

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

TCL CORPORATION; TCL COMMUNICATION )  
TECHNOLOGY HOLDINGS, LIMITED; TCT )  
MOBILE LIMITED; TCT MOBILE, INC.; AND ) Case No.  
TCT MOBILE (UC) INC., ) IPR2015-01602  
 ) IPR2015-01637  
 ) IPR2015-01641  
Petitioners, ) IPR2015-01646  
vs. ) IPR2015-01674  
 ) IPR2015-01676  
TELEFONAKTIEBOLAGET LM ERICSSON, ) IPR2015-01761  
 ) IPR2015-01806  
Patent Owner. )  
\_\_\_\_\_)

DEPOSITION OF ANDREW WOLFE, PhD  
San Diego, California  
Monday, April 11, 2016

Reported by:

Tricia Rosate, RDR, RMR, CRR, CCRR  
CSR No. 10891

Job No. 105712

<p style="text-align: right;">Page 2</p> <p>1</p> <p>2</p> <p>3</p> <p>4 Monday, April 11, 2016</p> <p>5 9:03 a.m.</p> <p>6</p> <p>7 DEPOSITION OF ANDREW WOLFE, PhD,</p> <p>8 taken at 12275 El Camino Real, Suite 200, San Diego,</p> <p>9 California, commencing at 9:03 a.m. and concluding at</p> <p>10 4:01 p.m., Monday, April 11, 2016, before Tricia Rosate,</p> <p>11 RDR, RMR, CRR, CCRR, CSR 10891, a Certified Shorthand</p> <p>12 Reporter.</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>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">Page 3</p> <p>1 A P P E A R A N C E S:</p> <p>2</p> <p>3 For the Petitioners:</p> <p>4 SHEPPARD MULLIN RICHTER &amp; HAMPTON</p> <p>5 12275 El Camino Real</p> <p>6 San Diego, California 92130</p> <p>7 BY: HECTOR AGDEPPA, ESQ.</p> <p>8 JESSE SALEN, ESQ.</p> <p>9</p> <p>10</p> <p>11 For the Patent Owner:</p> <p>12 OBLON, McCLELLAND, MAIER &amp; NEUSTADT</p> <p>13 1940 Duke Street</p> <p>14 Alexandria, Virginia 22314</p> <p>15 BY: SAMEER GOKHALE, ESQ.</p> <p>16 W. TODD BAKER, ESQ.</p> <p>17 LISA MANDRUSIAK, ESQ.</p> <p>18</p> <p>19</p> <p>20 Also Present:</p> <p>21 JEAN RENARD WARD</p> <p>22 TOM CAVANAUGH, The Videographer</p> <p>23</p> <p>24</p> <p>25</p>
<p style="text-align: right;">Page 4</p> <p>1 I N D E X</p> <p>2</p> <p>3 WITNESS: Andrew Wolfe, PhD</p> <p>4 EXAMINATION PAGE</p> <p>5 By Mr. Gokhale ..... 6, 80</p> <p>6</p> <p>7</p> <p>8</p> <p>9 E X H I B I T S</p> <p>10 EXHIBIT DESCRIPTION PAGE</p> <p>11 Exhibit 2002 U.S. Patent 8,243,045 124</p> <p>12</p> <p>13 PREVIOUSLY MARKED EXHIBITS</p> <p>14 EXHIBIT PAGE</p> <p>15 Exhibit 1012 ..... 86</p> <p>16 Exhibit 1029 ..... 20</p> <p>17 Exhibit 1036 ..... 30</p> <p>18 Exhibit 1037 ..... 63</p> <p>19 Exhibit 1087 ..... 84</p> <p>20 Exhibit 1201 ..... 7</p> <p>21 Exhibit 1205 ..... 83</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">Page 5</p> <p>1 SAN DIEGO, CALIFORNIA; MONDAY, APRIL 11, 2016</p> <p>2 9:03 A.M. - 4:01 P.M.</p> <p>3 - - - -</p> <p>4 THE VIDEOGRAPHER: Good morning.</p> <p>5 This is the start of tape labeled No. 1 of</p> <p>6 the videotaped deposition of Dr. Andrew Wolfe in the</p> <p>7 matter of TCL Corporation, LL [sic], vs.</p> <p>8 Telefonaktiebolaget LM Ericsson, held before the</p> <p>9 United States Patent and Trademark Office, Case No.</p> <p>10 IPR2015-01806 and all related case numbers.</p> <p>11 This deposition is being held at the offices</p> <p>12 of Sheppard Mullin, 12275 El Camino Real, Suite 200,</p> <p>13 San Diego, California, on April 11th, 2016, at</p> <p>14 approximately 9:03 a.m.</p> <p>15 My name is Tom Cavanaugh, from TSG Reporting,</p> <p>16 Incorporated. I am the legal video specialist.</p> <p>17 The court reporter is Tricia Rosate in</p> <p>18 association with TSG Reporting.</p> <p>19 Will counsel please introduce yourselves.</p> <p>20 MR. GOKHALE: I am Sameer Gokhale from Oblon,</p> <p>21 representing Ericsson.</p> <p>22 MR. SALEN: Jesse Salen from Sheppard Mullin,</p> <p>23 representing TCL.</p> <p>24 MR. AGDEPPA: Hector Agdeppa,</p> <p>25 Sheppard Mullin, representing TCL.</p>

<p style="text-align: right;">Page 6</p> <p>1 MR. BAKER: Todd Baker on behalf of patent 2 owner, Ericsson, from Oblon. 3 MS. MANDRUSIAK: And Lisa Mandrusiak on 4 behalf of the patent owner. 5 THE VIDEOGRAPHER: Thank you. 6 Will the court reporter please swear in the 7 witness. 8 ANDREW WOLFE, PhD, 9 having been first duly sworn, testified as follows: 10 11 EXAMINATION 12 BY MR. GOKHALE: 13 Q Hi. Good morning, Dr. Wolfe. 14 A Good morning. 15 Q Today I'm going to ask you a set of 16 questions. When I ask you a question, if my question 17 is not clear to you, you can please ask me for a 18 clearer question. 19 Is that agreed upon? 20 A That's fine. 21 Q Okay. Is it possible for you to obtain a 22 copy of Exhibit 1201 from the current proceedings? 23 A I don't -- I don't know the exhibits by 24 number. 25 Q That's fine. There you go.</p>	<p style="text-align: right;">Page 7</p> <p>1 (Exhibit 1201 was referenced.) 2 BY MR. GOKHALE: 3 Q So in front of you, you have Exhibit 1201. 4 Do you recognize this exhibit? 5 A Yes. 6 Q Can you identify for the record what that 7 exhibit is? 8 A This is a declaration that I prepared and 9 signed about nine months ago with respect to the 10 validity of certain claims and U.S. Patent RE43,931, 11 which I usually refer to as the '931 patent. 12 Q Okay. Is your signature on page 143 of this 13 exhibit? 14 A Yes. 15 Q And is that dated July 17th, 2015? 16 A It is. 17 Q Is it your understanding that this proceeding 18 concerns the patentability of claims of a 19 United States patent? 20 A I'm not quite sure what you mean by 21 "patentability." I think, you know, I perceived it as 22 a question of whether or not the -- the current claims 23 were valid or not. That was I think what I was asked 24 to opine on. 25 Q Okay. Do you understand the difference</p>
<p style="text-align: right;">Page 8</p> <p>1 between patentability and invalidity? 2 A I'm not a lawyer, so I'm not sure I 3 understand it from a legal perspective. I -- I would 4 think patentability is broader than validity. The 5 validity is only one aspect of patentability. 6 Q Okay. And I think you already mentioned 7 this. And the patent number which is the subject of 8 this proceeding, is it Reissue Patent 43,931? 9 A Yes. 10 Q Okay. And you understand that your 11 declaration, Exhibit 1201, was filed with the 12 United States Patent and Trademark Office? 13 A That's my understanding. 14 Q Okay. And do you understand that the purpose 15 of your declaration was to support a petition filed by 16 TCL? 17 MR. SALEN: Object to form. 18 THE WITNESS: Yeah. I don't know who filed 19 the petition. You know, there are a bunch of 20 different entities involved. You know, I -- I worked 21 with Sheppard Mullin with respect to a number of -- of 22 entities that I refer to as TCL, but -- but I don't 23 know whether or not -- I don't know which actual 24 corporate entity filed the -- the -- the proceeding. 25 ///</p>	<p style="text-align: right;">Page 9</p> <p>1 BY MR. GOKHALE: 2 Q Okay. And is the petition filed with regards 3 to the 1201 exhibit seeking to cancel Claims 1 through 4 12 and 15 of the '931 patent as unpatentable? Is that 5 correct? 6 MR. SALEN: Object to form. 7 THE WITNESS: That's my general 8 understanding. Again, I didn't write the petition, 9 and I -- I -- where I think I may have seen it at one 10 point, you know, I'm -- I'm not here to opine on the 11 petition. 12 BY MR. GOKHALE: 13 Q Okay. But the -- is -- are those the correct 14 claims that are addressed in the petition 15 corresponding to the 1201 exhibit, Claims 1 through 12 16 and 15 of the Reissue '931 patent? 17 A I would presume as much. Those are the 18 claims that are in my declaration that is 19 Exhibit 1201. 20 Q Okay. Have you ever testified before a 21 district court relating to a patent? 22 A Yes. 23 Q And how many times did that occur? 24 A I'm -- I'm trying to think through -- 25 I've testified four times in front of a</p>

