, what I see it</p>

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<p style="text-align: right;">65</p> <p>1 describing with respect to this embodiment is the</p> <p>2 area described as first, non-volatile memory</p> <p>3 labeled 4 in Figure 1, which is identified here in</p> <p>4 column five, for example, as to the ROM section of</p> <p>5 the BIOS.</p> <p>6 So I think that is what column five is</p> <p>7 intending to express to the reader as a</p> <p>8 possibility for this area -- memory area 4.</p> <p>9 Q. Is BIOS stored in the memory area 4?</p> <p>10 MR. GOSSE: Object to the form.</p> <p>11 THE WITNESS: A person reading this</p> <p>12 section of the patent where memory area 4 is</p> <p>13 identified as, for example, the ROM section of the</p> <p>14 BIOS, would think that part of the BIOS may be</p> <p>15 stored in this ROM section. But it doesn't</p> <p>16 clearly require that all of the instructions of</p> <p>17 the BIOS be stored in this ROM section, for</p> <p>18 instance. It simply characterizes this as a ROM</p> <p>19 section of the BIOS.</p> <p>20 BY MR. CRUDO:</p> <p>21 Q. But would you read that to mean that some</p> <p>22 BIOS must be stored in memory space 4?</p>	<p style="text-align: right;">67</p> <p>1 BY MR. CRUDO:</p> <p>2 Q. So is it your view that the ROM section</p> <p>3 of the BIOS doesn't necessarily need to have</p> <p>4 stored the BIOS software routines themselves?</p> <p>5 MR. GOSSE: Object to the form.</p> <p>6 THE WITNESS: My testimony is a little</p> <p>7 different. I'm saying that this description of</p> <p>8 non-volatile memory area 4 does not clearly state</p> <p>9 that the instructions of the BIOS must be stored</p> <p>10 in non-volatile memory area 4.</p> <p>11 They -- some of them may be stored there,</p> <p>12 but I don't see how this parenthetical absolutely</p> <p>13 requires that the instructions be stored in the</p> <p>14 BIOS, given that they're -- as I recall the</p> <p>15 instruction here, that there is no further</p> <p>16 discussion or consequence of the location of the</p> <p>17 instructions constituting that part of the BIOS.</p> <p>18 Ultimately, this feels like a claim</p> <p>19 construction debate and not one that I'm aware of</p> <p>20 or considered in the preparation of my</p> <p>21 declaration.</p> <p>22 BY MR. CRUDO:</p>
<p style="text-align: right;">66</p> <p>1 MR. GOSSE: Object to the form.</p> <p>2 THE WITNESS: Well, I don't think I would</p> <p>3 use the word "must" at least because we're in a</p> <p>4 section in column five called "Detailed</p> <p>5 description of a preferred embodiment." So it is</p> <p>6 merely an embodiment, it is not an overall</p> <p>7 requirement of every use of the term "BIOS" within</p> <p>8 the entire patent merely by being -- because</p> <p>9 what's expressed in this section.</p> <p>10 And, again, I don't see this</p> <p>11 parenthetical stating EG, the ROM section of the</p> <p>12 BIOS, clearly indicating that some of the</p> <p>13 instructions that are executed on behalf of the</p> <p>14 BIOS must be contained in area 4, even in this</p> <p>15 single embodiment. As I said, it may be that they</p> <p>16 are there, but I don't see that clear requirement.</p> <p>17 I'm also, as I sit here, not aware of any</p> <p>18 further requirement in the discussion of this</p> <p>19 preferred embodiment that would require BIOS</p> <p>20 instructions to be -- that is the executable BIOS</p> <p>21 instructions to be stored within non-volatile</p> <p>22 memory 4.</p>	<p style="text-align: right;">68</p> <p>1 Q. Understood.</p> <p>2 And I'm just trying to get an</p> <p>3 understanding of what you understand the term</p> <p>4 "BIOS" to mean, which you use, of course,</p> <p>5 throughout your declaration in forming your</p> <p>6 validity opinions.</p> <p>7 And I'm just going to --</p> <p>8 MR. GOSSE: Counsel, you are pushing the</p> <p>9 edge of relevance with respect to this</p> <p>10 declaration.</p> <p>11 If you want to ask about infringement</p> <p>12 claim construction positions, that might be</p> <p>13 something for a different deposition. So I just</p> <p>14 counsel you, if you want to know what he's</p> <p>15 thinking it means great, but he's given you some</p> <p>16 testimony on that.</p> <p>17 MR. CRUDO: Thank you. I appreciate</p> <p>18 that.</p> <p>19 We're not trying to probe infringement</p> <p>20 construction positions. Rather, we're trying to</p> <p>21 understand what the term -- what Dr. Martin</p> <p>22 understands the term "BIOS" to mean in paragraph</p>

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<p style="text-align: right;">69</p> <p>1 61 and 62 of his declaration.</p> <p>2 BY MR. CRUDO:</p> <p>3 Q. Dr. Martin, you just quoted from, I</p> <p>4 believe it was column five, line 11 of the '941</p> <p>5 patent. And that passage referred to the ROM</p> <p>6 section of the BIOS.</p> <p>7 What do you understand the term "section</p> <p>8 of the BIOS" to mean?</p> <p>9 MR. GOSSE: Object to the form.</p> <p>10 THE WITNESS: I can see the term ROM</p> <p>11 section of the BIOS here in column five at line --</p> <p>12 I guess it's, 13.</p> <p>13 What that indicates to me is that this</p> <p>14 passage is communicating that the BIOS has a ROM</p> <p>15 section. There is a ROM component of the BIOS,</p> <p>16 but that it's not the only part or section of the</p> <p>17 BIOS.</p> <p>18 BY MR. CRUDO:</p> <p>19 Q. I apologize. I'm genuinely confused</p> <p>20 here, and I'm trying to resolve that.</p> <p>21 But just a moment ago you testified that</p> <p>22 BIOS was software, that it contains software</p>	<p style="text-align: right;">71</p> <p>1 THE WITNESS: When I think of the term</p> <p>2 "memory of the BIOS", I think of Claim 1 and its</p> <p>3 use of that phrase. It recites erasable,</p> <p>4 non-volatile memory of a BIOS or memory area of a</p> <p>5 BIOS.</p> <p>6 And now taking that term and looking at</p> <p>7 Figure 1, I see Figure 1 being described in column</p> <p>8 five as having both the first non-volatile area 4</p> <p>9 EG, the ROM section of the BIOS, and a second</p> <p>10 non-volatile area 5 EG, the E²PROM section of the</p> <p>11 BIOS. And further a volatile memory area 6.</p> <p>12 So given this description that identifies</p> <p>13 two different non-volatile memory areas and</p> <p>14 associates them both with sections of the BIOS,</p> <p>15 those seem to be the closest thing that comes to</p> <p>16 mind for the term "memory of the BIOS" looking at</p> <p>17 Figure 1, armed with this self-incrimination</p> <p>18 column five, you would think of one of those two</p> <p>19 areas or both of them.</p> <p>20 BY MR. CRUDO:</p> <p>21 Q. Is BIOS stored in the memory space</p> <p>22 labeled 5 in Figure 1?</p>
<p style="text-align: right;">70</p> <p>1 routines. And just now --</p> <p>2 MR. GOSSE: Object to the form.</p> <p>3 BY MR. CRUDO:</p> <p>4 Q. Just now you referred to BIOS as having a</p> <p>5 ROM section, which to me suggests hardware.</p> <p>6 Can you clarify what you mean by BIOS?</p> <p>7 A. Again, I need to know what context we're</p> <p>8 discussing. Here we've been discussing column</p> <p>9 five, and what it is communicating to a reader.</p> <p>10 Previously, I was discussing Claim 1 and</p> <p>11 its use of the term "erasable, non-volatile memory</p> <p>12 of the BIOS", which is not exactly what is being</p> <p>13 discussed here in column five.</p> <p>14 So maybe that explains why there seems to</p> <p>15 be a disconnect. If we can narrow down to which</p> <p>16 thing we're talking about, I'm happy to take up</p> <p>17 the question.</p> <p>18 Q. Well, let's start with Figure 1.</p> <p>19 When we're talking about memory of the</p> <p>20 BIOS, what does that phrase mean to you in the</p> <p>21 context of Figure 1?</p> <p>22 MR. GOSSE: Object to the form.</p>	<p style="text-align: right;">72</p> <p>1 MR. GOSSE: Object to the form.</p> <p>2 THE WITNESS: I don't see the description</p> <p>3 of Figure 1 in column five as answering that</p> <p>4 question. It may be; it may not be. It doesn't</p> <p>5 seem to be relevant to the description of the</p> <p>6 preferred embodiment in column five.</p> <p>7 BY MR. CRUDO:</p> <p>8 Q. If BIOS is not stored in either of the</p> <p>9 memory space labeled 4 or the memory space labeled</p> <p>10 5, then how are those memory spaces memory of the</p> <p>11 BIOS?</p> <p>12 MR. GOSSE: Object to the form.</p> <p>13 THE WITNESS: As I think I explained</p> <p>14 before, a person of ordinary skill reading this</p> <p>15 passage from column five about Figure 1, would</p> <p>16 likely imagine that some instructions of the BIOS</p> <p>17 may be stored in the ROM area. However, this</p> <p>18 passage in column five does not appear to strictly</p> <p>19 require that.</p> <p>20 Another possibility is that the</p> <p>21 constructions to the BIOS could be stored in the</p> <p>22 second non-volatile memory labeled 5 but, again,</p>

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<p style="text-align: right;">73</p> <p>1 this passage does not strictly require that.</p> <p>2 However, these memory areas could also</p> <p>3 contain configuration or control information that</p> <p>4 determines how the operations of the BIOS are</p> <p>5 carried out.</p> <p>6 That is a way in which -- an additional</p> <p>7 way in which they may be considered memory of the</p> <p>8 BIOS.</p> <p>9 BY MR. CRUDO:</p> <p>10 Q. Is it possible for BIOS routines to be</p> <p>11 stored in both memory space 4 and memory space</p> <p>12 5?</p> <p>13 A. I am not aware of any reason why the</p> <p>14 description in the '941 patent would exclude that</p> <p>15 possibility. It does seem like constructions</p> <p>16 corresponding to the BIOS could be stored in</p> <p>17 either area 4 or area 5 or both or elsewhere.</p> <p>18 Q. And memory space 5 also includes license</p> <p>19 records labeled element 9, I believe, in Figure 1;</p> <p>20 is that right?</p> <p>21 A. I do see that area labeled 9 with the</p> <p>22 caption "license records". This is described</p>	<p style="text-align: right;">75</p> <p>1 about it, so you have to tell me whether it does</p> <p>2 or it doesn't.</p> <p>3 MR. GOSSE: Object to the form.</p> <p>4 BY MR. CANAVERA:</p> <p>5 Q. That's fair. Let me rephrase the</p> <p>6 question.</p> <p>7 If there were BIOS stored in memory space</p> <p>8 5, that BIOS could not occupy the same area as the</p> <p>9 license record 9; is that right? Is that a fair</p> <p>10 characterization?</p> <p>11 MR. GOSSE: Object to the form.</p> <p>12 THE WITNESS: I do not understand what</p> <p>13 you're getting at. It sounds like you're</p> <p>14 asking -- no, I don't understand what you're</p> <p>15 asking exactly, and I can't respond.</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. Memory space 5 accommodates both license</p> <p>18 record 9 and BIOS; is that correct?</p> <p>19 A. I think that's basically fair. Column</p> <p>20 five describes non-volatile memory area 5 as being</p> <p>21 EG the E²PROM section of the BIOS, while also at</p> <p>22 line 25, column five identifies a licensed record</p>
<p style="text-align: right;">74</p> <p>1 starting at line 25 of column five where it's</p> <p>2 described as a licensed record area 9.</p> <p>3 Q. What is a licensed record?</p> <p>4 MR. GOSSE: Object to the form.</p> <p>5 THE WITNESS: Again, I'm looking at my</p> <p>6 declaration starting on page 25, which discusses</p> <p>7 the constructions of the term "license record".</p> <p>8 And we have four different constructions and four</p> <p>9 different proceedings identified here on 25 going</p> <p>10 into page 26. I will read just one of them from</p> <p>11 the LG case.</p> <p>12 It's the second to last row on page 25</p> <p>13 where the court construed license record as "Data</p> <p>14 associated with the licensed program with</p> <p>15 information for verifying that licensed program".</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. So assume for the purposes of my next</p> <p>18 question that BIOS is stored in memory space 5</p> <p>19 shown in Figure 1.</p> <p>20 Would that BIOS occupy the entirety of</p> <p>21 memory space 5?</p> <p>22 A. You're asking me to assume something</p>	<p style="text-align: right;">76</p> <p>1 area 9, which is depicted in Figure 1, also being</p> <p>2 in non-volatile memory area 5. So 5 can</p> <p>3 accommodate both of these constraints.</p> <p>4 Q. In paragraph 62 of your declaration, you</p> <p>5 refer to BIOS memory.</p> <p>6 Do you see that?</p> <p>7 A. I do. Yes.</p> <p>8 Q. And are you using the phrase "BIOS</p> <p>9 memory" to refer to memory of the BIOS?</p> <p>10 MR. GOSSE: Object to the form.</p> <p>11 THE WITNESS: I was not intending to</p> <p>12 specifically address the meaning of the term</p> <p>13 "memory of the BIOS" or "memory area of the BIOS"</p> <p>14 as contained in Claim 1, but there is significant</p> <p>15 overlap between the concepts.</p> <p>16 In paragraph 62, I am talking about what</p> <p>17 was typically done at the time reflected by the</p> <p>18 definition that I quoted from the Microsoft</p> <p>19 definition.</p> <p>20 BY MR. CRUDO:</p> <p>21 Q. When you say that there is significant</p> <p>22 overlap between BIOS memory and memory of the</p>

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<p style="text-align: right;">77</p> <p>1 BIOS, what do you mean by that?</p> <p>2 MR. GOSSE: Object to the form.</p> <p>3 THE WITNESS: I mean, for example, that</p> <p>4 the memory of the BIOS as recited in Claim 1 could</p> <p>5 include code. That is the instructions of the</p> <p>6 BIOS as I -- and then in 62, I also mention that</p> <p>7 BIOS memory, therefore, was typically used for</p> <p>8 storing code. So that's an overlap.</p> <p>9 And in addition, in paragraph 62, I say</p> <p>10 that BIOS memory, therefore, was typically used</p> <p>11 also for other configuration data that assisted in</p> <p>12 the start up and operation of a computer.</p> <p>13 Those are also aspects of what can be</p> <p>14 held in memory of the BIOS. So that's another</p> <p>15 significant overlap.</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. And just to make sure that I understand</p> <p>18 your testimony, going back to Figure 1, BIOS</p> <p>19 routines and license records could both be stored</p> <p>20 in memory space 5 shown in Figure 1; is that</p> <p>21 correct?</p> <p>22 A. As I look at Figure 1, I see that it</p>	<p style="text-align: right;">79</p> <p>1 Q. Okay. And earlier today I believe you</p> <p>2 referenced E²PROM or E²PROM.</p> <p>3 Do you recall that?</p> <p>4 A. Yes, I do.</p> <p>5 Q. What is E²PROM?</p> <p>6 A. It's written E with a superscript 2 in</p> <p>7 the patent, and that's why I've been calling it</p> <p>8 E²PROM. Sometimes people will simply call it E²,</p> <p>9 and this refers to other electronically erasable</p> <p>10 programmable, read memory only.</p> <p>11 Q. Can BIOS be stored in E²PROM?</p> <p>12 MR. GOSSE: Object to the form.</p> <p>13 THE WITNESS: I'm not aware of any</p> <p>14 description in this area of the '941 patent in</p> <p>15 column five that would exclude the possibility of</p> <p>16 storing instructions that constitute the software</p> <p>17 part of the BIOS in the E² memory.</p> <p>18 However, I also, as I recall the '941</p> <p>19 patent, I don't -- I don't clearly recall it</p> <p>20 teaching that's where it would or should go. It's</p> <p>21 more that I don't recall it saying that it cannot</p> <p>22 go there. That BIOS instructions, individual</p>
<p style="text-align: right;">78</p> <p>1 literally shows license record area 9 being within</p> <p>2 the non-volatile memory area 5. So we start from</p> <p>3 that, and now I think that there is nothing in</p> <p>4 this first paragraph of the detailed embodiment of</p> <p>5 a preferred -- sorry.</p> <p>6 In this first paragraph of the detailed</p> <p>7 description of a preferred embodiment of column</p> <p>8 five that excludes the possibility of having</p> <p>9 instructions of the BIOS stored also in this</p> <p>10 non-volatile memory area 5.</p> <p>11 Q. So BIOS routines and license records</p> <p>12 could both be stored in memory space 5, correct?</p> <p>13 MR. GOSSE: Object to the form.</p> <p>14 THE WITNESS: As I look at Figure 1 and</p> <p>15 the description of this paragraph of column five,</p> <p>16 starting at line 11 and going through about line</p> <p>17 16 -- oh, sorry. Going through about line 27 or</p> <p>18 28, I think this description of Figure 1 allows</p> <p>19 for the possibility of storing both instructions</p> <p>20 of the BIOS and the license record area 9 within</p> <p>21 non-volatile memory 5.</p> <p>22 BY MR. CRUDO:</p>	<p style="text-align: right;">80</p> <p>1 instructions, could not go in an E²PROM memory.</p> <p>2 BY MR. CRUDO:</p> <p>3 Q. Setting aside the '941 patent for just a</p> <p>4 moment.</p> <p>5 As a general matter can BIOS be squared</p> <p>6 in E²PROM?</p> <p>7 MR. GOSSE: Object to the form.</p> <p>8 THE WITNESS: Well, as a general matter,</p> <p>9 it seems possible to me that individual</p> <p>10 instructions corresponding to the operations of</p> <p>11 the BIOS is consistent with the claim</p> <p>12 constructions of BIOS that we've previously</p> <p>13 discussed. Those individual instructions could</p> <p>14 generally be stored in E²PROM memory under</p> <p>15 appropriate circumstances.</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. Would you expect a general purpose</p> <p>18 computer in 1998 to have E²PROM?</p> <p>19 MR. GOSSE: Object to the form.</p> <p>20 THE WITNESS: This is sort of an awfully</p> <p>21 broad category. And it's difficult to answer</p> <p>22 generally about a general computer, and what my</p>

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<p style="text-align: right;">81</p> <p>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?</p>	<p style="text-align: right;">83</p> <p>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</p>
<p style="text-align: right;">82</p> <p>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:</p>	<p style="text-align: right;">84</p> <p>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</p>

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<p style="text-align: right;">85</p> <p>1 to paragraph 143 of your declaration.</p> <p>2 A. Yes, I see it.</p> <p>3 Q. You say here that, "Hellman does not</p> <p>4 disclose any BIOS or any other operating system or</p> <p>5 OS level software."</p> <p>6 Is that your opinion that Hellman does</p> <p>7 not disclose any BIOS?</p> <p>8 A. This sounds correct to me, as I stated it</p> <p>9 in paragraph 143. This is a summary, of course,</p> <p>10 because – actually, I'd like to look at my other</p> <p>11 references to Hellman as well on this term BIOS,</p> <p>12 so I'm doing that now.</p> <p>13 I also make a similar statement in</p> <p>14 paragraph 178 with reference back to paragraph</p> <p>15 143. And this is specifically what I say in 178</p> <p>16 as stated above in paragraph 143, "Hellman does</p> <p>17 not disclose an operating system or a BIOS."</p> <p>18 That's consistent with my recollection of</p> <p>19 Hellman. I don't – I certainly don't recall</p> <p>20 Hellman using the term "BIOS", nor do I recall</p> <p>21 Hellman addressing the substance of the claim</p> <p>22 construction of BIOS</p>	<p style="text-align: right;">87</p> <p>1 three where it mentioned BIOS EEPROM 15. That's</p> <p>2 another way to spell E²PROM.</p> <p>3 Q. Understood. I'd like to switch gears a</p> <p>4 little bit.</p> <p>5 Dr. Martin, would you like to take</p> <p>6 another break or are you okay to keep going?</p> <p>7 A. I'm happy to go for a while longer.</p> <p>8 Thank you for asking.</p> <p>9 Q. Sure. No problem.</p> <p>10 And, David, that's fine with you?</p> <p>11 MR. GOSSE: Sure. Yeah.</p> <p>12 BY MR. CRUDO:</p> <p>13 Q. Dr. Martin, I would like for you to turn</p> <p>14 to paragraph 129 of your declaration.</p> <p>15 A. I'm looking at it, yes.</p> <p>16 Q. And specifically the last sentence of</p> <p>17 paragraph 129, which appears on page 78 of your</p> <p>18 declaration.</p> <p>19 And that sentence says, "Consistent with</p> <p>20 these statements, a person of ordinary skill in</p> <p>21 the art would recognize that the plain regent must</p> <p>22 run at the OS level and be capable of writing to</p>
<p style="text-align: right;">86</p> <p>1 Q. Does Hellman disclose storing data in</p> <p>2 BIOS?</p> <p>3 A. Again, my recollection is that Hellman is</p> <p>4 silent on the question of BIOS. I discussed this,</p> <p>5 for example, in paragraph 183 and 182.</p> <p>6 So given no indication that I'm aware of</p> <p>7 in Hellman or that I understand has been raised in</p> <p>8 this case that I was responding to, I don't see</p> <p>9 how Hellman would be considered to be storing data</p> <p>10 in BIOS.</p> <p>11 Q. Does the prior art reference Chou</p> <p>12 disclose BIOS?</p> <p>13 MR. GOSSE: And I'll object to the</p> <p>14 form.</p> <p>15 THE WITNESS: Chou as described in</p> <p>16 Exhibit 1005, does mention BIOS many times in its</p> <p>17 disclosure.</p> <p>18 BY MR. CRUDO:</p> <p>19 Q. You would agree that Chou also mentions</p> <p>20 E²PROM, correct?</p> <p>21 A. Yes. For example, in my paragraph 144</p> <p>22 introducing Chou, I quote from Chou at column</p>	<p style="text-align: right;">88</p> <p>1 memory of the BIOS."</p> <p>2 Do you see that?</p> <p>3 A. I do see that sentence.</p> <p>4 Q. Is that the definition that you used of</p> <p>5 agent in your analysis?</p> <p>6 A. I wouldn't say that is the definition of</p> <p>7 agent that I used. However, it is a constraint</p> <p>8 upon the agent that is – that I've applied in my</p> <p>9 analysis as discussed in this section of my report</p> <p>10 that starts back on page 74 at paragraph 121 with</p> <p>11 many citations to many findings and rulings about</p> <p>12 the agent in question.</p> <p>13 Q. But is that the meaning of the word</p> <p>14 "agent" that you applied in your analysis?</p> <p>15 A. This is an aspect of agent that I applied</p> <p>16 in my analysis. However, it's not the only aspect</p> <p>17 of agent that I applied in my analysis.</p> <p>18 As we've previously discussed, there is</p> <p>19 also the description of agent within LG court's</p> <p>20 construction of the longer term using an agent to</p> <p>21 set up a verification structure that I also</p> <p>22 applied in the analysis in my declaration.</p>

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<p>89</p> <p>1 Q. This sentence that we just read in</p> <p>2 paragraph 129, do you believe that is consistent</p> <p>3 with the construction for agent that Ancora has</p> <p>4 advanced in this IPR?</p> <p>5 MR. GOSSE: Object to the form.</p> <p>6 THE WITNESS: Could you refer me</p> <p>7 specifically to the construction that Ancora has</p> <p>8 advanced so that I can address your question?</p> <p>9 BY MR. CRUDO:</p> <p>10 Q. Sitting here now, do you know which --</p> <p>11 let me strike that.</p> <p>12 Sitting here today, are you aware that</p> <p>13 Ancora has advanced a construction for the term</p> <p>14 "agent" in this IPR?</p> <p>15 A. I do not, sitting here today, recall what</p> <p>16 Ancora's briefing in this IPR may have said about</p> <p>17 the term "agent" in perfect detail. So I could</p> <p>18 not recite to you, for example, a proposed</p> <p>19 construction of agent from memory.</p> <p>20 To the extent that it has been proposed,</p> <p>21 I'm sure we could find it in materials in the box</p> <p>22 or in the folder.</p>	<p>91</p> <p>1 word agent is narrower than the district court's</p> <p>2 construction in the LG case?</p> <p>3 MR. GOSSE: Object to the form.</p> <p>4 THE WITNESS: My recollection of the</p> <p>5 construction in the LG case is that we have the</p> <p>6 words that I put in my declaration on page 28 from</p> <p>7 the LG case, but there is the court's description</p> <p>8 of the requirements of the agent in that case.</p> <p>9 And as a legal matter, I don't know</p> <p>10 whether that is part of the construction or rather</p> <p>11 it's -- whether it's a separate constraint that</p> <p>12 the court was intending to enforce on that term.</p> <p>13 When I prepared my declaration, I only</p> <p>14 pasted these words in this box. I did not paste</p> <p>15 in the court's entire discussion of this.</p> <p>16 However, I did cite -- I recall that I did cite to</p> <p>17 some such discussion in my declaration here in</p> <p>18 this section beginning on page 74.</p> <p>19 BY MR. CRUDO:</p> <p>20 Q. I'd like to just focus on the court's</p> <p>21 construction set forth on pages 28 and 29 of your</p> <p>22 declaration.</p>
<p>90</p> <p>1 Q. So it's possible that your understanding</p> <p>2 of the word agent is inconsistent with the</p> <p>3 arguments that Ancora has made in these IPRs?</p> <p>4 MR. GOSSE: Objection to the form.</p> <p>5 You're mischaracterizing the witness's testimony.</p> <p>6 Come on. Show him the papers or move on.</p> <p>7 BY MR. CRUDO:</p> <p>8 Q. Can you answer the question,</p> <p>9 Dr. Martin?</p> <p>10 A. Can you repeat it for me, please?</p> <p>11 Q. Is it possible that your understanding of</p> <p>12 the word agent is inconsistent with the arguments</p> <p>13 that Ancora has made in these IPRs?</p> <p>14 MR. GOSSE: Same objection.</p> <p>15 THE WITNESS: I can't answer -- I can't</p> <p>16 answer that question without reference to the</p> <p>17 construction that you're referring to. Otherwise,</p> <p>18 it would just be speculation.</p> <p>19 BY MR. CRUDO:</p> <p>20 Q. Okay. Turning back to this last sentence</p> <p>21 in paragraph 129, do you believe that this</p> <p>22 understanding set forth in this sentence of the</p>	<p>92</p> <p>1 On those pages, you have quoted the court</p> <p>2 as saying, "The plain and ordinary meaning of</p> <p>3 agent is a software program or routine"; is that</p> <p>4 correct?</p> <p>5 MR. GOSSE: Object to the form.</p> <p>6 THE WITNESS: That is part of the</p> <p>7 description of the construction of using an agent</p> <p>8 to set up a verification structure in the</p> <p>9 erasable, non-volatile memory of the BIOS.</p> <p>10 My recollection is there is no</p> <p>11 stand-alone construction of the term "agent" in</p> <p>12 the LG case. Rather, there is this sort of</p> <p>13 embedded explanation within a longer term together</p> <p>14 with the court's other reasoning in its opinions</p> <p>15 in that case.</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. Would you agree that a software program</p> <p>18 or routine is broader than OS level software</p> <p>19 program or routine?</p> <p>20 A. Generally speaking, I would agree that if</p> <p>21 you're discussing simply a software routine</p> <p>22 without any further constraints on it, that I</p>