<p style="text-align: right;">Page 10</p> <p>1 district court under oath. Two of those were patent  2 trials. One of them was a trade secret case, but I  3 think that there was also an aspect of patent  4 infringement in there as well.  5 Q Okay. Do you have approximate time frames  6 when that occurred?  7 A When what occurred?  8 Q When the -- each of these --  9 A Each of the four --  10 Q -- four instances occurred.  11 A I'd have to go back and look at my records.  12 The first case was probably ten years ago.  13 The last case was probably two years ago. The others,  14 somewhere in between.  15 Q Okay. So within the past 14 years, about,  16 these occurred?  17 A Yes.  18 Q Okay. Have you ever testified in an  19 administrative proceeding before the U.S. Patent and  20 Trademark Office?  21 A Not live. I've put in declarations before.  22 Q Okay. About how many times have you  23 testified or done depositions or declarations for --  24 in inter partes review proceedings before the  25 U.S. Patent and Trademark Office?</p>	<p style="text-align: right;">Page 11</p> <p>1 MR. SALEN: Object to form.  2 THE WITNESS: I don't know because I don't  3 keep track of all those things separately, but it's  4 been somewhere around seven to nine different matters.  5 BY MR. GOKHALE:  6 Q Okay. At the end of Exhibit 1201, there is  7 an appendix marked "Appendix A," which should occur  8 right after the signature page.  9 Are you familiar with this -- this portion of  10 the exhibit?  11 A Yes.  12 Q Can you please identify for the record what  13 this exhibit is.  14 A This would have been my CV as of July of  15 2015.  16 Q Okay. Is it -- it's correct that this CV  17 reflects that you are a named inventor on many U.S.  18 patents; correct?  19 A That's correct.  20 Q Do any of these patents relate to touchscreen  21 technology?  22 A Yes.  23 Q Do you recall if any of your patents describe  24 problems or challenges with touchscreen technology  25 prior to the date of December 30th, 1997?</p>
<p style="text-align: right;">Page 12</p> <p>1 MR. SALEN: Object to form.  2 THE WITNESS: Not specifically. Certainly  3 some of those patents were filed prior to that date,  4 but that was 20 or, in some cases, 35 years ago. So I  5 don't -- I haven't read them in a long time.  6 BY MR. GOKHALE:  7 Q Let me rephrase this differently.  8 Do you recall if any of your patents  9 described problems or challenges with touchscreen --  10 touchscreen technology leading up to the filing of any  11 of those patents?  12 MR. SALEN: Object to form.  13 THE WITNESS: Not specifically. It would not  14 surprise me if they do. But, again, I haven't read  15 any of those patents in a long time. So --  16 BY MR. GOKHALE:  17 Q Do any of the patents that you are the author  18 or co-author of relate to radiotelephone technology?  19 A Yes.  20 Q Can you identify a specific one?  21 A There may be others that -- that relate to  22 it. I -- again, I don't remember the text or the  23 specifications of all these patents. But in  24 particular, there is one entitled "Noise Cancellation  25 For Phone Conversations," and I'm -- I'm quite certain</p>	<p style="text-align: right;">Page 13</p> <p>1 that that was at least primarily focused on cellular  2 phones.  3 Q Do you have the patent number for that  4 particular patent you're talking about?  5 A I don't recall whether or not there's been a  6 U.S. issue. I see a Korean issue, 10-1185761. I know  7 there was a corresponding U.S. filing, but I don't  8 recall whether or not that's issued yet.  9 The -- oh, yes, it has. It's U.S. 8,824,666.  10 I also recall that U.S. Patent 8,676,668 is  11 also related to cellular phones.  12 Q Could you please turn to paragraph 58 in  13 Exhibit 1201.  14 A I've done that.  15 Q Okay. Thank you.  16 Does paragraph 58 describe what you believe  17 to be a person of ordinary skill in the art with  18 respect to the '931 patent?  19 A Yes, it does.  20 Q Does your understanding of the '931 patent,  21 in particular Claim 1, involve the use of  22 radiotelephones?  23 A I don't remember all the claims offhand.  24 Do you have a copy of the patent?  25 Q Sure.</p>

<p style="text-align: right;">Page 14</p> <p>1 MR. GOKHALE: Can we give him Exhibit 1001?</p> <p>2 THE WITNESS: No. Claim 1 is a -- is a</p> <p>3 apparatus claim. It shouldn't require using anything.</p> <p>4 BY MR. GOKHALE:</p> <p>5 Q What is the second word in Claim 1?</p> <p>6 A "Radiotelephone."</p> <p>7 Q Okay. Is Claim 1 directed to a</p> <p>8 radiotelephone?</p> <p>9 A It is. It includes one element that is a</p> <p>10 radiotelephone communications receiver. The rest of</p> <p>11 the elements are common to the other claims that don't</p> <p>12 require a radiotelephone.</p> <p>13 Q Now, is the standard for the person of</p> <p>14 ordinary skill in the art, described on paragraph 58</p> <p>15 of your declaration, the standard used in analyzing</p> <p>16 the claims of the '931 patent?</p> <p>17 MR. SALEN: Object to form.</p> <p>18 THE WITNESS: Can I hear the question one</p> <p>19 more time?</p> <p>20 BY MR. GOKHALE:</p> <p>21 Q Is the standard that you describe for a</p> <p>22 person of ordinary skill in the art with respect to</p> <p>23 the '931 patent the standard that you used in</p> <p>24 analyzing the claims of the '931 patent?</p> <p>25 MR. SALEN: Object to form.</p>	<p style="text-align: right;">Page 15</p> <p>1 THE WITNESS: Where it's appropriate to do</p> <p>2 so. In certain situations, it's appropriate to</p> <p>3 consider how a person of ordinary skill in the art</p> <p>4 would understand a document or what a person of</p> <p>5 ordinary skill in the art would know. And in those</p> <p>6 situations, with respect to these matters, I applied</p> <p>7 the level of ordinary skill that I expressed in</p> <p>8 paragraph 58; although, I certainly may have come up</p> <p>9 with the same answer if the level of ordinary skill</p> <p>10 had been somewhat different.</p> <p>11 BY MR. GOKHALE:</p> <p>12 Q Does your standard in paragraph 58 mention</p> <p>13 experience with radiotelephone devices?</p> <p>14 A To the extent that an ordinary electrical</p> <p>15 engineer would have one then, which is all that's</p> <p>16 required here. All that's required here is that -- is</p> <p>17 that the transceiver be present and supported by the</p> <p>18 housing.</p> <p>19 Certainly a person -- a person with a</p> <p>20 bachelor's degree in electrical engineering would be</p> <p>21 able to recognize the presence of a radiotele- -- a</p> <p>22 radiotelephone communications transceiver and to</p> <p>23 determine whether or not it was supported by a</p> <p>24 housing.</p> <p>25 Q I'm going to ask the question again. Yes or</p>
<p style="text-align: right;">Page 16</p> <p>1 no. Does the standard described in paragraph 58</p> <p>2 describe that a person of ordinary skill in the art</p> <p>3 should have experience with radiotelephones?</p> <p>4 MR. SALEN: Object to form.</p> <p>5 THE WITNESS: I think I answered that</p> <p>6 question. To the extent that a -- that a person with</p> <p>7 a bachelor's degree in electrical engineering would</p> <p>8 have that experience, which would be normal, it does.</p> <p>9 BY MR. GOKHALE:</p> <p>10 Q Does paragraph 58 mention having -- a person</p> <p>11 of ordinary skill in the art having experience in</p> <p>12 radiotelephones?</p> <p>13 A To the extent that a degree in electrical</p> <p>14 engineering and computer science would convey that</p> <p>15 expertise, yes; otherwise, it does not specifically</p> <p>16 mention any special knowledge beyond a bachelor's</p> <p>17 degree in engineering.</p> <p>18 Q Okay. Do any of the dependent claims, which</p> <p>19 were analyzed with regard to the 1201 exhibit, refer</p> <p>20 back to any features of a radiotelephone?</p> <p>21 MR. SALEN: Object to form. Foundation.</p> <p>22 THE WITNESS: None of the dependent claims</p> <p>23 recite any additional limitation that are specific to</p> <p>24 radiotelephony or require any special knowledge of</p> <p>25 radiotelephony. But because the context of Claim 1 is</p>	<p style="text-align: right;">Page 17</p> <p>1 that the device itself is a radiotelephone, they do</p> <p>2 refer to the name of the device as a radiotelephone.</p> <p>3 BY MR. GOKHALE:</p> <p>4 Q Could you please look at Claim 10 of the '931</p> <p>5 patent. You can read that to yourself.</p> <p>6 A Yes.</p> <p>7 Q Does it mention any -- any -- indicate any --</p> <p>8 Does it mention anywhere a radiotelephone</p> <p>9 communications transceiver?</p> <p>10 A It mentions it as -- it refers back to it</p> <p>11 using the antecedent basis of -- of when it was</p> <p>12 recited before. But there are two things that are --</p> <p>13 that are important to understand in terms of</p> <p>14 understanding the scope of that claim.</p> <p>15 One is that claim doesn't require the</p> <p>16 radiotelephone -- I'm sorry -- tough word for me to</p> <p>17 say -- radiotelephone communications transceiver to do</p> <p>18 anything. One can practice that claim without the</p> <p>19 radiotelephone communications transceiver doing</p> <p>20 anything at all because it's part of an "or" clause.</p> <p>21 And second, the only thing that it requires</p> <p>22 the radiotelephone communications transceiver to do is</p> <p>23 perform a plurality of actions, which, as of 1997 when</p> <p>24 this was filed, a five-year-old could have made a</p> <p>25 radiotelephone communications transceiver perform a</p>