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<p style="text-align: right;">93</p> <p>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.</p>	<p style="text-align: right;">95</p> <p>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?</p>
<p style="text-align: right;">94</p> <p>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.</p>	<p style="text-align: right;">96</p> <p>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?</p>

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<p style="text-align: right;">97</p> <p>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</p>	<p style="text-align: right;">99</p> <p>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</p>
<p style="text-align: right;">98</p> <p>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</p>	<p style="text-align: right;">100</p> <p>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.</p>

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<p style="text-align: right;">101</p> <p>1 I have not, in my declaration, attempted</p> <p>2 to create a stand-alone definition of the OS</p> <p>3 level. But that explanation that I just gave is</p> <p>4 consistent with -- I believe with how I used the</p> <p>5 term in my declaration, and with what I understand</p> <p>6 these previous references by the examiner and</p> <p>7 applicants and other parties to have meant.</p> <p>8 Q. So I'd like to just unpack that to make</p> <p>9 sure I understand.</p> <p>10 A. Yes.</p> <p>11 Q. OS level software is not itself the OS;</p> <p>12 is that correct?</p> <p>13 A. When I used the term "OS level" and when</p> <p>14 I understood others to be using the term "OS</p> <p>15 level" as cited in my report, I agree that they</p> <p>16 were not referring to simply only the software</p> <p>17 that is considered strictly part of the operating</p> <p>18 system. So to that extent I agree.</p> <p>19 Q. Does OS level software operate through</p> <p>20 the operating system?</p> <p>21 MR. GOSSE: Object to the form.</p> <p>22 THE WITNESS: Yes, I would agree that as</p>	<p style="text-align: right;">103</p> <p>1 A. As the term has been used in these</p> <p>2 proceedings to date, and as I've used the term in</p> <p>3 my declaration, I would consider Lotus 1-2-3 to be</p> <p>4 an application program that does run at the OS</p> <p>5 level, in that it relies on the OS services for</p> <p>6 its operation, and those services which are</p> <p>7 available because the operating system has</p> <p>8 started.</p> <p>9 Q. Does the OS level differ from BIOS</p> <p>10 level?</p> <p>11 A. As I would use those terms, yes, I would</p> <p>12 consider them to be different in the context of</p> <p>13 this proceeding because, as we've previously</p> <p>14 discussed, one of the BIOS's operations, one of</p> <p>15 its essential start-up operations, is to start the</p> <p>16 operating system.</p> <p>17 And so there is, in that sense, a moment</p> <p>18 of transition when the operating system first</p> <p>19 starts running, its services become available, and</p> <p>20 then an application could rely on those services.</p> <p>21 When they do so, they're relying on the OS level</p> <p>22 services, not the BIOS configuration utility that</p>
<p style="text-align: right;">102</p> <p>1 I've used the term "OS level", and as I've</p> <p>2 understood others to be using the term as cited in</p> <p>3 my report, OS level software can be thought of as</p> <p>4 running through the operating system.</p> <p>5 I think that's consistent with what I've</p> <p>6 previously explained as that the software in</p> <p>7 question is relying on operating system services</p> <p>8 and is doing so after the operating system is</p> <p>9 running.</p> <p>10 BY MR. CRUDO:</p> <p>11 Q. How would one determine whether any</p> <p>12 particular program is an OS level program?</p> <p>13 A. Well, if you give me your program and the</p> <p>14 environment in which it runs, then I would look to</p> <p>15 see how that program is coupled to the environment</p> <p>16 in order to determine whether -- when it runs, it</p> <p>17 is running so in a manner that makes it OS level.</p> <p>18 Consistent with my previous explanation of what OS</p> <p>19 level connotes.</p> <p>20 Q. You've referred previously to Lotus 1-2-3</p> <p>21 referenced in the '941 patent.</p> <p>22 Is Lotus 1-2-3 an OS level program?</p>	<p style="text-align: right;">104</p> <p>1 may launch when the computer is first turned on,</p> <p>2 for example.</p> <p>3 Q. And just to be clear, if the program runs</p> <p>4 at the OS level, does that mean it's an OS level</p> <p>5 program?</p> <p>6 MR. GOSSE: Object to the form.</p> <p>7 THE WITNESS: Yeah, I would want to look</p> <p>8 more specifically at the phrasing used in</p> <p>9 question. That sounds like there's something</p> <p>10 special going on in the phrasing that I don't</p> <p>11 understand. So it's difficult for me to</p> <p>12 understand.</p> <p>13 BY MR. CRUDO:</p> <p>14 Q. Oh, sure.</p> <p>15 So the last sentence of paragraph 129 of</p> <p>16 your declaration, you refer to that an agent must</p> <p>17 run at the OS level. So that's your terminology.</p> <p>18 And we've been talking about OS level</p> <p>19 programs generally. So I'm just trying to confirm</p> <p>20 that they're one in the same?</p> <p>21 A. I don't see my description of OS -- or I</p> <p>22 don't see the last sentence of paragraph 129 and</p>

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<p style="text-align: right;">105</p> <p>1 the use of the term "OS level" as being</p> <p>2 inconsistent with what we've just been discussing</p> <p>3 about what constitutes OS level.</p> <p>4 So, again, an application can run at the</p> <p>5 OS level in that it relies on OS services. So</p> <p>6 software that relies on the OS services that are</p> <p>7 available because the operating system has</p> <p>8 started. That is what I have understood as the</p> <p>9 term "OS level" to mean. Both in my declaration</p> <p>10 and in the materials cited.</p> <p>11 Q. And if you turn to Figure 1 of the '941</p> <p>12 patent that we were looking at.</p> <p>13 A. Yes.</p> <p>14 Q. There is an element there labeled 16,</p> <p>15 license program.</p> <p>16 Do you see that?</p> <p>17 A. I do.</p> <p>18 Q. Is that license program an OS level</p> <p>19 program?</p> <p>20 A. At column five, we were previously</p> <p>21 discussing Lotus 1-2-3 and that section of column</p> <p>22 five starting at line 25, the specification</p>	<p style="text-align: right;">107</p> <p>1 verification structure -- and I have that on page</p> <p>2 28 and 29 of my declaration -- we have the agent</p> <p>3 being a software program or a team so it has to</p> <p>4 run on some computer.</p> <p>5 And, additionally, it's clear that this</p> <p>6 agent has to set up the verification structure in</p> <p>7 the erasable, non-volatile memory of the BIOS.</p> <p>8 So to that extent, yes, the agent must</p> <p>9 run, at least in part, on the computer that is</p> <p>10 recited in Claim 1.</p> <p>11 BY MR. CRUDO:</p> <p>12 Q. Can the agent run on a computer other</p> <p>13 than the one recited in Claim 1?</p> <p>14 A. It seems to me possible that the -- let</p> <p>15 me rephrase.</p> <p>16 Yes, the agent can run a computer other</p> <p>17 than the computer cited in Claim 1. That is,</p> <p>18 there is nothing that I see in Claim 1 that says</p> <p>19 that the agent must not rely on any information</p> <p>20 from elsewhere as part of its operation as an</p> <p>21 agent.</p> <p>22 However, if we think back to paragraph</p>
<p style="text-align: right;">106</p> <p>1 identifies a license program 16, having license</p> <p>2 record fields 13 through 15 appended thereto. And</p> <p>3 then it describes what's in those license record</p> <p>4 fields. That's where we came up with Lotus as an</p> <p>5 example.</p> <p>6 So I would understand this description of</p> <p>7 Figure 1 to -- as we've previously discussed,</p> <p>8 relates to software Lotus 1-2-3 that would run at</p> <p>9 the OS level. There's much other software that</p> <p>10 would run at the OS level as well, but Lotus 1-2-3</p> <p>11 could be an example of that.</p> <p>12 Q. Does the claimed agent run on the user's</p> <p>13 computer?</p> <p>14 MR. GOSSE: Object to the form.</p> <p>15 THE WITNESS: I'm trying to think of the</p> <p>16 best place in my declaration that might address</p> <p>17 this.</p> <p>18 I would say that the agent that is</p> <p>19 claimed in the '941 patent claims does run on the</p> <p>20 computer recited, for example, in Claim 1.</p> <p>21 And one way we can see this is that in</p> <p>22 the construction of using an agent to set up a</p>	<p style="text-align: right;">108</p> <p>1 129 of my declaration, my understanding is that in</p> <p>2 the discussion of its agent and needing to run at</p> <p>3 the OS level, that refers to the portion of the</p> <p>4 agent that is running on the computer holding the</p> <p>5 BIOS with the erasable, non-volatile memory as</p> <p>6 opposed to any other computer.</p> <p>7 Q. Is it your view that an agent can be</p> <p>8 contributed across more than one computer?</p> <p>9 A. As I sit here today, I can imagine</p> <p>10 someone identifying an agent that is -- that has</p> <p>11 running parts on more than one computer that</p> <p>12 otherwise fulfills the requirement of agent in</p> <p>13 Claim 1, because the portion of the agent running</p> <p>14 on the computer with the erasable, non-volatile</p> <p>15 memory area is running at the OS level.</p> <p>16 So with that constraint, also that it be</p> <p>17 a software program or routine, I don't see any</p> <p>18 further constraints saying that you could not</p> <p>19 characterize the agent as also running in some</p> <p>20 sort of distributed fashion on another computer.</p> <p>21 MR. GOSSE: I don't want to interrupt the</p> <p>22 flow here too much, but we've been going now for</p>

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<p>109</p> <p>1 an hour and 45 minutes. I can see the court</p> <p>2 reporter at least is tired, and I know my tail is</p> <p>3 tired. Whenever you hit on a good opportunity,</p> <p>4 maybe in a question or two.</p> <p>5 MR. CRUDO: Yes, absolutely. I was going</p> <p>6 to ask one more question, and we can go on a lunch</p> <p>7 break, if that's okay with everybody.</p> <p>8 BY MR. CRUDO:</p> <p>9 Q. Dr. Martin, would you agree that OS level</p> <p>10 programs, as you understand that term, were known</p> <p>11 in the art as of 1998?</p> <p>12 A. Yes, I do agree that in 1998, it was</p> <p>13 known that programs could run that would rely on</p> <p>14 operating system services that are available</p> <p>15 because the operating system has been started.</p> <p>16 And so in that sense, yes, OS level programs were</p> <p>17 known at that time.</p> <p>18 MR. CRUDO: Understood. Great.</p> <p>19 I think now is a good time for lunch, if</p> <p>20 that's okay with everybody?</p> <p>21 THE WITNESS: Works for me.</p> <p>22 THE STENOGRAPHER: I will take us off the</p>	<p>111</p> <p>1 right.</p> <p>2 Q. Okay.</p> <p>3 A. Let me see how I can explain this.</p> <p>4 First, I don't recall having specifically</p> <p>5 considered the question of whether the agent</p> <p>6 that's claimed is itself something that would be</p> <p>7 present on multiple computers or part of a</p> <p>8 distributed program.</p> <p>9 However, when I look at the claim</p> <p>10 language and the construction for agent, I see the</p> <p>11 constraint that it be a software program or</p> <p>12 routine. And I see that the further constraint</p> <p>13 that it run at the OS level.</p> <p>14 And I understand that to mean that at</p> <p>15 least that portion of the agent must run at the OS</p> <p>16 level on the device that contains the recited</p> <p>17 erasable, non-volatile memory area of the BIOS of</p> <p>18 the computer.</p> <p>19 So it may be possible that the agent also</p> <p>20 has separate components that are running on</p> <p>21 different computers that it's in communication</p> <p>22 with, such as by a distributed program. I don't</p>
<p>110</p> <p>1 record. The time is 11:15 a.m.</p> <p>2 (Off the record 11:15 a.m. - 12:00 p.m.)</p> <p>3 THE STENOGRAPHER: We are on the record.</p> <p>4 The time is 12:00 p.m.</p> <p>5 BY MR. CRUDO:</p> <p>6 Q. Welcome back, Dr. Martin.</p> <p>7 A. Thank you.</p> <p>8 Q. Before the break, we were discussing</p> <p>9 whether an agent can be distributed across more</p> <p>10 than one computer.</p> <p>11 Do you recall that?</p> <p>12 A. Yes, I do.</p> <p>13 Q. And I want to make sure I understand your</p> <p>14 answer. And please correct me if I'm wrong.</p> <p>15 But you seem to suggest that, as long as</p> <p>16 a portion of the agent is running on the computer</p> <p>17 having erasable, non-volatile memory at the OS</p> <p>18 level, that would qualify as an agent even if it</p> <p>19 includes other portions on other computers; is</p> <p>20 that an accurate characterization of your</p> <p>21 testimony?</p> <p>22 A. It's close, but I don't think it's quite</p>	<p>112</p> <p>1 recall that specifically having been addressed</p> <p>2 before.</p> <p>3 And I realize in this discussion, this</p> <p>4 may come down to a claim construction issue that</p> <p>5 hasn't been squarely addressed in my recollection</p> <p>6 anyway.</p> <p>7 I also want to mention that Claim 3</p> <p>8 appears to be relevant here too because Claim 3</p> <p>9 recites a method that's dependent on Claim 1 that</p> <p>10 says, "Wherein setting up a verification structure</p> <p>11 further comprising the steps of establishing</p> <p>12 between the computer and the bureau, a two-way</p> <p>13 communications linkage", and there's many further</p> <p>14 limitations of what happens over that</p> <p>15 communications linkage.</p> <p>16 That Claim 2 is providing a further</p> <p>17 constraint on how the setting up of the</p> <p>18 verification structure happens, and that is an</p> <p>19 action of the agent.</p> <p>20 So, certainly, Claim 3 indicates that the</p> <p>21 setting up of the verification structure may</p> <p>22 involve multiple computers.</p>

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<p>113</p> <p>1 And I see a way in which the agent may be</p> <p>2 identified as comprising both of those parts or</p> <p>3 maybe only part of that two-computer</p> <p>4 communication. Anyway, I think this might come</p> <p>5 down to a claim construction issue.</p> <p>6 Q. You referenced Claim 3 of the '941 patent</p> <p>7 which refers to a bureau?</p> <p>8 A. Yes.</p> <p>9 Q. Is that the License Authentication Bureau</p> <p>10 recited in Claim 2?</p> <p>11 MR. GOSSE: Object to the form.</p> <p>12 THE WITNESS: My reading of Claim 3 in</p> <p>13 its mention of the bureau, I do understand it to</p> <p>14 be referring to the Licensing Authentication</p> <p>15 Bureau, which is described in Claim 2, which is</p> <p>16 further dependent on Claim 1.</p> <p>17 BY MR. CRUDO:</p> <p>18 Q. What is the License Authentication</p> <p>19 Bureau?</p> <p>20 MR. GOSSE: Object to the form.</p> <p>21 THE WITNESS: There's a description of it</p> <p>22 in the '941 patent on -- at least on page three.</p>	<p>115</p> <p>1 positive based on the entirety of the disclosure</p> <p>2 that one would consider in interpreting that term.</p> <p>3 However, it stands to reason that any</p> <p>4 such telecommunications accessible processor</p> <p>5 having the behavior described and ascribed to the</p> <p>6 bureau, would be running on a piece of hardware</p> <p>7 that could be identified.</p> <p>8 Q. When you just referred to</p> <p>9 "telecommunications accessible processor", you</p> <p>10 were quoting column three, line 42 of the '941</p> <p>11 patent?</p> <p>12 A. That's correct. That's a place it</p> <p>13 appears.</p> <p>14 Q. And a processor is hardware, correct?</p> <p>15 A. I think a person in the ordinary skill of</p> <p>16 the art would understand this particular use of</p> <p>17 the processor of column three, line 42 that is</p> <p>18 likely referring to hardware.</p> <p>19 But, like I said, the term of the License</p> <p>20 Authentication Bureau as a whole, whether that</p> <p>21 refers specifically to hardware or not, I think is</p> <p>22 something I don't have a firm opinion on today.</p>
<p>114</p> <p>1 I also see it on page -- I'm sorry, column three.</p> <p>2 And I also see it on column five. It's in column</p> <p>3 four as well.</p> <p>4 So there's a fairly long description of</p> <p>5 the bureau and some of its capabilities. It's the</p> <p>6 entity described in the patent along those lines.</p> <p>7 We can go down to details, if you'd like.</p> <p>8 BY MR. CRUDO:</p> <p>9 Q. The License Authentication Bureau is</p> <p>10 hardware, correct?</p> <p>11 If it would help, I could direct you to</p> <p>12 column three, line 42 of the 941 patent.</p> <p>13 A. Yes, I see that.</p> <p>14 However, I'm not aware of this term</p> <p>15 having been construed or proposed for construction</p> <p>16 in any of the cases so far. Maybe it has been.</p> <p>17 This -- the bureau is described in the</p> <p>18 patent primarily in terms of its behavior rather</p> <p>19 than a description that I think is intended to say</p> <p>20 that it is hardware rather than software or vice</p> <p>21 versa for that matter.</p> <p>22 So, I guess the short answer is, I'm not</p>	<p>116</p> <p>1 Q. Dr. Martin, could you please turn to</p> <p>2 paragraph 174 of your declaration -- I'm sorry,</p> <p>3 paragraph 171?</p> <p>4 A. Yes, I do see that.</p> <p>5 Q. And do you see here in the first sentence</p> <p>6 of paragraph 171, you refer to the fact that</p> <p>7 Hellman's disclosure "would not bring to mind a</p> <p>8 pure software implementation"?</p> <p>9 A. Yes, I do see that.</p> <p>10 Q. What do you mean by "pure software</p> <p>11 implementation"?</p> <p>12 A. What I'm referring to here is, for</p> <p>13 example, a general purpose computer, which could</p> <p>14 accommodate any number of programs running on it,</p> <p>15 would not have a record player as part of that</p> <p>16 computer. That would be considered a separate</p> <p>17 hardware device.</p> <p>18 So I was simply pointing out the</p> <p>19 distinction between a general purpose computer</p> <p>20 that -- whose behavior really revolves around the</p> <p>21 software in the general purpose computer, and a</p> <p>22 record player, which is not generally part of a</p>

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<p>117</p> <p>1 general purpose computer.</p> <p>2 Q. A general purpose computer has hardware,</p> <p>3 correct?</p> <p>4 A. Yes, a general purpose computer, as I am</p> <p>5 referring to it here, has hardware consistent with</p> <p>6 the general purpose nature of that computer.</p> <p>7 Q. Can that hardware be included as part of</p> <p>8 an agent?</p> <p>9 MR. GOSSE: I'm going to object to the</p> <p>10 form.</p> <p>11 THE WITNESS: As I have used the term</p> <p>12 agent in my analysis, and as I understand the</p> <p>13 courts have considered agent, it is software -- a</p> <p>14 software program or routine, among other</p> <p>15 constraints.</p> <p>16 And so from that standpoint, it doesn't</p> <p>17 make sense to me to simply identify a piece of</p> <p>18 hardware that's not known to be software, it's</p> <p>19 simply hardware instead, and say that satisfies</p> <p>20 the requirements of agent. That doesn't make</p> <p>21 sense to me.</p> <p>22 BY MR. CRUDO:</p>	<p>119</p> <p>1 entity is software. Now -- yes, I don't see how</p> <p>2 you can do that and, actually, be faithful to the</p> <p>3 constraints of agent.</p> <p>4 Now, agent is used in the claims. There</p> <p>5 are other things going on in the claims. I don't</p> <p>6 see why it would be required to do what you are</p> <p>7 proposing. But, again, I don't see how something</p> <p>8 that is known to be hardware could satisfy the</p> <p>9 constraint of actually being software.</p> <p>10 BY MR. CRUDO:</p> <p>11 Q. So just to make sure I understand.</p> <p>12 It sounds like, in your view, agent is OS</p> <p>13 level software and no hardware; is that correct?</p> <p>14 A. Well, the claimed agent must run at the</p> <p>15 OS level, and it must be a software program or a</p> <p>16 routine at least that -- that's the combination of</p> <p>17 constraints that I applied in my analysis of what</p> <p>18 can satisfy the term agent or not.</p> <p>19 Q. Sorry. I'm not sure you answered my</p> <p>20 question.</p> <p>21 My question is, is agent limited to OS</p> <p>22 level software such that it can include no</p>
<p>118</p> <p>1 Q. But can an agent include a combination of</p> <p>2 hardware and software?</p> <p>3 MR. GOSSE: Object to the form.</p> <p>4 THE WITNESS: Sitting here today, I guess</p> <p>5 I would have difficulty looking at an</p> <p>6 identification of some entity that includes</p> <p>7 hardware and say that, yes, that entity, including</p> <p>8 hardware, is a software program or routine. That</p> <p>9 sounds difficult to me.</p> <p>10 BY MR. CRUDO:</p> <p>11 Q. But if the hardware were to run software,</p> <p>12 would the hardware/software combination be an</p> <p>13 agent?</p> <p>14 MR. GOSSE: Object to the form.</p> <p>15 MR. CRUDO: Let me rephrase that.</p> <p>16 BY MR. CRUDO:</p> <p>17 Q. If hardware were running software, can</p> <p>18 the hardware/software combination be an agent?</p> <p>19 MR. GOSSE: Object to the form.</p> <p>20 THE WITNESS: Again, I'm having trouble</p> <p>21 with the idea of looking at an entity that</p> <p>22 explicitly includes hardware and saying that that</p>	<p>120</p> <p>1 hardware?</p> <p>2 MR. GOSSE: Object to the form.</p> <p>3 THE WITNESS: I'm not sure how to answer</p> <p>4 this differently than I have before.</p> <p>5 The understanding of agent that I used</p> <p>6 and that I've explained, does not have a negative</p> <p>7 limitation in it saying, furthermore, it cannot be</p> <p>8 hardware. However, the construction and</p> <p>9 understanding that I used does say that it is</p> <p>10 software.</p> <p>11 So if you have an entity that is known to</p> <p>12 be hardware and not software, then that is an</p> <p>13 entity that I would not consider to be satisfying</p> <p>14 those requirements of the term.</p> <p>15 BY MR. CRUDO:</p> <p>16 Q. But if you had an entity that is known to</p> <p>17 be hardware and software, could that entity be an</p> <p>18 agent?</p> <p>19 MR. GOSSE: Object to the form. This has</p> <p>20 been asked and answered three times now.</p> <p>21 MR. CRUDO: I'm not sure that I'm getting</p> <p>22 a straight answer, so I just want to make sure I</p>

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<p style="text-align: right;">121</p> <p>1 understand this.</p> <p>2 MR. GOSSE: Maybe ask a different</p> <p>3 question.</p> <p>4 BY MR. CRUDO:</p> <p>5 Q. Dr. Martin, are you able to answer that</p> <p>6 question?</p> <p>7 A. It's going to sound like a previous</p> <p>8 answer that I gave. Namely, since you included</p> <p>9 hardware in the description of the entity in</p> <p>10 question, I would have difficulty looking at that</p> <p>11 entity, seeing the hardware there, and saying that</p> <p>12 hardware is software.</p> <p>13 So that's why I would find it difficult</p> <p>14 to conclude that the entity you've described</p> <p>15 satisfies the constraints of agent.</p> <p>16 Q. I'm sorry. There must be a</p> <p>17 misunderstanding here.</p> <p>18 I'm not asking you to assume that</p> <p>19 hardware is software. Rather, I'm asking, if an</p> <p>20 entity has both hardware and software, could that</p> <p>21 entity be an agent?</p> <p>22 MR. GOSSE: Object to the form.</p>	<p style="text-align: right;">123</p> <p>1 extent, I just don't see how a mixed</p> <p>2 hardware/software entity could constitute an</p> <p>3 agent.</p> <p>4 BY MR. CRUDO:</p> <p>5 Q. Understood.</p> <p>6 A. However, a mixed software/hardware entity</p> <p>7 does have a software component. And it may be</p> <p>8 possible to analyze the software component without</p> <p>9 the hardware, but it depends on the specific</p> <p>10 circumstance.</p> <p>11 Q. Setting aside the '941 patent just for a</p> <p>12 moment, do you agree that as a general matter the</p> <p>13 word "agent" could refer to software, hardware, or</p> <p>14 the combination of the two?</p> <p>15 A. This is something that I would need to</p> <p>16 analyze separately and specifically. None of my</p> <p>17 work into this matter has been in analyzing the</p> <p>18 term "agent" outside of the context of the '941</p> <p>19 patent, and so I'm not really prepared to do that</p> <p>20 here.</p> <p>21 There, of course, are many general world</p> <p>22 uses of the term "agent" that have nothing to do</p>
<p style="text-align: right;">122</p> <p>1 THE WITNESS: I am having trouble</p> <p>2 understanding this question any differently than</p> <p>3 previous ones along these lines.</p> <p>4 If the entity in question includes both</p> <p>5 hardware and software, then it includes hardware,</p> <p>6 and it would be difficult for me to conclude that</p> <p>7 it meets the constraint as a whole of being a</p> <p>8 software program or routine, which I understand to</p> <p>9 be one of the constraints associated with agent</p> <p>10 that I've applied in my analysis.</p> <p>11 BY MR. CRUDO:</p> <p>12 Q. So it sounds that from your answer, if an</p> <p>13 entity contains any hardware at all, then it</p> <p>14 cannot be an agent; is that correct?</p> <p>15 MR. GOSSE: Object to the form.</p> <p>16 THE WITNESS: Sitting here today, I don't</p> <p>17 understand how an entity containing software can</p> <p>18 meet the constraint of -- pardon me, I think I</p> <p>19 better start over.</p> <p>20 I don't understand, sitting here today,</p> <p>21 how an entity can -- containing hardware can meet</p> <p>22 the constraint of being software. And so to that</p>	<p style="text-align: right;">124</p> <p>1 with the '941 patent. And so I'm very hesitant to</p> <p>2 offer an opinion that is outside of this specific</p> <p>3 context.</p> <p>4 Q. In the context of computer science, and</p> <p>5 again putting aside the '941 patent for the</p> <p>6 moment, do you agree that as a general matter the</p> <p>7 word "agent" could refer to software, hardware, or</p> <p>8 the combination of the two?</p> <p>9 MR. GOSSE: Object to the form.</p> <p>10 THE WITNESS: As a general computer</p> <p>11 science matter, I don't fully know the answer to</p> <p>12 that question.</p> <p>13 However, sitting here today, I am having</p> <p>14 difficulty remembering usages of the word "agent"</p> <p>15 that referred to hardware in the computer science</p> <p>16 sphere generally.</p> <p>17 There may be some, of course, but this is</p> <p>18 not something that I researched in preparation for</p> <p>19 my declaration or this deposition or that comes to</p> <p>20 mind readily upon this question.</p> <p>21 BY MR. CRUDO:</p> <p>22 Q. In the context of computer science, and</p>

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<p>125</p> <p>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?</p>	<p>127</p> <p>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.</p>
<p>126</p> <p>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.</p>	<p>128</p> <p>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:</p>