<p style="text-align: right;">Page 18</p> <p>1 plurality of actions just by dialing a phone or 2 answering a phone. It's quite trivial.</p> <p>3 Q Going back to Claim 1 of the '931 patent. 4 Yes or no. Does Claim 1 require a radiotelephone 5 communications transceiver in the housing or in the -- 6 in the device?</p> <p>7 A Technically, no. It's got to be supported by 8 the housing, but it could be outside the device.</p> <p>9 Q Does --</p> <p>10 Let me rephrase the question. Does a claim 11 require a radiotelephone communications transceiver be 12 present?</p> <p>13 A For Claim 1? Yes. I've already told you 14 that. It's literally recited.</p> <p>15 Q So do you believe that a person of ordinary 16 skill in the art would have any experience with 17 integrating touchscreens with a radiotelephone device?</p> <p>18 MR. SALEN: Object to form.</p> <p>19 THE WITNESS: Not necessarily. There's 20 nothing in these claims that require that there be any 21 special integration between them, other than using the 22 touchscreen in the ordinary way and using the 23 radiotelephone device in the ordinary way. There's no 24 specific interaction between them. There's no -- 25 nothing specific to integrating the devices that is</p>	<p style="text-align: right;">Page 19</p> <p>1 required here.</p> <p>2 Now, a person of ordinary skill in the art 3 would certainly know of integrations between 4 radiotelephones and touchscreens, because they had 5 been commercially sold by this time. And a person of 6 ordinary skill in the art, knowing the prior art, 7 would have been aware of -- of the fact that it had 8 been done before and how it had been done before from 9 a -- from an observable level.</p> <p>10 And it's also described in the -- in the 11 patent art. And, therefore, a person of ordinary 12 skill would -- would be aware of that just by being 13 aware of the touchscreen art in general. Within the 14 touchscreen art -- touchscreens had been integrated 15 with a wide variety of devices, including computers, 16 handheld devices of various kinds including 17 radiotelephones.</p> <p>18 BY MR. GOKHALE:</p> <p>19 Q Okay. So would the pers- -- person of 20 ordinary skill in the art be aware of issues affecting 21 integration of a touchscreen device into a 22 radiotelephone device?</p> <p>23 MR. SALEN: Object to form.</p> <p>24 THE WITNESS: Yes. To the extent that those 25 were ordinarily problems that such a person would deal</p>
<p style="text-align: right;">Page 20</p> <p>1 with, they would, because that was simply part of the 2 commercial space and the published space of -- of the 3 touchscreen business and the touchscreen technology.</p> <p>4 MR. GOKHALE: If possible, could counsel 5 please provide Dr. Wolfe with Exhibit 1029. 6 (Exhibit 1029 was referenced.)</p> <p>7 BY MR. GOKHALE:</p> <p>8 Q Can you identify this document?</p> <p>9 A This is a U.S. patent, 6,009,338, issued to 10 Mitsubishi -- or assigned to Mitsubishi Denki 11 Kabushiki Kaisha. It was filed in April 17th, 1997. 12 The lead inventor is named Iwata, and I generally 13 refer to it as "the Iwata patent."</p> <p>14 Q Okay. And you reference the Iwata patent in 15 your analysis of independent Claim 1 of the '931 16 patent; correct?</p> <p>17 A With respect to certain of the IPRs, that's 18 true.</p> <p>19 Q Okay. Have you read Iwata in its entirety?</p> <p>20 A I have.</p> <p>21 Q Could you please turn to Figure 6 of Iwata. 22 What is your understanding of what Figure 6 23 is displaying?</p> <p>24 A Well, Figure 6 displays a lot of things.</p> <p>25 Q Is it a illustration of what is displayed on</p>	<p style="text-align: right;">Page 21</p> <p>1 a screen of a telephone in Iwata?</p> <p>2 A It's --</p> <p>3 Q One of the options that could be displayed?</p> <p>4 A It is one illustration of what is displayed 5 at certain times in the screen of a radiotelephone 6 that's disclosed in Iwata. There are many other 7 similar illustrations showing other things that can be 8 shown on the screen, and there's also a lot of 9 descriptive text.</p> <p>10 Q Okay. Could you please turn to Figure 47 of 11 Iwata.</p> <p>12 A Okay.</p> <p>13 Q Does Figure 47 show a person's hand holding 14 the device of Iwata?</p> <p>15 A It does.</p> <p>16 Q Now, in Figure 48, is that showing a screen 17 of Iwata exposed?</p> <p>18 A It is.</p> <p>19 Q Is the display that we previously looked at 20 on Figure 6 intended to be displayed on the screen 21 shown in Figure 48 in Iwata?</p> <p>22 MR. SALEN: Object to form. Foundation.</p> <p>23 THE WITNESS: That would be one possible 24 embodiment. 25 ///</p>

<p style="text-align: right;">Page 22</p> <p>1 BY MR. GOKHALE:</p> <p>2 Q So is your understanding that the display of</p> <p>3 Figure 6 is not to scale, then, or it's -- it's larger</p> <p>4 than what is actually capable of being displayed on</p> <p>5 the screen of Iwata?</p> <p>6 MR. SALEN: Object to form.</p> <p>7 THE WITNESS: It's my understanding that, as</p> <p>8 a general principle, unless you're told otherwise, you</p> <p>9 should presume that patent drawings are not to scale.</p> <p>10 BY MR. GOKHALE:</p> <p>11 Q Okay. Would you agree that the display shown</p> <p>12 on Figure 6 would be smaller in a real-life</p> <p>13 implementation of Iwata with respect to the embodiment</p> <p>14 shown on Figure 47 and 48 of Iwata?</p> <p>15 MR. SALEN: Object to form and foundation.</p> <p>16 THE WITNESS: I haven't made any presumptions</p> <p>17 as to what its illustrated size is, so I -- so I don't</p> <p>18 have any opinion related to that.</p> <p>19 BY MR. GOKHALE:</p> <p>20 Q Does Figure 47 show the housing of Iwata in</p> <p>21 the palm of the user's hand?</p> <p>22 A For one particular embodiment, it does.</p> <p>23 Q Can you get an approximate size of the --</p> <p>24 part of the screen in Iwata based on that</p> <p>25 illustration?</p>	<p style="text-align: right;">Page 23</p> <p>1 A Well, again, it's my understanding that you</p> <p>2 should not presume that -- that things are drawn to</p> <p>3 scale on a patent drawing unless you're told</p> <p>4 otherwise. Do you want me to make that assumption,</p> <p>5 that Figure 47 is drawn to scale?</p> <p>6 Q Well, I'm asking if you believe that Figure 6</p> <p>7 is drawn larger than its real-life implementation with</p> <p>8 respect to the -- the embodiment shown in Figure 47.</p> <p>9 MR. SALEN: Object to form and foundation.</p> <p>10 THE WITNESS: I -- I don't see any</p> <p>11 measurements on Figure 6. Do you want me to presume</p> <p>12 that Figure 6 is intended to be drawn as it's printed</p> <p>13 on an 8 1/2-by-11 sheet of paper? Because I haven't</p> <p>14 made that assumption.</p> <p>15 BY MR. GOKHALE:</p> <p>16 Q Should -- should a reader of the Iwata</p> <p>17 reference assume that the device of Iwata fits into a</p> <p>18 user's hand based on the illustration in Figure 47?</p> <p>19 MR. SALEN: Object to form and foundation.</p> <p>20 THE WITNESS: I think that a person of</p> <p>21 ordinary skill reading the patent and looking at</p> <p>22 Figure 47 would understand that Iwata discloses at</p> <p>23 least one embodiment that can fit into the palm of a</p> <p>24 user's hand.</p> <p>25 ///</p>
<p style="text-align: right;">Page 24</p> <p>1 BY MR. GOKHALE:</p> <p>2 Q Does the presence of the hand holding the</p> <p>3 phone in Figure 47 of Iwata give you an idea of the</p> <p>4 scale of the display that will be displayed on that</p> <p>5 device?</p> <p>6 A That depends on what assumptions you make</p> <p>7 about Figure 47.</p> <p>8 Q What assumptions do you make when you see</p> <p>9 Figure 47?</p> <p>10 A I make the assumption that Figure 47 is</p> <p>11 intended to teach me that there is at least one</p> <p>12 embodiment in which device 301 -- or that's actually</p> <p>13 the body of the device -- where the device that's</p> <p>14 being shown in Figure 47 can fit comfortably into the</p> <p>15 palm of the user's hand.</p> <p>16 Q To your knowledge, has this device described</p> <p>17 in the Iwata reference ever been built and developed</p> <p>18 in real life or anything with features similar to</p> <p>19 this -- this particular patent?</p> <p>20 MR. SALEN: Object to form.</p> <p>21 THE WITNESS: I don't know whether or not</p> <p>22 this precise device has ever been built. I haven't</p> <p>23 investigated that one way or the other. Certainly</p> <p>24 there were devices that were similar in many aspects,</p> <p>25 in many different ways to this device. There were</p>	<p style="text-align: right;">Page 25</p> <p>1 other touchscreen-based phones. There were other</p> <p>2 phones that included various user interface elements.</p> <p>3 You'd have to be more specific for me to tell</p> <p>4 you exactly where, but there -- there's -- there's</p> <p>5 dozens and dozens of -- of aspects of this device that</p> <p>6 are similar to other products.</p> <p>7 BY MR. GOKHALE:</p> <p>8 Q Have you seen a product that uses a -- the</p> <p>9 same display, or Figure 6, shown in Iwata?</p> <p>10 A Not exactly. No. But that -- but -- but I</p> <p>11 haven't looked for one. I mean, presumably this would</p> <p>12 be something that was primarily intended for a</p> <p>13 Japanese market, and I don't have any particular</p> <p>14 familiarity with Japanese cell phone models.</p> <p>15 Q In the background section of Exhibit 1201,</p> <p>16 you mentioned that you worked on --</p> <p>17 Sorry to backtrack. Can you name any device</p> <p>18 similar to Figure 47's embodiment?</p> <p>19 MR. SALEN: Object to form.</p> <p>20 THE WITNESS: I -- it depends what you mean</p> <p>21 by "similar."</p> <p>22 There are lots of devices that have</p> <p>23 individual characteristics that are similar. There</p> <p>24 were certainly cell phones of that general shape that</p> <p>25 were available at the time, from people like Nokia. I</p>

<p style="text-align: right;">Page 26</p> <p>1 don't remember model numbers.</p> <p>2 There were phones that had touchscreens and</p> <p>3 displays on their front surface, like the IBM Simon.</p> <p>4 There was -- there were personal organizers that had</p> <p>5 user interfaces that had many of the same aspects as</p> <p>6 what are shown in the Iwata patent, like the Apple</p> <p>7 Newton and the Scion 5. And there were handheld PCs</p> <p>8 as well that also had aspects of similar user</p> <p>9 interface characteristics.</p> <p>10 BY MR. GOKHALE:</p> <p>11 Q With regard to the IBM Simon, which you</p> <p>12 mentioned, in your background section, you mentioned</p> <p>13 that you contributed to the development of this</p> <p>14 portable telephone. Is this correct?</p> <p>15 A I don't know if those are the words that --</p> <p>16 Is there a particular portion here that</p> <p>17 you're referring to?</p> <p>18 Q Yeah. Give me a chance to get there.</p> <p>19 Paragraph 84 of Exhibit 1201.</p> <p>20 A Yes.</p> <p>21 Q You mentioned that you personally developed</p> <p>22 touchscreen prototypes for the IBM Simon.</p> <p>23 A I did.</p> <p>24 Q Okay. Do you recall what the size of the</p> <p>25 display was for the IBM Simon?</p>	<p style="text-align: right;">Page 27</p> <p>1 A Not precisely. It was about this big, which</p> <p>2 I would say is probably maybe 125 millimeters by</p> <p>3 50 millimeters, ballpark.</p> <p>4 Q Okay. That's a very specific ballpark.</p> <p>5 Thank you.</p> <p>6 Do you recall if there were buttons used on</p> <p>7 the input -- the touchscreen interface on the IBM</p> <p>8 Simon for accepting an input?</p> <p>9 A You mean like virtual buttons?</p> <p>10 Q Yes.</p> <p>11 A Soft buttons?</p> <p>12 Q Yes.</p> <p>13 A My recollection is, at times, there were.</p> <p>14 It's just certain screens, there were. I don't -- I</p> <p>15 don't remember if they were on every screen.</p> <p>16 Q Do you recall the particular spacing that was</p> <p>17 given between any two buttons in the IBM Simon device?</p> <p>18 A Not in general. There's an illustration on</p> <p>19 page 50 of Exhibit 1201 of one particular screen.</p> <p>20 But, again, it's -- it's 23 years ago, so I don't -- I</p> <p>21 don't remember all the screens.</p> <p>22 Q Is there any reason why the spacing might be</p> <p>23 designed to any -- any particular size for a</p> <p>24 touchscreen interface --</p> <p>25 MR. SALEN: Object --</p>
<p style="text-align: right;">Page 28</p> <p>1 BY MR. GOKHALE:</p> <p>2 Q -- between the buttons?</p> <p>3 MR. SALEN: Object to form.</p> <p>4 THE WITNESS: It's a design choice. So</p> <p>5 depending on how you want the user to express its</p> <p>6 input, what kind of input's being used, there are some</p> <p>7 situations where you want -- may want larger buttons</p> <p>8 and some situations where you may want smaller buttons</p> <p>9 or no buttons, just like any other user interface</p> <p>10 design.</p> <p>11 BY MR. GOKHALE:</p> <p>12 Q Is the -- does the size of the user's finger</p> <p>13 play a role in determining how far apart to keep the</p> <p>14 buttons in a touchscreen interface?</p> <p>15 A Sometimes it --</p> <p>16 MR. SALEN: Objection to form and foundation.</p> <p>17 THE WITNESS: Sometimes it does; sometimes it</p> <p>18 doesn't. There -- there are some times where a user</p> <p>19 will move their finger or even just roll their finger</p> <p>20 to make fine movements. There are other cases where</p> <p>21 you want a user simply to be able to quickly poke at</p> <p>22 something, and -- and you would want the buttons to be</p> <p>23 larger and further apart. It's a design choice that's</p> <p>24 up to the user interface designer.</p> <p>25 ///</p>	<p style="text-align: right;">Page 29</p> <p>1 BY MR. GOKHALE:</p> <p>2 Q Is accuracy of detecting an input affected if</p> <p>3 the buttons are smaller than a user's finger size?</p> <p>4 MR. SALEN: Object to form and foundation.</p> <p>5 THE WITNESS: No. The input's always</p> <p>6 measured to the same degree of accuracy. It's simply</p> <p>7 a question of how it's interpreted later and how it's</p> <p>8 used to interact with the user interface.</p> <p>9 BY MR. GOKHALE:</p> <p>10 Q Now, when you mention that there's no issues</p> <p>11 with accuracy, are you talking about hardware</p> <p>12 accuracy, or is there possibilities that if the</p> <p>13 buttons are smaller, an incorrect input may be</p> <p>14 detected?</p> <p>15 MR. SALEN: Object to form.</p> <p>16 THE WITNESS: I don't think I said there are</p> <p>17 no issues with accuracy.</p> <p>18 BY MR. GOKHALE:</p> <p>19 Q Okay. So is there -- is there an issue with</p> <p>20 the si- -- taking into account the size of a user's</p> <p>21 finger when designing the space between buttons in a</p> <p>22 touchscreen interface?</p> <p>23 MR. SALEN: Object to form.</p> <p>24 THE WITNESS: I already answered that. It</p> <p>25 depends on what your objectives are, what type of</p>



<p style="text-align: right;">Page 30</p> <p>1 input you're trying to get. Certainly some of the  2 projects I worked on at the time, like the Simon or --  3 or the prototype for the Apple Newton, we would make  4 measurements to a minimum of 100 points per inch,  5 sometimes 200 points per inch. And then it's up to  6 the designer of the controls as to how they wanted to  7 interpret that data.  8 Some cases, as I mentioned, you may want  9 someone to be able to poke at something and pick it  10 very rapidly, in which case you would -- you would  11 have a relatively large button surrounded by space.  12 In other cases, you might want someone to have fine  13 control, like a -- a volume control slider, in which  14 case you may want to be able to measure very -- very  15 tiny movements like the rolling of a finger.  16 MR. GOKHALE: If possible, can -- can we have  17 Exhibit 1036 provided to Dr. Wolfe?  18 MR. SALEN: Sure.  19 (Exhibit 1036 was referenced.)  20 BY MR. GOKHALE:  21 Q Can you describe what -- what Exhibit 1036 is  22 directed to?  23 A This is U.S. patent 5,748,185. It is a  24 patent assigned to Stratos Product Development Group.  25 The lead inventor is Allan H. Stephan, and I generally</p>	<p style="text-align: right;">Page 31</p> <p>1 refer to it as "the Stephan patent."  2 Q Now, you relied on certain portions of  3 Stephan in combination with Iwata in your analysis  4 with regard to independent Claim 1 of the '931 patent;  5 correct?  6 A Yes.  7 Q Can you turn to Figure 2 of Stephan --  8 Stephan [pronunciation].  9 A Yes.  10 Q Now, Figure 2 of Stephan shows an external  11 input device, 50, attached to a computer; correct?  12 A That's what Figure 2 shows. The other forms  13 of Stephan's particular device are shown in other  14 figures.  15 Q Can you explain what happens if a user slides  16 his finger on region 56 or 58 of the input device of  17 Stephan?  18 MR. SALEN: Object to form and foundation.  19 THE WITNESS: So specifically with regard to  20 the Figure 2 embodiment?  21 BY MR. GOKHALE:  22 Q Yes.  23 A With regard to the Figure 2 embodiment, if  24 you were to slide your finger up or down on 50- --  25 regions 56 and 58, which are portions of an underlying</p>
<p style="text-align: right;">Page 32</p> <p>1 touchscreen surface, then --  2 Of course, it would depend on what  3 application you're running, but if, for example, you  4 were running an application like the Excel application  5 that's shown in Figure 1, if you moved your finger up  6 and down on region 56, you would scroll the rows of  7 information up and down, and if you moved your finger  8 back and forth in region 58, you would scroll the  9 columns left and right.  10 Q Okay.  11 A In the ordinary way, the same way you would  12 with -- with, for example, a mouse. Clearly at some  13 point you get to a boundary, and it stops.  14 Q So if you were to move your finger in the  15 downward direction in region 56, would it cause the  16 Excel spreadsheet shown in Figure 1 of Iwata to move  17 the view downward, as well?  18 MR. SALEN: Object to form and foundation.  19 THE WITNESS: I think a person of ordinary  20 skill would understand it's quite easy, given the  21 teachings of Stephan, to scroll either way, but I  22 think the specific embodiment in Figure 2 is described  23 in such a way that, if you move your finger up, the --  24 the -- document scrolls down.  25 ///</p>	<p style="text-align: right;">Page 33</p> <p>1 BY MR. GOKHALE:  2 Q Where does it describe that in Stephan?  3 A It's in column 6, lines 5 through 15. The  4 initial description simply says up or down, but then  5 there's an additional description that says that --  6 that there is a technique in which, where you move  7 your finger up, the work space will move downward, and  8 vice versa.  9 Q Okay. Turning back to Figure 2. Is -- what  10 does the area 54 represent on that input device?  11 A In Figure 54 -- in Figure 2, area 54 is  12 called a cursor control region.  13 Q Does that control cursor control for the  14 entire display region shown on the computer?  15 MR. SALEN: Object to form.  16 THE WITNESS: That would depend on the  17 particular application. It would just be ordinary  18 cursor control like a mouse or any other cursor  19 control device that lets you move the cursor to the  20 desired location on the monitor.  21 BY MR. GOKHALE:  22 Q Okay. Is -- anywhere on the monitor, is --  23 is that available to move the cursor?  24 A I don't know. But just like any other  25 computer -- lots of computers let you move anywhere on</p>