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<p style="text-align: right;">129</p> <p>1 Q. And to be clear, I'm asking you about</p> <p>2 your understanding of the claim limitation as a</p> <p>3 person in the skill and the art.</p> <p>4 MR. GOSSE: I'm sorry, is that a</p> <p>5 question?</p> <p>6 MR. CRUDO: It isn't, no.</p> <p>7 MR. GOSSE: Then I won't object to it.</p> <p>8 BY MR. CRUDO:</p> <p>9 Q. Can other components or software be used</p> <p>10 along with the agent to set up the verification</p> <p>11 structure?</p> <p>12 MR. GOSSE: Object to the form.</p> <p>13 THE WITNESS: The way I read this</p> <p>14 limitation in Claim 1 of using an agent to set up</p> <p>15 a verification structure, it requires the use of</p> <p>16 the agent to set up the verification structure as</p> <p>17 described in the limitations. But it does not</p> <p>18 exclude the possibility of using additional other</p> <p>19 entities or operations in service of using an</p> <p>20 agent to set up a verification structure.</p> <p>21 BY MR. CRUDO:</p> <p>22 Q. In your response, you referred to</p>	<p style="text-align: right;">131</p> <p>1 Q. You use the word "entities" again in that</p> <p>2 response.</p> <p>3 What would be an example of an entity?</p> <p>4 A. I'm thinking, for example, of a – one</p> <p>5 thing that comes to mind is a subroutine that is</p> <p>6 also software, but is simply not described as</p> <p>7 being part of the agent that is identified as</p> <p>8 satisfying this claim.</p> <p>9 It's software that is used in the process</p> <p>10 of setting up the verification structure but is</p> <p>11 not identified as being in the agent itself.</p> <p>12 That's an example of one of the entities that I</p> <p>13 was referring to.</p> <p>14 Q. Is it possible for hardware to be used to</p> <p>15 set up a verification structure?</p> <p>16 MR. GOSSE: Object to the form.</p> <p>17 THE WITNESS: As I read this limitation,</p> <p>18 I don't see anything precluding the use of</p> <p>19 hardware in setting up the verification structure.</p> <p>20 However, that hardware is not something</p> <p>21 that would be part of the agent that is recited in</p> <p>22 this limitation as well, along the lines of our</p>
<p style="text-align: right;">130</p> <p>1 entities for operations.</p> <p>2 What do you mean by that?</p> <p>3 A. I'm sorry, I don't remember the exact</p> <p>4 phrase that I used where that appeared. So maybe</p> <p>5 if you could rephrase the question?</p> <p>6 Q. Sure.</p> <p>7 In response you said, "The claims don't</p> <p>8 preclude the possibility of using additional other</p> <p>9 entities or operations in service of using an</p> <p>10 agent to set up a verification structure."</p> <p>11 And my question is, what did you mean by</p> <p>12 "other entities or operations"?</p> <p>13 A. What I meant was, while the limitation of</p> <p>14 using an agent to set up a verification structure</p> <p>15 does require, obviously, the use of the agent to</p> <p>16 set up the verification structure.</p> <p>17 There may be other entities that are also</p> <p>18 involved in setting up the verification structure,</p> <p>19 in addition to the agent being recited here.</p> <p>20 Those would not necessarily have to be considered</p> <p>21 part of the agent that is used to set up a</p> <p>22 verification structure.</p>	<p style="text-align: right;">132</p> <p>1 previous discussion about hardware, software, and</p> <p>2 agents.</p> <p>3 BY MR. CRUDO:</p> <p>4 Q. Understood. Thank you.</p> <p>5 Can you please turn to paragraph 128 of</p> <p>6 your declaration?</p> <p>7 A. I see it, yes.</p> <p>8 Q. Now in this paragraph, you are quoting a</p> <p>9 passage from the '941 patent specification column</p> <p>10 one, line 65 to column two, line nine.</p> <p>11 Do you see that?</p> <p>12 A. I do.</p> <p>13 Q. And that passage is describing the agent</p> <p>14 setting up a verification structure using EEPROM</p> <p>15 manipulation commands to store, add, and modify</p> <p>16 items in the erasable, non-volatile memory of the</p> <p>17 BIOS.</p> <p>18 Do you see that?</p> <p>19 A. Yes, I do see that portion of paragraph</p> <p>20 128.</p> <p>21 Q. That passage of the '941 patent doesn't</p> <p>22 refer specifically to -- let me scratch that.</p>

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<p>133</p> <p>1 That passage of the '941 patent does not</p> <p>2 refer specifically to OS level implementation,</p> <p>3 correct?</p> <p>4 MR. GOSSE: Object to the form.</p> <p>5 THE WITNESS: I don't see this section</p> <p>6 column one, line 65 through column two, line nine</p> <p>7 specifically describing the OS level nature of an</p> <p>8 agent.</p> <p>9 I understand that is covered elsewhere in</p> <p>10 the file history and the previous proceedings</p> <p>11 related to the '941 patent.</p> <p>12 BY MR. CRUDO:</p> <p>13 Q. And this particular passage of the '941</p> <p>14 patent, doesn't refer to the word "agent" at all,</p> <p>15 right?</p> <p>16 A. That's correct. I don't see the word</p> <p>17 "agent" being referred to in the same passage of</p> <p>18 the '941 patent.</p> <p>19 It is described elsewhere in the</p> <p>20 specification and named in the claims and in the</p> <p>21 file history and in the previous proceedings.</p> <p>22 Q. The '941 patent specification doesn't use</p>	<p>135</p> <p>1 previously discussed it, it is used in the file</p> <p>2 history of the '941 patent and other proceedings</p> <p>3 related to the '941.</p> <p>4 BY MR. CRUDO:</p> <p>5 Q. And turning back to paragraph 128 of your</p> <p>6 declaration, and in particular to this phrase</p> <p>7 E²PROM manipulation commands.</p> <p>8 Do you see that?</p> <p>9 A. Yes.</p> <p>10 Q. What is the relationship between E²PROM</p> <p>11 manipulation commands and agent?</p> <p>12 A. I didn't catch the end of that</p> <p>13 sentence.</p> <p>14 Q. What is the relationship between E²PROM</p> <p>15 manipulation commands and agent?</p> <p>16 MR. GOSSE: Object to the form.</p> <p>17 THE WITNESS: That's an awfully broad</p> <p>18 question. And I'm not sure I can characterize a</p> <p>19 single relationship between those two terms that</p> <p>20 gets at what you're asking. I'm not sure I</p> <p>21 understand what you're asking.</p> <p>22 BY MR. CRUDO:</p>
<p>134</p> <p>1 the word "agent" at all, correct?</p> <p>2 A. I just searched the '941 patent, and I</p> <p>3 only see the term "agent" being used in the claims</p> <p>4 of the '941 patent and together to describe the</p> <p>5 attorney agent forum on the cover page of the '941</p> <p>6 patent, which I think is a different term of that</p> <p>7 use word "agent".</p> <p>8 Q. Other than the claims, the '941 patent</p> <p>9 specification doesn't use the word "agent",</p> <p>10 right?</p> <p>11 A. That is my understanding. And based on</p> <p>12 this brief search, I do think I recall the term</p> <p>13 "agent" being used in the file history, but I do</p> <p>14 not see it otherwise in the specification of the</p> <p>15 '941 patent.</p> <p>16 Q. And does the specification of the '941</p> <p>17 patent refer to OS level software?</p> <p>18 MR. GOSSE: Object to the form. We've</p> <p>19 discussed this.</p> <p>20 THE WITNESS: I'm looking.</p> <p>21 My quick search of the patent, I haven't</p> <p>22 seen that phrase OS level being used. As we've</p>	<p>136</p> <p>1 Q. Understood. Let me see if I can break it</p> <p>2 down a little.</p> <p>3 Are the E²PROM manipulation commands</p> <p>4 referenced here in paragraph 128 of your</p> <p>5 declaration themselves the agent?</p> <p>6 A. I don't understand. Which agent are you</p> <p>7 referring to?</p> <p>8 Q. So in paragraph 128, first sentence you</p> <p>9 say, "The claims recite agent in several examples</p> <p>10 summarized above"?</p> <p>11 A. Yes.</p> <p>12 Q. But the term "agent" does not</p> <p>13 otherwise -- I think the word appeared to be</p> <p>14 omitted in the '941 patent. And then you say,</p> <p>15 "The specification describes the agent's</p> <p>16 prescribed actions."</p> <p>17 Do you see that?</p> <p>18 A. Yes.</p> <p>19 Q. And one of the actions that you refer to</p> <p>20 is using E²PROM manipulation commands to store,</p> <p>21 add, and modify items in the erasable,</p> <p>22 non-volatile memory of the BIOS.</p>

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<p>137</p> <p>1 Do you see that?</p> <p>2 A. Yes, I do.</p> <p>3 Q. So are you contending here that the agent</p> <p>4 performs in the E²PROM manipulation command?</p> <p>5 MR. GOSSE: Object to the form.</p> <p>6 THE WITNESS: No. I would say more</p> <p>7 specifically that setting up the verification</p> <p>8 structure action, which is attributed to an agent</p> <p>9 in Claim 1, is described in the patent in the</p> <p>10 cited section column one, line 65 through column</p> <p>11 two, line nine by in part using E²PROM</p> <p>12 manipulation commands to store, add, and modify</p> <p>13 items in the other erasable, non-volatile memory</p> <p>14 of the BIOS.</p> <p>15 BY MR. CRUDO:</p> <p>16 Q. Do you contend that that passage of the</p> <p>17 '941 patent specification supports your</p> <p>18 interpretation of the word "agent"?</p> <p>19 A. I would say that this passage, column</p> <p>20 one, line 65 through column two, line nine of the</p> <p>21 '941 patent, supports the understanding of the</p> <p>22 term "agent" that I used in my analysis. And that</p>	<p>139</p> <p>1 specific mention of OS level software or an</p> <p>2 indication – a direct indication of that</p> <p>3 constraint.</p> <p>4 However, as I explained, this is an</p> <p>5 introductory passage. And an ordinary person in</p> <p>6 the prior skill of art would consider more</p> <p>7 disclosure in '941 than simply this passage.</p> <p>8 Q. What other closer in the '941 patent</p> <p>9 would a person in the skill of the art consider as</p> <p>10 supporting your interpretation of the word</p> <p>11 "agent"?</p> <p>12 MR. GOSSE: Object to the form.</p> <p>13 THE WITNESS: As I sit here today, I</p> <p>14 don't recall a clear identification specifically</p> <p>15 of the agent running at the OS level in the</p> <p>16 specification of the '941 patent.</p> <p>17 However, my understanding is that in</p> <p>18 determining the plain and ordinary meaning, a</p> <p>19 person of ordinary skill in the art would also</p> <p>20 look to the file history of the '941 patent. And</p> <p>21 I understand that the file history does discuss</p> <p>22 the relationship between the term "agent" and the</p>
<p>138</p> <p>1 we've previously discussed, in that it's</p> <p>2 consistent with how the term "agent" is used, for</p> <p>3 example, in Claim 1.</p> <p>4 Although, I'm not saying that this</p> <p>5 passage alone covers every aspect of the term</p> <p>6 "agent".</p> <p>7 Q. In your view, does that passage describe</p> <p>8 an OS level program?</p> <p>9 A. Ultimately, I would say, yes, that this</p> <p>10 passage column, line 65 through column two, line</p> <p>11 nine, does describe an OS level activity.</p> <p>12 Although, it doesn't describe it</p> <p>13 directly, it is – you can see this perhaps has</p> <p>14 for shadowing that aspect of the agent's operation</p> <p>15 that is made clear elsewhere in the disclosures</p> <p>16 for the '941 patent, but I think it's discussing</p> <p>17 the same thing.</p> <p>18 Q. Is there a particular aspect of that</p> <p>19 passage of the '941 patent that suggests OS level</p> <p>20 software?</p> <p>21 A. When I look at this passage, one at line</p> <p>22 65 through two at line nine, I don't see a</p>	<p>140</p> <p>1 OS level.</p> <p>2 In addition, I know that the federal</p> <p>3 circuit has also decided issues related to the</p> <p>4 '941 patent and specifically mentioned an</p> <p>5 operating system.</p> <p>6 So I think it might be misleading to</p> <p>7 focus only on the specification of the '941 patent</p> <p>8 for the source of the proper understanding of the</p> <p>9 term.</p> <p>10 BY MR. CRUDO:</p> <p>11 Q. Understood.</p> <p>12 Okay. I think we're just about done --</p> <p>13 let me rephrase. I think we can go on break for</p> <p>14 just a moment. But I do want to ask one more</p> <p>15 question just to make sure that I've properly</p> <p>16 understood your position as to what the word</p> <p>17 "agent" means in the '941 patent.</p> <p>18 In your view, the agent operates at the</p> <p>19 OS level; is that correct?</p> <p>20 A. As I have described it, I said the</p> <p>21 claimed agent must run at the OS level.</p> <p>22 Q. And the claimed agent must be capable of</p>