<p style="text-align: right;">Page 34</p> <p>1 the monitor, and some computers don't -- they have you  2 move within some kind of a window. It's -- it's just  3 the same as any ordinary computer.  4 Q Can we turn to Figure 13 in Stephan.  5 A Yes.  6 Q Now, Figure 13 of Stephan shows regions 288,  7 286, and 284 on what appears to be a laptop display;  8 correct?  9 A Yes.  10 Q Is the functionality of areas 288, 286, and  11 284, analogous to the functionality of the regions 56,  12 58, and 54, respectively, that we just discussed in  13 Figure 2?  14 MR. SALEN: Object to form.  15 THE WITNESS: They can be generally  16 analogous. Basically, region 288 can be used for  17 horizontal and vertical scroll -- I'm sorry -- for up  18 and down scrolling. Region 286 can be used for left  19 and right scrolling, and region 284 can be used for  20 cursor control.  21 It refers back to the previous embodiments,  22 but the description of the previous embodiments are  23 quite open and talk about many possible arrangements  24 of the regions and -- and such.  25 ///</p>	<p style="text-align: right;">Page 35</p> <p>1 BY MR. GOKHALE:  2 Q Is the region 288 shown in Figure 13 -- is it  3 your understanding that that is the rightmost object  4 on the display?  5 A Not necessarily. There's certainly space  6 shown to the -- to the right of it, but it doesn't say  7 whether or not that's useable space or whether or not  8 that's just some type of a border area. It's not  9 really relevant to the teachings of the patent.  10 Q In the embodiment of Figure 2, is the region  11 56 the rightmost region you can input to on that  12 external input device?  13 A It is. The -- the input tablet may exceed --  14 may go under the bezel, but you wouldn't be able to  15 reach that.  16 And similarly, in 13, you might ignore any  17 input that's to the right of region 288.  18 Q Could you please turn to paragraph 145 in  19 Exhibit 1201, your declaration.  20 Now, in this paragraph, there is a  21 description that -- there's a sentence that starts  22 with the word "likewise."  23 "Likewise, Stephan suggests that users can  24 accomplish desired functions quickly and efficiently,"  25 and then states, "and the overall user work space can</p>
<p style="text-align: right;">Page 36</p> <p>1 be increased by removing graphical icons,  2 representations of scroll bars."  3 Can you explain what you mean by the "overall  4 user work space can be increased"?  5 A Yes. One of the things --  6 Well, let me find the specifics in Stephan.  7 Well, it's not really a question of what I  8 mean. It's -- it's -- it -- it's a quote from  9 Stephan. He said it. I can explain it to you, but --  10 but it -- but it -- it -- it's a quote.  11 Q Okay. Can you explain how you're  12 interpreting Stephan to describe increasing the  13 overall user work space?  14 A Yes. He's teaching that, in some  15 embodiments, you can dedicate an area to scrolling,  16 and you don't have to place a visual scrolling-based  17 control underneath it. So it's something similar to  18 what we're all familiar with probably, today, on an  19 iPad where you can simply move an entire page of text  20 up and down without having to visually show a -- a  21 scrolling control, which was the most common type of  22 user interface at the time.  23 And by doing that, you can display more text  24 or more graphics on the screen, and he's explaining  25 that that's one possible advantage of some embodiments</p>	<p style="text-align: right;">Page 37</p> <p>1 of what he discloses.  2 Q Can you go to paragraph 147 of your  3 declaration.  4 In the last sentence, it describes that  5 "Stephan teaches it would be desirable to eliminate  6 the need for scroll and pan bars," and the portion is  7 in quotes, "eliminate the need for scroll and pan  8 bars." Outside of the quotes, it says, "by using a  9 scroll region defined on the touchscreen instead of a  10 permanently displayed scroll bar to avoid," then the  11 quotes start again, "detracting from the overall work  12 space that is visible and therefore accessible by the  13 user."  14 What does Stephan mean by "detracting from  15 the overall work space that is visible and therefore  16 accessible by the user"?  17 A Essentially what I described before; that in  18 much of the prior art, one would provide a visible  19 scroll control, like the one that's shown in Iwata,  20 and that in some embodiments, Stephan suggests that,  21 instead, it might make more sense to fill that with  22 more relevant data, like text that you want to read or  23 a picture that you want to see, and to have the user  24 simply know that that's a scroll region that he can  25 use to scroll up and down.</p>

<p style="text-align: right;">Page 38</p> <p>1 Q How are you interpreting the word</p> <p>2 "accessible" in that -- in that sentence?</p> <p>3 A That you can see more information; right? It</p> <p>4 says, "visible and therefore accessible," so</p> <p>5 it -- it -- it could be that there's more information</p> <p>6 there that's -- that's visible.</p> <p>7 Q Okay. Now, that -- that quote in that</p> <p>8 portion of Stephan refers back to column 2, lines 46</p> <p>9 to 50 of Stephan. Is that quote specific to the</p> <p>10 touchscreen embodiment of Figure 13?</p> <p>11 MR. SALEN: Object to form.</p> <p>12 THE WITNESS: I don't think so. He's</p> <p>13 introduced it prior to describing any of his</p> <p>14 embodiments, so as a motivation for his invention</p> <p>15 overall. So I think he intends it to be part of</p> <p>16 the -- his -- his reasoning and part of his teaching</p> <p>17 with respect to -- to all of the embodiments.</p> <p>18 BY MR. GOKHALE:</p> <p>19 Q Okay. Now, if we were -- revisit Figure 1.</p> <p>20 You mentioned that Stephan describes an Excel</p> <p>21 spreadsheet.</p> <p>22 Now, in a touchscreen of -- a normal</p> <p>23 touchscreen, say, one without the scroll and pan</p> <p>24 regions --</p> <p>25 A Uh-huh.</p>	<p style="text-align: right;">Page 39</p> <p>1 Q -- can you directly touch entries in column</p> <p>2 L, to your understanding?</p> <p>3 MR. SALEN: Object to form and foundation.</p> <p>4 THE WITNESS: I'm not sure what -- what</p> <p>5 you're asking. Certainly there were Windows PCs with</p> <p>6 touchscreens, Windows laptops with touchscreens like</p> <p>7 the IBM ThinkPad 360 PE that existed at this time, and</p> <p>8 they could run Excel. And if you touched, in box L1,</p> <p>9 for example, it would select that box, like, with a</p> <p>10 mouse, but I don't think you could enter text that</p> <p>11 way, because I think in that particular embodiment,</p> <p>12 you would have to enter text with --</p> <p>13 Well, you could -- you could enter text</p> <p>14 either by pulling up a virtual keyboard on the screen</p> <p>15 or by typing on the -- on the physical keyboard.</p> <p>16 BY MR. GOKHALE:</p> <p>17 Q To your understanding of Microsoft Excel, if</p> <p>18 you touched a cell in column L, would it place the</p> <p>19 cursor into that -- into that box?</p> <p>20 MR. SALEN: Object to form. Foundation. And</p> <p>21 outside the scope of direct.</p> <p>22 THE WITNESS: I believe it would select the</p> <p>23 cell. I believe it would --</p> <p>24 And there -- there were various different</p> <p>25 touchscreen embodiments, but I think -- believe that</p>
<p style="text-align: right;">Page 40</p> <p>1 the most common one, the one that was standard, the</p> <p>2 default configuration in Windows, I believe it would</p> <p>3 select the cell, like if you had clicked on the box.</p> <p>4 BY MR. GOKHALE:</p> <p>5 Q Would you be allowed to perform further</p> <p>6 operations after that selection?</p> <p>7 MR. SALEN: Object to form. Foundation.</p> <p>8 Outside the scope of direct.</p> <p>9 THE WITNESS: Again, my recollection is that</p> <p>10 you could.</p> <p>11 BY MR. GOKHALE:</p> <p>12 Q Okay. At the bottom of Figure 1, there is</p> <p>13 shown a pan/scroll bar area, *30, 31, 38 and arrows 36</p> <p>14 and -- 36.</p> <p>15 A Correct.</p> <p>16 Q If you removed that scroll bar, would you be</p> <p>17 able to display additional sheet tabs as are shown</p> <p>18 adjacent to that scroll bar?</p> <p>19 MR. SALEN: Object to form. Foundation.</p> <p>20 Outside the scope of direct.</p> <p>21 THE WITNESS: I don't know. I don't -- I</p> <p>22 don't know the Excel source code well enough to know</p> <p>23 what would happen if you modified it.</p> <p>24 BY MR. GOKHALE:</p> <p>25 Q Okay. But in -- in terms of increasing the</p>	<p style="text-align: right;">Page 41</p> <p>1 work space that is visible, would it be reasonable to</p> <p>2 believe that you could display more sheet tabs at the</p> <p>3 bottom of that screen?</p> <p>4 MR. SALEN: Object to form. Foundation.</p> <p>5 Outside the scope of direct.</p> <p>6 THE WITNESS: Theoretically, if that's what</p> <p>7 you wanted to do, I -- I think you could do that.</p> <p>8 BY MR. GOKHALE:</p> <p>9 Q If you were to directly touch on a</p> <p>10 touchscreen one of the sheet tabs, does it allow you</p> <p>11 to access that sheet?</p> <p>12 MR. SALEN: Object to form. Foundation.</p> <p>13 Outside the scope of direct.</p> <p>14 THE WITNESS: I don't recall. I never used</p> <p>15 Excel on a touchscreen machine to that level of detail</p> <p>16 where I tried to get -- access a second sheet.</p> <p>17 Again, my recollection is that it would be</p> <p>18 the same as clicking it on a mouse, but different</p> <p>19 applications can interpret touch input in different</p> <p>20 ways. So -- so --</p> <p>21 BY MR. GOKHALE:</p> <p>22 Q So if we --</p> <p>23 A -- there's always flexibility there.</p> <p>24 Q If we go back to Figure 13, then, with the</p> <p>25 region 288, if we were to have this Microsoft Excel</p>