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<p>141</p> <p>1 writing to memory of the BIOS, correct?</p> <p>2 A. Yes, that is a property required of the</p> <p>3 agent as well.</p> <p>4 Q. And the agent includes only software and</p> <p>5 no hardware; is that correct?</p> <p>6 MR. GOSSE: Object to the form.</p> <p>7 THE WITNESS: As according to our</p> <p>8 previous discussion on this, I don't see how an</p> <p>9 entity that is hardware could be considered to be</p> <p>10 software instead. So to that extent, I don't see</p> <p>11 how such an entity could meet the constraints of</p> <p>12 the term "agent".</p> <p>13 BY MR. CRUDO:</p> <p>14 Q. Are there any other constraints that you</p> <p>15 were imposing on the term "agent" other than those</p> <p>16 three that we just listed?</p> <p>17 A. There are different ways to phrase those</p> <p>18 constraints that are consistent with them. So</p> <p>19 other than that, I'm not sure that I would insist</p> <p>20 that any other description is -- would be any</p> <p>21 different, as long as it's consistent with what</p> <p>22 I've said.</p>	<p>143</p> <p>1 Are you aware that those constructions</p> <p>2 are not binding on the board?</p> <p>3 (Zoom audio interruption.)</p> <p>4 BY MR. CRUDO:</p> <p>5 Q. Let me reframe the question.</p> <p>6 Dr. Martin, you referred repeatedly to</p> <p>7 claim constructions from different court</p> <p>8 proceedings.</p> <p>9 Are you aware that those constructions</p> <p>10 are not binding on the board in these IPR</p> <p>11 proceedings?</p> <p>12 A. Generally, yes. My understanding is</p> <p>13 consistent with what you said. I, for instance,</p> <p>14 in paragraph 127 of my report in the last sentence</p> <p>15 I state, "I understand that the PTAB is not</p> <p>16 obligated to follow these decisions. But I</p> <p>17 recognize them as further evidence of the</p> <p>18 technical baseline of agent, the term that's being</p> <p>19 discussed, otherwise in this paragraph.</p> <p>20 Q. Okay. I'd like to focus on Hellman,</p> <p>21 which is Exhibit 1004. And, specifically, I would</p> <p>22 like to discuss Hellman's update unit 36.</p>
<p>142</p> <p>1 Of course, the agent is required to do</p> <p>2 specific things in Claim 1 and dependent claims of</p> <p>3 '941 patent. So for satisfying those larger</p> <p>4 limitations more will be required.</p> <p>5 But for the term "agent" alone, as I sit</p> <p>6 here today, that seems like a reasonable</p> <p>7 description of the properties required as I've</p> <p>8 used that term and analysis in my declaration.</p> <p>9 MR. CRUDO: Understood. Thank you.</p> <p>10 I think now would be a good time to</p> <p>11 break.</p> <p>12 Do you want to say 15 minutes?</p> <p>13 THE WITNESS: Sure.</p> <p>14 THE STENOGRAPHER: We are off the record.</p> <p>15 The time is 12:59 p.m. Pacific.</p> <p>16 (Off the record 12:59 p.m. - 1:15 p.m.)</p> <p>17 THE STENOGRAPHER: We are on the record.</p> <p>18 The time is 1:15 p.m.</p> <p>19 BY MR. CRUDO:</p> <p>20 Q. Dr. Martin, you referred repeatedly to</p> <p>21 claim constructions from district court</p> <p>22 proceedings.</p>	<p>144</p> <p>1 Hellman's update unit 36 is part of its</p> <p>2 base unit 12; is that correct?</p> <p>3 A. Yes, that's my understanding. I'm</p> <p>4 looking for an example at Figure 8 that depicts</p> <p>5 update unit 36 and the large box is also labeled</p> <p>6 12. So, yes, I would agree.</p> <p>7 Q. In your view, is Hellman's update unit</p> <p>8 hardware, software, or a combination of hardware</p> <p>9 and software?</p> <p>10 A. I'm looking at paragraph 169 of my report</p> <p>11 where I state that "Hellman discloses that the</p> <p>12 update unit 36 is a hardware unit that is</p> <p>13 connected by wires to switches."</p> <p>14 My recollection is that Hellman really</p> <p>15 only ever characterizes it as a hardware-type</p> <p>16 component, and does not give any hints that it</p> <p>17 would have a software presence.</p> <p>18 In the following paragraph 170, I</p> <p>19 describe how Hellman teaches away from</p> <p>20 implementing its intention in software. And then</p> <p>21 I describe how the abstract of Hellman describes</p> <p>22 the base unit as a "computer video game base unit,</p>

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<p style="text-align: right;">145</p> <p>1 record player, video recorder, or video disk</p> <p>2 player", clearly indicating the base unit a</p> <p>3 hardware device. The update unit is, of course,</p> <p>4 contained within the base unit.</p> <p>5 Q. The base unit can be a computer,</p> <p>6 correct?</p> <p>7 A. That is one of the possibilities listed</p> <p>8 for the base unit in the abstract of Hellman.</p> <p>9 Q. And would you agree that computers as of</p> <p>10 1998 contained processors?</p> <p>11 A. Yes, I would agree that in 1998 a</p> <p>12 processor would be present in something described</p> <p>13 as a computer.</p> <p>14 Q. Do you agree that computers in 1998 ran</p> <p>15 software?</p> <p>16 A. Yes, in 1998 a computer is a device that</p> <p>17 generally would be understood as running software;</p> <p>18 although, it may be characterized as a firmware</p> <p>19 form of software or comparable, but still there</p> <p>20 would be software associated with the device.</p> <p>21 Q. Can two components within a computer</p> <p>22 communicate with each other without software?</p>	<p style="text-align: right;">147</p> <p>1 MR. GOSSE: Object to the form.</p> <p>2 THE WITNESS: I guess, I don't know what</p> <p>3 you mean by "single"?</p> <p>4 Are you -- is the point of the question</p> <p>5 that it identifies one and only one or simply that</p> <p>6 it identifies an EEPROM?</p> <p>7 BY MR. CRUDO:</p> <p>8 Q. Well, let me see if I can reframe it.</p> <p>9 Hellman refers to a couple types of</p> <p>10 memory, including in the passage that you just</p> <p>11 read, an EEPROM or a CMOS memory, right?</p> <p>12 A. Yes, I see that.</p> <p>13 Q. But it only refers to EEPROM a single</p> <p>14 time; is that correct?</p> <p>15 A. Well, if my search capability is working</p> <p>16 correctly, I'll say that it only shows that one</p> <p>17 reference to EEPROM.</p> <p>18 Q. Is there any indication in Hellman that</p> <p>19 Hellman's system contains more than one EEPROM?</p> <p>20 A. I guess my recollection of Hellman is</p> <p>21 that it's describing the possibility of there</p> <p>22 being multiple base units, each of which may have</p>
<p style="text-align: right;">146</p> <p>1 MR. GOSSE: Object to the form.</p> <p>2 THE WITNESS: I would say, yes, for two</p> <p>3 components within a computer to communicate with</p> <p>4 each other in a way that does not involve what I</p> <p>5 would understand as software. And so such</p> <p>6 components I would consider also to be hardware</p> <p>7 components.</p> <p>8 BY MR. CRUDO:</p> <p>9 Q. You would agree that Hellman discloses</p> <p>10 non-volatile memory, right?</p> <p>11 A. I do see, for example, non-volatile</p> <p>12 memory described as item 37 in Figure 8 of</p> <p>13 Hellman.</p> <p>14 Q. You would agree that Hellman discloses</p> <p>15 that the non-volatile memory can be EEPROM,</p> <p>16 right?</p> <p>17 A. Yes, I see on column ten, at line --</p> <p>18 starting at line one, a description of Hellman</p> <p>19 indicating that non-volatile memory 37 could be an</p> <p>20 EEPROM.</p> <p>21 Q. Hellman discloses a single EEPROM,</p> <p>22 right?</p>	<p style="text-align: right;">148</p> <p>1 an EEPROM. So in that sense, Hellman does</p> <p>2 disclose multiple EEPROMs.</p> <p>3 However, I don't remember Hellman making</p> <p>4 a point of the number of EEPROMs in its disclosure</p> <p>5 or description of the system as a whole.</p> <p>6 Q. Would you agree that Hellman's update</p> <p>7 unit reads and writes data to its non-volatile</p> <p>8 memory 37?</p> <p>9 A. I think this passage in column ten,</p> <p>10 starting at line eight is largely consistent with</p> <p>11 that summary. It reads "The update unit 36 adds</p> <p>12 M&N and applies a single representing M plus N to</p> <p>13 the non-volatile memory 37. So that M plus N</p> <p>14 replaces the old number M, and the non-volatile</p> <p>15 member 37 has the number of uses of the software</p> <p>16 package, which had been paid for."</p> <p>17 So that sounds like a right operation.</p> <p>18 Immediately before this passage, there is a</p> <p>19 separate signal described that -- that is</p> <p>20 described as an interrogatory signal that I think</p> <p>21 could be fairly characterized as a read-type</p> <p>22 operation to the non-volatile memory 37.</p>

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<p style="text-align: right;">149</p> <p>1 Q. And, actually, that passage that you were</p> <p>2 reading from in Hellman, I believe, refers to</p> <p>3 Figure 6 of Hellman; is that correct?</p> <p>4 A. I do see a reference to Figure 6 at</p> <p>5 column nine, line 29 that appears to begin this</p> <p>6 larger section.</p> <p>7 And my understanding is that the entity</p> <p>8 labeled, for example 36 and 37, is done</p> <p>9 essentially consistently throughout all the</p> <p>10 figures of Hellman that is referring to the same</p> <p>11 component.</p> <p>12 Q. And why don't we walk through Figure 6 so</p> <p>13 I have a better understanding of how you</p> <p>14 understand Hellman to be operating.</p> <p>15 Is it correct that Figure 6 shows what</p> <p>16 happens when a user request for additional usages</p> <p>17 of a software package is granted?</p> <p>18 MR. GOSSE: Object to the form.</p> <p>19 THE WITNESS: The description given of</p> <p>20 Figure 6, in column five, at line 21 states that</p> <p>21 "Figure 6 is a block diagram of a base unit during</p> <p>22 verification of authorization of additional</p>	<p style="text-align: right;">151</p> <p>1 A. Well, I'm just reading from the patent</p> <p>2 specification here. Column nine, line 54, it</p> <p>3 states, "In a manner to be described shortly, the</p> <p>4 cryptographic check unit 34 determines if the</p> <p>5 authorization A is valid for the software package</p> <p>6 17 being presented to the base unit 12 for the</p> <p>7 current authorization request."</p> <p>8 Q. Okay. And Figure 6 shows that the output</p> <p>9 of the crypto check unit comprises N and H.</p> <p>10 Do you see that?</p> <p>11 A. Figure 6 does show an arrow labeled N, H</p> <p>12 going from the crypto check unit to update unit</p> <p>13 36.</p> <p>14 Q. And what are values N and H?</p> <p>15 A. I'm looking at column six, line 31 of the</p> <p>16 Hellman patent that describes software package 21,</p> <p>17 which is applied as an input signal to one-way</p> <p>18 hash function generator 22 to produce an output</p> <p>19 signal H.</p> <p>20 This output signal H is used as an</p> <p>21 "abbreviation" or name for describing software</p> <p>22 package 21. So that is an H, such as what is</p>
<p style="text-align: right;">150</p> <p>1 software uses in a paid per use software control</p> <p>2 system of Figure 1."</p> <p>3 So I think that's pretty consistent with</p> <p>4 what you said. Although, this description relates</p> <p>5 more to the verification of the additional uses.</p> <p>6 BY MR. CRUDO:</p> <p>7 Q. Understood.</p> <p>8 And if we look at Figure 6, there's a box</p> <p>9 34 called "Crypto Check Unit".</p> <p>10 Do you see that?</p> <p>11 A. Yes I do.</p> <p>12 Q. And there's an input A into that box.</p> <p>13 Do you see that?</p> <p>14 A. Yes, I do.</p> <p>15 Q. What is A?</p> <p>16 A. First, A is an authorization signal that</p> <p>17 is identified on column nine, line 51. And my</p> <p>18 recollection here is that there are a couple of</p> <p>19 alternatives for the form of A that are suggested</p> <p>20 in prior columns of Hellman.</p> <p>21 Q. And what is the crypto check unit deal</p> <p>22 within value A?</p>	<p style="text-align: right;">152</p> <p>1 depicted in Figure 6.</p> <p>2 You also asked about N, I believe,</p> <p>3 correct?</p> <p>4 Q. Yes.</p> <p>5 A. I'm looking at column five, line 65,</p> <p>6 which states that N is the number of additional</p> <p>7 uses of software requested.</p> <p>8 Q. Okay. And Figure 6 also shows the update</p> <p>9 unit sending a signal with the age value to</p> <p>10 non-volatile memory 37.</p> <p>11 Do you see that?</p> <p>12 A. I do.</p> <p>13 Q. What is that H value used to do in the</p> <p>14 non-volatile memory 37?</p> <p>15 A. I'm looking at column ten now starting at</p> <p>16 line 38, which states "The signal H is transmitted</p> <p>17 to update unit 36 to indicate which software</p> <p>18 package is being used. Update unit 36 uses H as</p> <p>19 an address to non-volatile memory 37, which</p> <p>20 responds with a signal representing M, the number</p> <p>21 of uses of package 17, which are still available."</p> <p>22 Q. And then the update unit then adds M to N</p>

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<p style="text-align: right;">153</p> <p>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.</p>	<p style="text-align: right;">155</p> <p>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</p>
<p style="text-align: right;">154</p> <p>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</p>	<p style="text-align: right;">156</p> <p>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</p>