<p style="text-align: right;">Page 42</p> <p>1 display shown in Figure 1 encompassing the full  2 display area of that screen, would that area 288  3 overlap the visible column in the Microsoft Excel  4 spreadsheet?  5 MR. SALEN: Object to form and foundation.  6 THE WITNESS: If you were to put  7 Microsoft Excel on that machine and if you were to  8 expand Microsoft Excel to fill the entirety of the  9 display, then -- then, again, I don't want to presume  10 that anything's to scale, but -- but -- but if it were  11 to scale, then region 288 would overlap some  12 information.  13 BY MR. GOKHALE:  14 Q If that region 288 overlaps the entirety of  15 column L, based on the initial point of contact, can  16 you select a specific cell in column L?  17 MR. SALEN: Object to form. Foundation.  18 Outside the scope of direct.  19 THE WITNESS: It would depend on how you do  20 the design. Clearly, if you were going to make the  21 decision to put selectable information under region  22 288, you would construct the embodiment in such a way  23 that 288's scrolling function could be turned on and  24 off.  25 The whole point of using a touchscreen-based</p>	<p style="text-align: right;">Page 43</p> <p>1 interface is that you redefine the functionality of  2 the touchscreen input --  3 BY MR. GOKHALE:  4 Q So when is --  5 MR. SALEN: I'm sorry. He's still answering  6 the question.  7 BY MR. GOKHALE:  8 Q I'm sorry. I'm sorry. Please proceed.  9 A I was saying, the whole point of  10 touchscreen-based interfaces is generally that they're  11 easily redefinable over time.  12 Q Okay. When the scrolling region is active,  13 can you, like we described before, touch the cell in  14 column L and select it?  15 MR. SALEN: Object to form. Foundation. And  16 outside the scope of direct.  17 THE WITNESS: Again, you need to make a lot  18 of assumptions there, but -- but if you were to build  19 it that way, then presumably you couldn't. For that  20 reason, probably nobody would build it in that  21 particular way. They would either not place  22 selectable information under the scrolling region, or  23 they would give you the ability to turn the scrolling  24 region on and off.  25 ///</p>
<p style="text-align: right;">Page 44</p> <p>1 BY MR. GOKHALE:  2 Q Okay. So is there a difference, though, when  3 you use the embodiment of Figure 2 of Stephan in the  4 same exact situation?  5 MR. SALEN: Object to form.  6 THE WITNESS: Well, again, in both cases --  7 I should be clear. In both cases, the cell  8 is probably selectable but probably not selectable  9 using a touchscreen; right? It's probably selectable  10 using the keyboard. It may be selectable using any  11 other kind of user-input device. With the --  12 And -- and it may be selectable, as well;  13 right? So, again, there -- there -- there's an  14 analogy here -- there's no teaching in Stephan that  15 you would have to touch directly on something to  16 select it. You asked me questions about how certain  17 other devices like an IBM PC worked many years ago,  18 but in Stephan, it doesn't teach that way.  19 It's certainly quite reasonable to believe  20 that, in Stephan, region 284 operates like a mouse and  21 that you move the cursor by making motions and that  22 you can select things by tapping. There's no reason  23 to presume that once you put the -- the -- that the  24 Stephan device in Figure 13 operates in the same way  25 as an IBM ThinkPad did earlier.</p>	<p style="text-align: right;">Page 45</p> <p>1 So if -- if that were the case, if, in fact,  2 region 284 operated just like analogous region 54,  3 where you can drag things and you can make the  4 selection in some other way by hitting a key on a  5 keyboard or by tapping or some other gesture, all of  6 which were well known, then you could select anything.  7 MR. SALEN: Counsel, can -- when you get a  8 chance, can we go off the record for a minute?  9 MR. GOKHALE: Sure.  10 MR. SALEN: Is it a good time now to -- or we  11 can take a break, if you want.  12 MR. GOKHALE: Take a break? Yeah, that's  13 fine. No problem. Yeah.  14 THE VIDEOGRAPHER: Going off the record?  15 Okay. All agreed to go off the record.  16 We are going off the record at 10:09 a.m.  17 (Recess from 10:09 a.m. - 10:21 a.m.)  18 THE VIDEOGRAPHER: We're back on the record  19 at 10:21 a.m.  20 MR. SALEN: I'd just like to ask a question  21 real quick. If Counsel could just identify who's  22 sitting next to you.  23 MR. GOKHALE: Jean Renard Ward is sitting  24 next to me.  25 MR. SALEN: And what is his role?</p>

<p style="text-align: right;">Page 46</p> <p>1 MR. GOKHALE: He is a technical expert.  2 MR. SALEN: Thank you.  3 MR. GOKHALE: Uh-huh.  4 BY MR. GOKHALE:  5 Q Okay, Dr. Wolfe. Resuming the -- the line of  6 discussion we were having before. I believe you said  7 that if you have one of the scrolling regions, as  8 shown in Figure 13, overlapping column L, you have to  9 disable that scrolling region to make a direct  10 selection of a cell in column L. Is that -- is that  11 correct?  12 MR. SALEN: Object to form. Foundation.  13 Outside the scope of direct.  14 THE WITNESS: I don't think so. It depends  15 what you mean by "direct selection."  16 BY MR. GOKHALE:  17 Q If you -- if you had made no previous contact  18 with the touchscreen, you can see the touchscreen and  19 you want to select that cell, would you have to  20 disable that scrolling region to make that selection  21 in the embodiment shown in Figure 13 --  22 MR. SALEN: Objection.  23 BY MR. GOKHALE:  24 Q -- if it completely overlapped the column L,  25 for instance?</p>	<p style="text-align: right;">Page 47</p> <p>1 MR. SALEN: Objection to form. Foundation.  2 Outside the scope of direct.  3 THE WITNESS: No. Not necessarily. It  4 depends on what protocols you use for the gesture  5 recognition of the touchscreen, and it depends on how  6 you define the -- the interpretation of the inputs  7 into region 284.  8 BY MR. GOKHALE:  9 Q Is there a difference, though, between the  10 embodiment in Figure 2 in performing the same function  11 that I just described, to be able to directly select  12 the cell between Figure 2 and Figure 13? Is there a  13 difference in what you can do with Figure 2's  14 embodiment?  15 MR. SALEN: Objection to form. Foundation.  16 Outside the scope of direct.  17 THE WITNESS: No. I don't believe so. I  18 don't think there's one that's taught. Again,  19 there's -- there's nothing in Stephan that even --  20 that talks about a need to have an ability to directly  21 select a cell by touching a spot that corresponds to  22 that cell. That's just not a function Stephan  23 discusses. So we would have to make a lot of  24 assumptions.  25 And using what a person of ordinary skill in</p>
<p style="text-align: right;">Page 48</p> <p>1 the art would know, based on other comparable devices  2 at the time, it could be that -- that a direct  3 selection is allowed, and it could be that it isn't.  4 Those would be design choices.  5 Q Okay. Let me rephrase the question, then.  6 If you are in the embodiment of Figure 13 and  7 that Excel spreadsheet shown in Figure 1 is displayed  8 to maximize its display area over the screen, if you  9 were to touch the region 288 shown in Figure 13, how  10 would it interpret that input?  11 MR. SALEN: Object to form. Foundation.  12 Outside the scope of direct.  13 THE WITNESS: It would depend on how you  14 implement parts of the system that aren't described in  15 Stephan. For example, Stephan, one, doesn't even tell  16 you that the laptop on Figure 13 can run Excel, and it  17 doesn't tell you how you would select particular cells  18 in Excel. And there are multiple ways known in the  19 art to do it. So you could do it various ways, as  20 I've described.  21 BY MR. GOKHALE:  22 Q But Stephan is silent on that particular  23 problem and solution that we're discussing right now?  24 MR. SALEN: Objection to form. Foundation.  25 Outside the scope of direct.</p>	<p style="text-align: right;">Page 49</p> <p>1 THE WITNESS: On the question of what would  2 happen if you ran Excel on Figure 13 and you maximized  3 Excel to fill the entire display and you touched a  4 cell in region 288, what would happen?  5 Is that the --  6 Q Yes.  7 A Is that the question?  8 No. That's not something Stephan  9 specifically addresses. A person of ordinary skill in  10 the art could -- could apply their knowledge in  11 various ways and implement that in various ways, but  12 it's not something that -- that is specifically  13 described in Stephan.  14 BY MR. GOKHALE:  15 Q Does the embodiment of Figure 2 of Stephan,  16 the scrolling region 56 -- does that overlap any  17 region in a displayed area? Does it --  18 MR. SALEN: Objection to form.  19 THE WITNESS: I'm not sure I understand your  20 question. If region 56 is -- is on a separate device,  21 it's not -- it doesn't physically overlap any portion  22 of the display in the Figure 2 embodiment.  23 BY MR. GOKHALE:  24 Q Okay. All right. Okay. Going back to  25 Figure 6 of Iwata. In a combination of Stephan and</p>

<p style="text-align: right;">Page 50</p> <p>1 Iwata, based on the embodiment of Figure 13 in  2 Stephan, where does the -- the scroll region overlap  3 in the display of Figure 6?  4 A Well, I don't know that the combination would  5 in any way be limited to Figure 6. There are lots of  6 different displays that are described in Iwata. And  7 I'm also not sure that you would take actual physical  8 characteristics of Figure 13. There wouldn't be any  9 reason to do that.  10 Iwata discloses a sensor input device. Iwata  11 discloses a way to move the -- the rows of text on the  12 screen. I think what I say in my declaration is that  13 at least one embodiment that you could have would be  14 where you would put a vertical scrolling region over  15 the top of the region that is currently the scroll bar  16 control in Figure 6 or in Figure 10, for example, of  17 Iwata. And you could either display a scroll bar  18 control under it or you could not display a scroll bar  19 control under it, depending on what your objectives  20 were. Certainly a person of ordinary skill would know  21 how to do either.  22 Q Okay. In Figure 6, though, is there a  23 current scroll bar that is being replaced by this --  24 this modification, a display scroll bar that you're  25 eliminating as a result of that modification?</p>	<p style="text-align: right;">Page 51</p> <p>1 A I think I just answered that for you. You  2 can either eliminate it or not eliminate it --  3 Q For the actual --  4 A -- for exactness.  5 Q What's shown in the reference numbers, does  6 Figure 6 show a scroll bar currently that you can use  7 to scroll the list of names?  8 A It does. It does. And -- and, in fact, in  9 my opinion, a person of ordinary skill, just from  10 looking at the figures in Iwata, would understand that  11 one can touch the scroll control on that scroll bar  12 and move it up and down by moving your finger.  13 But Iwata didn't say that explicitly in its  14 text. Only shows something in its figures that a  15 person of ordinary skill would recognize as an  16 ordinary scroll bar, essentially identical to the one  17 that's shown in Figure 1 on the Excel spreadsheet in  18 Stephan.  19 So the combination that's proposed in my  20 declaration, 1201, is that one would use the teachings  21 of Stephan to implement a scroll bar control, a  22 scroll -- within a scrolling region over top of that  23 area that's used for scrolling control now in Iwata.  24 Q In -- in touchscreen technology, is -- at the  25 time of the filing of the '931 patent and with respect</p>
<p style="text-align: right;">Page 52</p> <p>1 to what Iwata's purported touchscreen is -- is  2 described to be, is the touchscreen embedded with  3 the -- the soft -- the displayable software or the  4 software that's causing the display, or is it a  5 separate device that overlaps what is being shown?  6 MR. SALEN: Objection. Form. Foundation.  7 THE WITNESS: It depends how you're using the  8 terminology. Typically the touchscreen is a physical  9 piece of hardware that is used as a sensor to measure  10 the location of touch.  11 BY MR. GOKHALE:  12 Q Is -- is -- is it overlapping an existing  13 display device?  14 MR. SALEN: Objection to form.  15 BY MR. GOKHALE:  16 Q Is the -- the physical touchscreen is a -- is  17 it a separate component from the -- the device that's  18 performing the actual display function?  19 MR. SALEN: Objection to form and foundation.  20 THE WITNESS: Generally at the time there  21 would be two components that are bonded together.  22 There would be a touch sensor that is bonded on top of  23 a ordinary LCD or similar type of flat-panel display.  24 But -- and that's usually what we're referring to when  25 we use the word "touchscreen."</p>	<p style="text-align: right;">Page 53</p> <p>1 We would typically call it a touchpad or  2 something else if it were off to the side.  3 BY MR. GOKHALE:  4 Q Okay. So in the modification of Stephan and  5 Iwata, are you applying a physical touch panel --  6 touch-sensitive panel over an existing display?  7 A In the suggested combination of Iwata and  8 Stephan, I'm not suggesting any modifications to the  9 hardware of Iwata at all. It's the exact hardware  10 that is disclosed in Iwata.  11 Q And does Iwata have what you just described  12 as a -- a two-component setup with a physical  13 touchscreen overlapping a display?  14 A I don't think it's limited to that, but  15 that's certainly an embodiment that's disclosed.  16 Q Okay. In that type of embodiment, you  17 have -- you have to essentially program the  18 touchscreen to overlap a desired area that's going to  19 be displayed on -- or the -- I guess --  20 Let me back up. In the embodiment of  21 Figure 13 in Stephan, the scrolling and pan regions  22 that we've talked about at length, now, those are  23 essentially overlapping display portions of an  24 underlying display; is that correct?  25 MR. SALEN: Objection to form.</p>