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<p>157</p> <p>1 in address H in non-volatile memory 37.</p> <p>2 Q. Does Hellman disclose any embodiment in</p> <p>3 which the number of uses would not need to be</p> <p>4 decremented?</p> <p>5 A. In line 55, starting column ten, it does</p> <p>6 describe a variant in which one value of M could</p> <p>7 be used to represent infinity.</p> <p>8 And this would be understood as a</p> <p>9 scenario in which the user is authorized to an</p> <p>10 unlimited or infinite number of uses.</p> <p>11 Q. And in that case, the M value would not</p> <p>12 need to be decremented; is that correct?</p> <p>13 A. In this case, where Hellman only has this</p> <p>14 property of selling or authorizing uses of</p> <p>15 software for an infinite number of uses, then</p> <p>16 there would be no need for the functionality of</p> <p>17 the update unit to decrement the number of</p> <p>18 remaining uses.</p> <p>19 Q. Okay. I would like to turn to paragraph</p> <p>20 170 of your declaration -- excuse me, paragraph</p> <p>21 171 on page 103 of your declaration.</p> <p>22 A. I see it, yes.</p>	<p>159</p> <p>1 describes.</p> <p>2 Q. And if you turn to paragraph 174 of your</p> <p>3 declaration on page 105.</p> <p>4 A. Yes.</p> <p>5 Q. Here you are discussing whether a person</p> <p>6 of skill in the art would have implemented Hellman</p> <p>7 in software form; is that right?</p> <p>8 A. Roughly speaking, yes, I'm considering</p> <p>9 what happens in the scenario, as I understood it</p> <p>10 being described from Dr. Wolfe, as one in which</p> <p>11 the Hellman system was not realized using the</p> <p>12 hardware components that it seems to describe.</p> <p>13 But rather was reimagined as being implemented in</p> <p>14 software together with adaptation that he applies</p> <p>15 due to the addition of Schneck to the combination</p> <p>16 and Chou to the combination.</p> <p>17 Q. Okay. Got it.</p> <p>18 In this paragraph, you refer to the fact</p> <p>19 that a person with the skill in the art would have</p> <p>20 to grapple.</p> <p>21 With "The question of how a software</p> <p>22 solution could isolate and protect itself from the</p>
<p>158</p> <p>1 Q. In there you are referring to a record</p> <p>2 player as a hardware device.</p> <p>3 Do you see that?</p> <p>4 A. I do.</p> <p>5 Q. And a record player is referenced in</p> <p>6 Hellman, right?</p> <p>7 A. That's my recollection, yes.</p> <p>8 Q. And we've referenced this sentence</p> <p>9 earlier today, but you say that that disclosure</p> <p>10 would not bring to mind a pure software</p> <p>11 implementation, right?</p> <p>12 A. That's correct.</p> <p>13 Q. You agree that Hellman's system can also</p> <p>14 apply to computers more generally, right?</p> <p>15 A. I don't know exactly what you mean.</p> <p>16 Q. Hellman's system is not limited to record</p> <p>17 players; is that correct?</p> <p>18 A. I would say that that's correct. Hellman</p> <p>19 does not require that there always be a record</p> <p>20 player present as part of the system. It provides</p> <p>21 that as an alternative that is naturally</p> <p>22 accommodated in the structure that Hellman</p>	<p>160</p> <p>1 various software packages whose authorization is</p> <p>2 at issue."</p> <p>3 Do you see that?</p> <p>4 A. I do.</p> <p>5 Q. And what do you mean by this statement?</p> <p>6 A. I'm referring to the problem of having a</p> <p>7 software system that includes both the</p> <p>8 authorization and authentication and enforcement</p> <p>9 mechanisms for running a different set of software</p> <p>10 while also allowing that different set of software</p> <p>11 to run on the same system that is performing those</p> <p>12 security functions. And I describe this by way of</p> <p>13 example in the following paragraph starting in</p> <p>14 175.</p> <p>15 Q. And what is the problem that you identify</p> <p>16 in paragraphs 174 and 175?</p> <p>17 A. I am describing how it can be difficult</p> <p>18 to properly engineer a system that has a layer of</p> <p>19 software that is used to authenticate and</p> <p>20 authorize and enforce constraints on another layer</p> <p>21 of software that comes from an outside source,</p> <p>22 where all or both of those pieces of software have</p>

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<p style="text-align: right;">161</p> <p>1 access to the same components as would generally</p> <p>2 be expected in a general purpose computing system</p> <p>3 or more, specifically, in the system that I</p> <p>4 understood Dr. Wolfe to be describing as his</p> <p>5 interpretation of the combination between Hellman,</p> <p>6 Chou, and Schneck.</p> <p>7 Q. In your response, you said that it can be</p> <p>8 difficult to properly engineer such a system, but</p> <p>9 is it possible to engineer such a system?</p> <p>10 A. I would say it is not possible to</p> <p>11 properly engineer a system without -- along those</p> <p>12 lines without considering the risks of the aspect</p> <p>13 of the system wherein the software that's</p> <p>14 performing the enforcement mechanism is running in</p> <p>15 the same manner as the software that is being</p> <p>16 enforced on the system.</p> <p>17 Certainly, people had undertaken an</p> <p>18 engineering effort along those lines in the past.</p> <p>19 However, that is an effort that needs specific</p> <p>20 device and implementation that is not something</p> <p>21 that I perceived in the description of the system</p> <p>22 from Dr. Wolfe that deviates from the disclosure</p>	<p style="text-align: right;">163</p> <p>1 has described, it's difficult for me to envision</p> <p>2 it in sufficient detail that I would know exactly</p> <p>3 where to begin in order to make changes to that</p> <p>4 system in order to make it resilient against the</p> <p>5 sort of threats that I'm describing in these</p> <p>6 paragraphs.</p> <p>7 For example, Dr. Wolfe said nothing about</p> <p>8 the memory protection architecture of a system</p> <p>9 that would be appropriate or required. I guess</p> <p>10 one of the things that I would wonder about is,</p> <p>11 well, what is the memory protection architecture</p> <p>12 of this system. That might be a starting point</p> <p>13 but that didn't tell me what the solution is.</p> <p>14 Q. And if you could just look at Figure 6 of</p> <p>15 Hellman one more time. I apologize for going back</p> <p>16 and forth.</p> <p>17 A. I do see it.</p> <p>18 Q. We've described several functions that</p> <p>19 update unit 36 performs.</p> <p>20 Specifically, reading and writing to</p> <p>21 non-volatile memory 37, right?</p> <p>22 A. I think we have covered instances both of</p>
<p style="text-align: right;">162</p> <p>1 in Hellman, as I understood it.</p> <p>2 Q. Are you aware of any modifications that a</p> <p>3 person of the skill in the art could make to</p> <p>4 alleviate the risk that you've identified in</p> <p>5 paragraphs 174 and 175 of your declaration?</p> <p>6 A. It's difficult to answer that question.</p> <p>7 I didn't understand it to be in the space of my</p> <p>8 opinions to try to adapt a system that Dr. Wolfe</p> <p>9 presented in a way that would be -- require</p> <p>10 further changes, and may turn out to alleviate</p> <p>11 some of the issues that I describe as being</p> <p>12 problematic there.</p> <p>13 I expect that there is a large universe</p> <p>14 of issues that could arise. And certainly</p> <p>15 engineering techniques could be undertaken to</p> <p>16 attempt to address some of them, but I did not</p> <p>17 understand that as being my role to undertake.</p> <p>18 Q. Sitting here today though, are you able</p> <p>19 to identify any modifications that a person in the</p> <p>20 skill and art would take to alleviate the risks</p> <p>21 that you've referenced?</p> <p>22 A. When I think of the system that Dr. Wolfe</p>	<p style="text-align: right;">164</p> <p>1 reading and writing to the non-volatile memory</p> <p>2 37.</p> <p>3 Q. Are any of those -- let me withdraw that.</p> <p>4 Are there any such functions that we've</p> <p>5 described that could not be achieved using a</p> <p>6 software routine running on the base unit?</p> <p>7 MR. GOSSE: Object to the form.</p> <p>8 THE WITNESS: It depends on the</p> <p>9 architecture of the base unit where the update</p> <p>10 unit is running as software. I haven't seen that</p> <p>11 specified anywhere.</p> <p>12 BY MR. CRUDO:</p> <p>13 Q. But there would be nothing that would</p> <p>14 preclude software from performing those functions,</p> <p>15 right?</p> <p>16 A. Well, I don't see exactly how this is</p> <p>17 directly related to Figure 6. As a general</p> <p>18 matter, I can imagine software that is -- that</p> <p>19 when run would be able to read and write values</p> <p>20 from a non-volatile memory. Perhaps that answers</p> <p>21 your question.</p> <p>22 Q. It does. Thank you.</p>

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<p>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?</p>	<p>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.</p>
<p>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.</p>	<p>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</p>

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<p>169</p> <p>1 district court litigation?</p> <p>2 A. That's correct. Yes, sir.</p> <p>3 And I'm not sure whether it's a</p> <p>4 correction or not. I don't remember exactly what</p> <p>5 you asked me. But it seems like this is something</p> <p>6 that you would be asking about generally.</p> <p>7 Q. Thank you. Yeah, I appreciate that.</p> <p>8 A. You're welcome.</p> <p>9 Q. And in the Nintendo, Roku, and VIZIO</p> <p>10 cases, were you deposed?</p> <p>11 A. No, sir.</p> <p>12 Q. Did you admit expert reports in those</p> <p>13 cases?</p> <p>14 A. I have not submitted reports in those</p> <p>15 cases, no.</p> <p>16 Q. Thank you.</p> <p>17 A. You're welcome.</p> <p>18 Q. Dr. Martin, could you please turn to</p> <p>19 paragraph 88 of your declaration?</p> <p>20 A. I see it, yes.</p> <p>21 Q. In this paragraph, you refer to a white</p> <p>22 paper titled "Beeble hardware stamping</p>	<p>171</p> <p>1 corner.</p> <p>2 Do you see that?</p> <p>3 A. I do.</p> <p>4 Q. Do you recognize this document as the</p> <p>5 file history for the '941 patent?</p> <p>6 A. It does appear to be so.</p> <p>7 Q. Okay. If you would please turn to page</p> <p>8 ANC 178.</p> <p>9 A. Yes, I do see that page.</p> <p>10 It appears on the PDF page number 171.</p> <p>11 But, yes, I have ANC 178, the title page for the</p> <p>12 Beeble paper.</p> <p>13 Q. Is this the paper that you were citing in</p> <p>14 paragraph 88 of your declaration?</p> <p>15 A. Yes, it does appear to be so.</p> <p>16 Q. And on page 178, the paper says on its</p> <p>17 face, that it was published September 2021.</p> <p>18 Do you see that?</p> <p>19 A. Yes, sir.</p> <p>20 Q. And if you look at the next page of the</p> <p>21 footer, there's a confidential designation there</p> <p>22 on page 179.</p>
<p>170</p> <p>1 technology."</p> <p>2 Do you see that?</p> <p>3 A. I do. Yes, sir.</p> <p>4 Q. Did you review that document before you</p> <p>5 submitted your declaration?</p> <p>6 A. I do recall doing so, yes.</p> <p>7 Q. Do you -- well, why don't we pull out</p> <p>8 that document. It's in the file history, which is</p> <p>9 marked as Exhibit 2011.</p> <p>10 A. Yes.</p> <p>11 Q. Do you have an electronic version of that</p> <p>12 document?</p> <p>13 A. Correct.</p> <p>14 Q. Okay.</p> <p>15 A. If you could help me with a page number</p> <p>16 -- well, I guess my report cites to the page,</p> <p>17 doesn't it?</p> <p>18 Q. Yes. And I can walk you through it.</p> <p>19 Just let me know once you have the exhibit up.</p> <p>20 A. I do have the exhibit open.</p> <p>21 Q. Okay. And the first page of that exhibit</p> <p>22 is labeled "ANC 8" in the bottom right-hand</p>	<p>172</p> <p>1 Do you see that?</p> <p>2 A. I do.</p> <p>3 Q. Do you know if this paper was publicly</p> <p>4 available as of 1998?</p> <p>5 MR. GOSSE: Objection to the form.</p> <p>6 THE WITNESS: As I sit here today, I</p> <p>7 can't recall whether I have known that or not. I</p> <p>8 certainly don't know it today.</p> <p>9 BY MR. CRUDO:</p> <p>10 Q. And can you please turn to page 184 of</p> <p>11 that document?</p> <p>12 A. ANC 184?</p> <p>13 Q. Yes, that's correct. Yes.</p> <p>14 A. I see it, yes.</p> <p>15 Q. There's a section here titled "EEPROM</p> <p>16 writing".</p> <p>17 Do you see that?</p> <p>18 A. Yes, sir.</p> <p>19 Q. And under that heading, the paper says</p> <p>20 "Beeble will attempt to write license data by</p> <p>21 utilizing the DMI function 52h, which is designed</p> <p>22 to write DMI structures to EEPROM."</p>

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<p>173</p> <p>1 Do you see that?</p> <p>2 A. Yes, sir.</p> <p>3 Q. What do you understand the reference to</p> <p>4 Beeble to mean?</p> <p>5 MR. GOSSE: Object to the form.</p> <p>6 THE WITNESS: I understand the term</p> <p>7 Beeble in that sentence to be referring to the</p> <p>8 Beeble Company's product that's being described in</p> <p>9 this white paper.</p> <p>10 BY MR. CRUDO:</p> <p>11 Q. Is that product software?</p> <p>12 A. I'm looking at ANC 185 at the bottom.</p> <p>13 It's in the summary section under the bullet. It</p> <p>14 says, "Low cost". There's a description that</p> <p>15 says, "Beeble is a software product with no</p> <p>16 production costs associated with it."</p> <p>17 Certainly, the Beeble product, as I</p> <p>18 understand it from this white paper, involves</p> <p>19 software. It's also described more generally at</p> <p>20 the top of this page in the first paragraph</p> <p>21 following "summary", as a next generation software</p> <p>22 licensing technology.</p>	<p>175</p> <p>1 probably would not describe it as an EEPROM</p> <p>2 manipulation command as such. However, my</p> <p>3 recollection of the use of DMI function 52h does</p> <p>4 provide the ability to manipulate EEPROM memory.</p> <p>5 Q. Is DMI function 52h called from a</p> <p>6 software program running at the OS level?</p> <p>7 A. I'm looking at ANC 182. It's the</p> <p>8 previous page -- two previous pages, I guess,</p> <p>9 which shows, for example, the -- what it describes</p> <p>10 as Figure 3 to be a licensed manager. And it</p> <p>11 describes it above that figure as a Windows</p> <p>12 control panel applet that allows to self-manage</p> <p>13 Beeble licenses installed on their machine.</p> <p>14 And at the bottom of the same page it</p> <p>15 says "The control panel applet pictured above is</p> <p>16 responsible for installation and removal of Beeble</p> <p>17 licenses."</p> <p>18 My understanding of this illustration and</p> <p>19 explanation as a Windows control applet is that</p> <p>20 this license manager applet is running at the OS</p> <p>21 level because it's running as software that is</p> <p>22 using Windows services after Windows has been</p>
<p>174</p> <p>1 So it for sure includes a significant</p> <p>2 software component. It may include some other</p> <p>3 components typical with that of a software vendor</p> <p>4 such as documentation, such as licenses for us of</p> <p>5 it, and so on.</p> <p>6 Q. And the sentence that I just read on page</p> <p>7 184 refers to writing DMI structures to EEPROM,</p> <p>8 right?</p> <p>9 A. It does include that phrase, "write DMI</p> <p>10 structures to EEPROM", yes.</p> <p>11 Q. What do you understand that phrase to</p> <p>12 mean?</p> <p>13 A. First of all, DMI is the Desktop</p> <p>14 Management Interface. And what's being referred</p> <p>15 to as DMI function 52, if I recall correctly, is a</p> <p>16 function that would allow for the storage of a</p> <p>17 structure specified by the user of this function</p> <p>18 into the EEPROM memory associated with the DMI</p> <p>19 system and this function 52h.</p> <p>20 Q. Is DMI function 52h an EEPROM</p> <p>21 manipulation command?</p> <p>22 A. As a high-level description of 52h, I</p>	<p>176</p> <p>1 booted. And the description here also says that</p> <p>2 it's responsible for installation and removal of</p> <p>3 Beeble licenses.</p> <p>4 Combining that with the ANC 184</p> <p>5 discussion that we just had, I understand this as</p> <p>6 indicating that the license manager, which is</p> <p>7 running at the OS level, would use the DMI</p> <p>8 function 52h as described at the beginning of this</p> <p>9 paragraph.</p> <p>10 And then the paragraph also describes</p> <p>11 another technique to accomplish the writing of the</p> <p>12 data under different circumstances.</p> <p>13 Q. And when you refer to another technique</p> <p>14 to accomplish the writing of data, are you</p> <p>15 referring to this statement on page 184 of the</p> <p>16 paper that Beeble will write to an EEPROM</p> <p>17 generically?</p> <p>18 A. It is part of that disclosure in here,</p> <p>19 yes. It says, "If BIOS manufacturers do not</p> <p>20 support DMI function 52h, then Beeble will write</p> <p>21 to an EEPROM generically."</p> <p>22 And then it describes a driver that it</p>

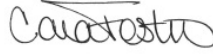
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<p style="text-align: right;">177</p> <p>1 uses with a library of different EEPROM chips and</p> <p>2 proper instructions to accomplish that.</p> <p>3 Q. Understood.</p> <p>4 And also on page 184 of the paper,</p> <p>5 there's a reference to Footnote 2 immediately</p> <p>6 following the phrase, "DMI function 52h".</p> <p>7 Do you see that?</p> <p>8 A. I do. Yes.</p> <p>9 Q. And there's a citation in Footnote 2 to</p> <p>10 SM BIOS reference specifications version 2.2, 16</p> <p>11 March 1998, page 11.</p> <p>12 Do you see that?</p> <p>13 A. I do.</p> <p>14 Q. Are you familiar with the specifications</p> <p>15 referenced in Footnote 2?</p> <p>16 A. Generally, I am. I'm familiar with</p> <p>17 function 52h. At least I have reviewed the SM</p> <p>18 BIOS specification for it before.</p> <p>19 I don't recall whether I reviewed</p> <p>20 precisely this version 2.2 16 March 1998 or not.</p> <p>21 However, I do think I've reviewed more than one</p> <p>22 version of it, in which I saw the descriptions</p>	<p style="text-align: right;">179</p> <p>1 MR. GOSSE: Object to the form.</p> <p>2 THE WITNESS: Well, assuming that this</p> <p>3 footnote on ANC 184 has an accurate date</p> <p>4 associated with this publication of the SM BIOS</p> <p>5 reference specifications, then I would also expect</p> <p>6 that the documentation being referred to here was</p> <p>7 available at that time in 1998.</p> <p>8 BY MR. CRUDO:</p> <p>9 Q. Is it fair to say as a general matter,</p> <p>10 writing data structures to EEPROM was known as of</p> <p>11 March 1998?</p> <p>12 A. Generally speaking, yes, it's fair to say</p> <p>13 that it was known to read and write from EEPROM</p> <p>14 generally.</p> <p>15 Q. Okay. I think we're just about ready to</p> <p>16 wrap up. We'll need 15 minutes to consult with</p> <p>17 Nintendo's counsel, then we can go back on record.</p> <p>18 THE WITNESS: Okay. I'll be back in 15</p> <p>19 minutes.</p> <p>20 MR. CRUDO: Thank you very much.</p> <p>21 THE STENOGRAPHER: We're off the record.</p> <p>22 The time is 2:38 p.m.</p>
<p style="text-align: right;">178</p> <p>1 were similar for the purposes of my analysis.</p> <p>2 Q. Did you review the SM BIOS reference</p> <p>3 specifications in connection with this case?</p> <p>4 A. I don't recall whether I looked at them</p> <p>5 in connection with this case. That is, these two</p> <p>6 IPRs or not. I may have done so briefly, but I</p> <p>7 can't clearly remember.</p> <p>8 Q. Is there a reason that you don't cite to</p> <p>9 the SM BIOS reference specifications in your</p> <p>10 declaration?</p> <p>11 MR. GOSSE: Object to the form.</p> <p>12 THE WITNESS: As I sit here, I can't</p> <p>13 remember any thought process that I had that led</p> <p>14 to a decision whether to further cite to a</p> <p>15 citation of something within the file history</p> <p>16 here.</p> <p>17 I just -- I don't remember there being a</p> <p>18 decision process for that. It could have gone</p> <p>19 either way.</p> <p>20 BY MR. CRUDO:</p> <p>21 Q. Is it fair to say that DMI function 52h</p> <p>22 was known as of March 1998?</p>	<p style="text-align: right;">180</p> <p>1 (Off the record 2:38 p.m. - 2:54 p.m.)</p> <p>2 THE STENOGRAPHER: We are on the record.</p> <p>3 The time is 2:54 p.m.</p> <p>4 BY MR. CANAVERA:</p> <p>5 Q. Dr. Martin, during any of the breaks that</p> <p>6 we took today, did you speak to your counsel?</p> <p>7 A. No, sir. I didn't.</p> <p>8 MR. CRUDO: Petitioners Roku and VIZIO</p> <p>9 don't have any further questions. So I will pass</p> <p>10 it off to counsel for Ancora and Nintendo.</p> <p>11 MR. CANAVERA: This is Kyle Canavera for</p> <p>12 Nintendo. We do not have any separate</p> <p>13 questioning.</p> <p>14 MR. GOSSE: I may have just one or two</p> <p>15 questions on redirect.</p> <p>16</p> <p>17 EXAMINATION</p> <p>18 BY MR. GOSSEE:</p> <p>19 Q. Dr. Martin, if you could turn back to</p> <p>20 Exhibit 2018 from the 1406 matter that you've been</p> <p>21 looking at today?</p> <p>22 A. Yes.</p>

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<p>181</p> <p>1 Q. And do you mind skipping over to page 135</p> <p>2 of that exhibit?</p> <p>3 A. I do see page 135, yes.</p> <p>4 Q. What's listed on page 135?</p> <p>5 A. It's page three of the CV that I provided</p> <p>6 in connection with this proceeding.</p> <p>7 Q. And what is this category that begins</p> <p>8 "Representative Testifying Expert Engagements"?</p> <p>9 A. This is one of the professional</p> <p>10 activities that I list in my CV. And as described</p> <p>11 here, I list those expert -- testifying expert</p> <p>12 engagements that I find to be representative</p> <p>13 generally of the work that I do in this line of my</p> <p>14 activities.</p> <p>15 Q. And I think you testified earlier that</p> <p>16 there may be a number of engagements that you have</p> <p>17 not listed here?</p> <p>18 A. That's correct.</p> <p>19 Q. Do you have any sense for the number of</p> <p>20 engagements that are not listed here?</p> <p>21 A. When I think about my engagements, I</p> <p>22 imagine that there's somewhere between a dozen and</p>	<p>183</p> <p>1 work on behalf of these engagements listed here.</p> <p>2 But not in a testifying role, so I did not file a</p> <p>3 declaration or an expert report or testify in</p> <p>4 deposition, for example.</p> <p>5 Q. Okay. Would the number of your</p> <p>6 consulting expert engagements generally be greater</p> <p>7 than or about the same as you're testifying expert</p> <p>8 engagements?</p> <p>9 A. I would generally say, if we are</p> <p>10 distinguishing consulting between consulting and</p> <p>11 testifying, then, as I sit here today, it seems to</p> <p>12 me that it's about equal in terms of the number of</p> <p>13 cases that I recall having provided testimony for</p> <p>14 versus the number of cases that I did not provide</p> <p>15 testimony or declaration or report for. But I'm</p> <p>16 not super confident about the comparative level</p> <p>17 between consulting versus testifying. That's not</p> <p>18 something I specifically prepared.</p> <p>19 Q. Sure.</p> <p>20 In the context of your representative</p> <p>21 consulting expert engagements, would there be a</p> <p>22 similar number of engagements that are not shown</p>
<p>182</p> <p>1 two dozen, roughly, engagements that I have</p> <p>2 undertaken that are not listed here.</p> <p>3 Q. Okay. For instance, in the years 2018 --</p> <p>4 well, 2019 and 2021, were you engaged in</p> <p>5 professionally as a testifying expert witness?</p> <p>6 A. Yes, sir. I was.</p> <p>7 Q. And were some of the matters that you</p> <p>8 were engaged in unrelated to Ancora?</p> <p>9 A. Yes, sir. They were.</p> <p>10 Q. And those were not listed here in your</p> <p>11 representative matters, for example?</p> <p>12 A. That is correct.</p> <p>13 Q. Okay. What about the category that</p> <p>14 begins numeral four, "Representative Consulting</p> <p>15 Expert Engagements", how does that category differ</p> <p>16 from the testifying expert engagements above?</p> <p>17 A. The consulting expert engagements</p> <p>18 category differs from the testifying expert</p> <p>19 engagements representative category, simply in</p> <p>20 that the cases listed here under item four</p> <p>21 "Representative Consulting Expert Engagements",</p> <p>22 are engagements where I was involved and performed</p>	<p>184</p> <p>1 in this CV?</p> <p>2 MR. CRUDO: Objection. Form.</p> <p>3 MR. GOSSE: Strike that.</p> <p>4 BY MR. GOSSE:</p> <p>5 Q. With respect to category four, your</p> <p>6 representative consulting engagement agreements,</p> <p>7 do you have a sense for how many of your</p> <p>8 engagements are not listed in the CV as shown</p> <p>9 here?</p> <p>10 A. It's difficult to say with any precision.</p> <p>11 There are definitely several or more engagements</p> <p>12 that I'm recalling as being more consulting</p> <p>13 engagements than testifying engagements that are</p> <p>14 not listed here.</p> <p>15 But the -- my recollection simply isn't</p> <p>16 as good with those compared to the expert</p> <p>17 engagements where I actually testify, file a</p> <p>18 report, or, you know, write a declaration. Those</p> <p>19 are coming to mind easier at the moment.</p> <p>20 Q. Sure.</p> <p>21 In short, is it unusual in any way that</p> <p>22 Ancora and your engagements with Ancora are not</p>

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<p>185</p> <p>1 listed in either category number three or category</p> <p>2 number four on your CV?</p> <p>3 MR. CRUDO: Objection. Leading.</p> <p>4 THE WITNESS: According to my practice,</p> <p>5 no, it's not unusual at all that my CV would not</p> <p>6 include an engagement or some other engagement.</p> <p>7 I can also recall having provided a CV</p> <p>8 with the similar section 3 and 4 in other matters</p> <p>9 this year that had nothing to do with Ancora.</p> <p>10 And this is just how I manage my CV, as</p> <p>11 my representation of the kind of work that I do.</p> <p>12 Not every detail about every discrete item of work</p> <p>13 that I've done.</p> <p>14 MR. GOSSE: Okay. I don't have any</p> <p>15 further questions for now.</p> <p>16 Thank you, Dr. Martin.</p> <p>17 THE WITNESS: You're welcome.</p> <p>18 MR. CRUDO: Petitioners Roku and VIZIO</p> <p>19 have no further questions. So I'll pass it to</p> <p>20 Nintendo's counsel.</p> <p>21 MR. CANAVERA: No further questions from</p> <p>22 Nintendo.</p>	<p>187</p> <p>1</p> <p>2 I, CARA M. FOSTER, a Stenographic</p> <p>3 Certified Shorthand Reporter and Registered</p> <p>4 Professional Reporter, hereby certify that the</p> <p>5 witness in the foregoing deposition:</p> <p>6</p> <p>7 That DAVID MARTIN, PhD, the witness whose</p> <p>8 deposition is hereinbefore set forth, was duly</p> <p>9 sworn by me before the commencement of such</p> <p>10 deposition and that such deposition was taken</p> <p>11 before me and is a true record of the testimony</p> <p>12 given by such witness.</p> <p>13</p> <p>14 I further certify that the deposition of</p> <p>15 DAVID MARTIN, PhD, occurred remotely via</p> <p>16 videoconference on Thursday, July 14, 2022,</p> <p>17 commencing at 8:01 a.m. to 3:04 p.m.</p> <p>18</p> <p>19 I further certify that I am not related</p> <p>20 to any of the parties to this action by blood or</p> <p>21 marriage, I am not employed by or an attorney to</p> <p>22 any of the parties to this action, and that I am</p>
<p>186</p> <p>1 THE STENOGRAPHER: Off the record at</p> <p>2 p.m.</p> <p>3 ***</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22 CERTIFICATE OF STENOGRAPHIC REPORTER</p>	<p>188</p> <p>1 in no way interested, financially or otherwise, in</p> <p>2 the outcome of this matter.</p> <p>3</p> <p>4 IN WITNESS WHEREOF, I have hereunto set my hand</p> <p>5 this 19th day of July, 2022.</p> <p>6</p> <p>7 </p> <p>8</p> <p>9 Cara M. Foster, CSR No. 11973 RPR</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p>

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