<p style="text-align: right;">Page 54</p> <p>1 THE WITNESS: I don't understand what you  2 mean by the word "overlapping."  3 BY MR. GOKHALE:  4 Q Like the actual touch-sensitive region is on  5 a separate physical component than the actual display  6 device, which is producing displayable images and  7 graphics.  8 A Not necessarily, but -- but in many  9 embodiments, that would be true.  10 Q If we were in that embodiment, then, do you  11 have to decide -- sorry. Let me back up.  12 Do you have to align the scrolling region in  13 Stephan or the pan region in Stephan with a particular  14 display portion in the underlying display?  15 MR. SALEN: Objection to form and foundation.  16 THE WITNESS: Not in any special way. If  17 you've got a touchscreen technology that needs to be  18 aligned in general, that's generally done through a  19 calibration procedure and software. Some touchscreen  20 technologies that are disclosed in these patents  21 ordinarily would require that; some ordinarily would  22 not.  23 By this time, self-adjusting displays or  24 touchscreens were well known. So it's just a design  25 choice as to which particular technology you use, one</p>	<p style="text-align: right;">Page 55</p> <p>1 that self-calibrates to display or one that's  2 calibrated periodically by -- by a user or at the  3 factory. They were -- they were both well known at  4 the time.  5 And -- and that's just a general principle  6 whenever you want to have some correspondence between  7 any button or control on the screen at a touch  8 location. So that would already have been a  9 characteristic of Iwata in some embodiments, and for  10 those embodiments, when you add in the combination  11 with Stephan, that characteristic would not change.  12 Q Okay. So going back to Figure 6 of Iwata.  13 What is the region 29 representing?  14 A It's a scroll area, scroll area 29.  15 Q Is this region eliminated -- this visible  16 scroll region eliminated in the combination of Stephan  17 and Iwata if you're -- if Figure 6 is involved in the  18 combination?  19 MR. SALEN: Objection to form. Foundation.  20 THE WITNESS: That would be a design choice.  21 You could either leave it there or you could eliminate  22 it.  23 BY MR. GOKHALE:  24 Q But isn't the motivation in Stephan to  25 eliminate these visible scroll regions?</p>
<p style="text-align: right;">Page 56</p> <p>1 A It's one of --  2 MR. SALEN: Objection to form.  3 THE WITNESS: It's one of many motivations,  4 that -- that he talks is a possible motivation, but  5 it's certainly not his sole motivation for -- for his  6 design.  7 BY MR. GOKHALE:  8 Q Did you cite to that motivation in Stephan to  9 increase the displayable work space?  10 A Yes. That would be a motivation for certain  11 embodiments of the combination.  12 Q So if you're trying to increase the display  13 of a work space, would you eliminate that displayed  14 scroll bar 29 in Figure 26?  15 A If that were your objective, yes, you -- you  16 would do that.  17 Q And would the -- if you go back to Figure 13  18 of Stephan, would that dotted-line region that shows  19 the scrolling region -- and you remove the display of  20 scroll bar 29, where would that dotted-line region go?  21 MR. SALEN: Objection to form. Foundation.  22 THE WITNESS: Again, it's a design choice,  23 but in at least one interesting embodiment, it would  24 go in the -- in the area where the scrolling area 29  25 had previously been.</p>	<p style="text-align: right;">Page 57</p> <p>1 BY MR. GOKHALE:  2 Q Would you maintain the scrolling area 28  3 displayed if you -- if you did that implementation?  4 A Again, that would be a design choice. You --  5 you could have a second scrolling area 288, or you  6 could maintain 28. It would just be a design choice.  7 Either one would make sense.  8 Q Okay. Now, scrolling region 28, does that  9 operate differently than scrolling region 29?  10 A In the details, it does. It scrolls a  11 different -- different part of the screen.  12 Q Does it allow you to select separate inputs  13 in addition to the scrolling?  14 MR. SALEN: Objection to form.  15 THE WITNESS: I'm not sure what that question  16 means.  17 BY MR. GOKHALE:  18 Q There are -- in scroll region 28 of Iwata,  19 there is an arrow input at the bottom, and there's  20 letter inputs above that.  21 A So Iwata doesn't refer to 28 as a scroll  22 region. It refers to it as a tag area.  23 Q Okay.  24 A And it refers only to 29 as a scroll area.  25 So I want to make it clear that if -- if we're going</p>

<p style="text-align: right;">Page 58</p> <p>1 to call it something different, those are your terms.</p> <p>2 Q Okay. Can you provide a -- an input to the</p> <p>3 buttons shown above region 28?</p> <p>4 MR. SALEN: Objection to form.</p> <p>5 THE WITNESS: Well, there are two -- in --</p> <p>6 in -- in Figure 6, for example, there are two</p> <p>7 region 28s. There are two tag areas.</p> <p>8 BY MR. GOKHALE:</p> <p>9 Q Is there one shown to the right of --</p> <p>10 Sorry. Go ahead.</p> <p>11 A And you can select the boxes that are shown</p> <p>12 in the various tag area 28s.</p> <p>13 Q Now, in your proposed modification, you said</p> <p>14 you would eliminate the scroll area 29, and you would</p> <p>15 apply the scrolling region in its place. So would</p> <p>16 that --</p> <p>17 It would be adjacent to that displayed area</p> <p>18 of the buttons above 28; is that correct?</p> <p>19 MR. SALEN: Objection to form.</p> <p>20 THE WITNESS: It's a design choice. It</p> <p>21 could -- you could do it that way, or you could</p> <p>22 eliminate 28. You could combine 28 onto the other</p> <p>23 side, or you could have a second scrolling area for 28</p> <p>24 where it's displayed. I mean, those are very simple</p> <p>25 user interface design choices.</p>	<p style="text-align: right;">Page 59</p> <p>1 But certainly one way to combine it would be</p> <p>2 to leave everything else alone and simply place the</p> <p>3 scrolling area from Stephan in where scroll area 29</p> <p>4 had been before.</p> <p>5 BY MR. GOKHALE:</p> <p>6 Q About how big would that scroll region have</p> <p>7 to be in the portable device of Iwata?</p> <p>8 MR. SALEN: Objection to form.</p> <p>9 THE WITNESS: Again, it's a design choice.</p> <p>10 It would depend on the size of your display and the</p> <p>11 size of -- of your control and -- and how precisely</p> <p>12 you wanted the user to be able to make adjustments.</p> <p>13 BY MR. GOKHALE:</p> <p>14 Q Now, when you put the scroll region into an</p> <p>15 area of Iwata, can you have a button similar to the</p> <p>16 ones shown above 28 underneath that scroll region or</p> <p>17 the button -- the buttons above region 28 underneath</p> <p>18 that scroll region?</p> <p>19 MR. SALEN: Objection to form.</p> <p>20 THE WITNESS: It's -- it's a graphical user</p> <p>21 interface. I guess you can do whatever you want, but</p> <p>22 you wouldn't have to do that.</p> <p>23 I mean, again, the combination doesn't have</p> <p>24 to be, you know, specific to -- to Figure 6, either,</p> <p>25 but -- but I mean, yeah, you could -- you could do</p>
<p style="text-align: right;">Page 60</p> <p>1 whatever you wanted as a design choice. I mean,</p> <p>2 that's -- that's easy to do. That's not necessarily</p> <p>3 the way I would do it.</p> <p>4 BY MR. GOKHALE:</p> <p>5 Q Now, if we assume that the display in Figure</p> <p>6 6 of Iwata -- if we assume that the length on the</p> <p>7 bottom side is about three inches, what would be the</p> <p>8 width of your scroll region for that type of</p> <p>9 embodiment?</p> <p>10 MR. SALEN: Object to form and foundation.</p> <p>11 THE WITNESS: It would be whatever you want</p> <p>12 it to be. It's easy -- I think it's trivial to change</p> <p>13 the width of a -- of a user interface element in a --</p> <p>14 in a user interface.</p> <p>15 BY MR. GOKHALE:</p> <p>16 Q Would the areas outside of the scroll</p> <p>17 region -- would they be able to accept a -- an</p> <p>18 absolute positioning input?</p> <p>19 MR. SALEN: Object to form.</p> <p>20 THE WITNESS: Presumably, they would.</p> <p>21 They -- they -- they can in Iwata today. So there</p> <p>22 certainly wouldn't be any reason to change that. But,</p> <p>23 again, it's -- it's a very simple user interface</p> <p>24 design choice.</p> <p>25 MR. GOKHALE: Okay. I'm going to move on to</p>	<p style="text-align: right;">Page 61</p> <p>1 Dependent Claim 3 of Iwata -- I'm sorry -- of the '931</p> <p>2 re-issue patent -- re-exam patent.</p> <p>3 Q Claim 3 uses the phrase "wherein the</p> <p>4 controller is operative to selectively display an</p> <p>5 image on the display according to the output signal of</p> <p>6 the contact-sensitive transducer."</p> <p>7 Did you provide an interpretation of the</p> <p>8 phrase "selectively display" in your declaration?</p> <p>9 MR. SALEN: Objection to form.</p> <p>10 THE WITNESS: I don't recall any specific</p> <p>11 one. I think I just used the plain meaning. Let me</p> <p>12 look at exactly what I addressed in Claim 3.</p> <p>13 BY MR. GOKHALE:</p> <p>14 Q It starts on paragraph 206 of your</p> <p>15 declaration.</p> <p>16 A Yes. I didn't provide any specific</p> <p>17 definition. I just used plain meaning, and -- and in</p> <p>18 this case, it was quite easy since the patents at</p> <p>19 issue disclosed essentially exactly the same thing</p> <p>20 that's disclosed in the '931 patent.</p> <p>21 Q In paragraph 206, you refer to Figure 7(b) of</p> <p>22 the '931 patent.</p> <p>23 A I do.</p> <p>24 Q Okay. Can you explain what is happening in</p> <p>25 Figure 7(b) of the '931 patent?</p>



<p style="text-align: right;">Page 62</p> <p>1 MR. SALEN: Objection to form.</p> <p>2 THE WITNESS: A user makes a swiping or</p> <p>3 displacement motion in contact with a</p> <p>4 contact-sensitive strip (150) mounted on the side of</p> <p>5 the radiotelephone, causing the display rows to scroll</p> <p>6 along the direction of the user's movement. Those</p> <p>7 skilled in the art will appreciate that scrolling in a</p> <p>8 generic sense refers to selective display of a row on</p> <p>9 the display (120) and may encompass a number of</p> <p>10 different graphical operations.</p> <p>11 BY MR. GOKHALE:</p> <p>12 Q So are you relying on the description of the</p> <p>13 '931 patent for your interpretation of the term</p> <p>14 "selectively displaying"?</p> <p>15 A Not in terms of defining its scope, but in</p> <p>16 terms of the fact that it is at least exemplary of</p> <p>17 selectively displaying.</p> <p>18 Q If you perform the moving contact in the '931</p> <p>19 patent, is a single row highlighted or all the rows</p> <p>20 highlighted or multiple rows highlighted, to your</p> <p>21 understanding?</p> <p>22 MR. SALEN: Objection to form.</p> <p>23 THE WITNESS: I don't think it's limited. I</p> <p>24 think, in this example, there's one row that's</p> <p>25 highlighted.</p>	<p style="text-align: right;">Page 63</p> <p>1 MR. GOKHALE: Okay. Can we provide</p> <p>2 Exhibit 1037 to Dr. Wolfe?</p> <p>3 MR. SALEN: Sure.</p> <p>4 (Exhibit 1037 was referenced.)</p> <p>5 BY MR. GOKHALE:</p> <p>6 Q Are you interpreting the phrase "selectively</p> <p>7 display" to be disclosed by --</p> <p>8 Sorry. First can you describe what this</p> <p>9 exhibit is?</p> <p>10 A This is U.S. Patent 5,710,844, signed</p> <p>11 Apple Computer. Lead inventor is Stephen P. Capps,</p> <p>12 and I refer to it as "the Capps patent."</p> <p>13 Q Did you rely on Capps in combination with</p> <p>14 Iwata and Stephan for the features of Dependent</p> <p>15 Claim 3?</p> <p>16 A I did.</p> <p>17 Q Are you interpreting Capps to disclose the</p> <p>18 "selectively display" feature of Claim 3?</p> <p>19 A It does. Iwata probably discloses it on its</p> <p>20 own, for example, in Figure 6, but it's -- it's</p> <p>21 clearer in -- in Capps that it -- that it -- that it</p> <p>22 highlights things. And since there were other claims</p> <p>23 that involved highlighting, I focused on that</p> <p>24 combination.</p> <p>25 Q Can you explain how Capps produces</p>
<p style="text-align: right;">Page 64</p> <p>1 highlighting?</p> <p>2 A When Capps is in a search mode, you type in a</p> <p>3 phrase, and then as you scroll the screen, everything</p> <p>4 that matches that phrase that appears on the screen is</p> <p>5 highlighted.</p> <p>6 Q Is it highlighted before you scroll the</p> <p>7 screen or only after you scroll the screen?</p> <p>8 MR. SALEN: Objection to form.</p> <p>9 THE WITNESS: As a display, I'll admit I</p> <p>10 don't think it exists until it's on the screen.</p> <p>11 BY MR. GOKHALE:</p> <p>12 Q You said that Capps, you type in a search</p> <p>13 string.</p> <p>14 A Yes.</p> <p>15 Q When you type in a search string and</p> <p>16 presumably you hit an "Enter" button or some kind of</p> <p>17 a -- some kind of a button to provide that search,</p> <p>18 what happens as a result?</p> <p>19 MR. SALEN: Objection to form and foundation.</p> <p>20 THE WITNESS: I'm not sure you have to hit a</p> <p>21 button, but the corresponding text within a document</p> <p>22 gets highlighted if it is being shown on the screen at</p> <p>23 the current time. And then if you scroll through the</p> <p>24 document, any corresponding text that appears on the</p> <p>25 screen gets highlighted in a similar manner.</p>	<p style="text-align: right;">Page 65</p> <p>1 BY MR. GOKHALE:</p> <p>2 Q Okay. So does Capps highlight items before</p> <p>3 you perform any scrolling on the list on the screen?</p> <p>4 MR. SALEN: Objection to form.</p> <p>5 THE WITNESS: There -- there's no disclosure</p> <p>6 of that. There would be no reason to -- to highlight</p> <p>7 them before they're displayed. I'm not even quite</p> <p>8 sure how -- what we would define that to mean.</p> <p>9 There's -- there's no disclosure that -- that those</p> <p>10 images even exist before they're drawn on the screen.</p> <p>11 MR. GOKHALE: All right. Is it okay if we</p> <p>12 take a break now?</p> <p>13 MR. SALEN: Yeah.</p> <p>14 MR. GOKHALE: Okay.</p> <p>15 THE VIDEOGRAPHER: All agreed to go off the</p> <p>16 record.</p> <p>17 We're off the record at 10:55 a.m.</p> <p>18 (Recess from 10:55 a.m. - 11:09 a.m.)</p> <p>19 THE VIDEOGRAPHER: This is the start of</p> <p>20 Media No. 2 in the deposition of Dr. Andrew Wolfe.</p> <p>21 We're back on the record at 11:09 a.m.</p> <p>22 BY MR. GOKHALE:</p> <p>23 Q Okay, Dr. Wolfe. We're going to resume the</p> <p>24 discussion regarding Capps.</p> <p>25 Could you look to column 5, lines 1 through 9</p>

<p style="text-align: right;">Page 66</p> <p>1 in Capps, please. And you can read that to yourself.</p> <p>2 A Okay.</p> <p>3 Q Okay. So that -- that description refers to</p> <p>4 the Figure 5 example; correct?</p> <p>5 A It does.</p> <p>6 Q Okay. It describes -- it appears to describe</p> <p>7 that if you enter the word "electrician" in the "Find</p> <p>8 Input" field, you will get a list of returns, and at</p> <p>9 least one of those returns is highlighted, 70; is that</p> <p>10 correct?</p> <p>11 MR. SALEN: Objection to form.</p> <p>12 THE WITNESS: Well, it also has to do with</p> <p>13 what happens when you hit the -- the "What" button --</p> <p>14 BY MR. GOKHALE:</p> <p>15 Q Okay.</p> <p>16 A -- and when you're looking for a to-do list.</p> <p>17 Q Okay. So in response to typing in the word</p> <p>18 "electrician" and hitting the "What" button, does it</p> <p>19 display the list -- the to-do list shown in Figure 5?</p> <p>20 A Under that particular set of conditions</p> <p>21 that's described for Figure 5, that would -- that</p> <p>22 would be true.</p> <p>23 Q Okay. In the description on column 5, lines</p> <p>24 5 through 9, it then states that there -- there are</p> <p>25 two other hits that can be viewed if you use the up</p>	<p style="text-align: right;">Page 67</p> <p>1 and down scroll buttons to scroll through the other</p> <p>2 hits. Now, is that scrolling occurring after the</p> <p>3 display that's shown in Figure 5?</p> <p>4 A It would depend what you do. If you were to</p> <p>5 actually hit the scroll buttons after the display on</p> <p>6 Figure 5, then -- then the page would scroll, and you</p> <p>7 would see other terms highlighted.</p> <p>8 Q Okay. But the term "electrician" shown in</p> <p>9 Figure 5 is highlighted before you perform that</p> <p>10 scrolling; is that correct?</p> <p>11 A In this one particular example, that's true.</p> <p>12 That -- that is the example, is that one instance of</p> <p>13 "electrician" is highlighted prior to that particular</p> <p>14 scrolling action, and two others are highlighted after</p> <p>15 scrolling actions.</p> <p>16 Q Okay. So is -- can you have multiple</p> <p>17 highlighted terms on one page in this description?</p> <p>18 A In some instances, you can. In other</p> <p>19 instances, you won't.</p> <p>20 Q If you have an entry that's highlighted, such</p> <p>21 as the term "electrician" shown in Figure 5, and you</p> <p>22 scroll down and there's two simultaneous entries of</p> <p>23 "electrician" then displayed at one time, would the --</p> <p>24 would the first instance of "electrician" go away as</p> <p>25 being highlighted or would it stay highlighted if you</p>
<p style="text-align: right;">Page 68</p> <p>1 could still see it?</p> <p>2 MR. SALEN: Objection to form and</p> <p>3 foundation.</p> <p>4 THE WITNESS: It depends on how long the file</p> <p>5 is. I think in -- I think it -- it depends on what</p> <p>6 the other data is. Either situation could occur.</p> <p>7 BY MR. GOKHALE:</p> <p>8 Q But would it -- does it describe removing the</p> <p>9 highlight from -- a previously highlighted item when</p> <p>10 you perform the scrolling action?</p> <p>11 MR. SALEN: Objection to form.</p> <p>12 THE WITNESS: I didn't -- I didn't understand</p> <p>13 your question.</p> <p>14 BY MR. GOKHALE:</p> <p>15 Q If -- in Figure 5, it's showing an instance</p> <p>16 of the term "electrician" highlighted. It says you</p> <p>17 can view other hits by using the up-down scroll</p> <p>18 buttons, 52 and 54. If you were to scroll downward</p> <p>19 and encounter another hit of "electrician," does it</p> <p>20 describe removing the previous highlight that was</p> <p>21 already there for the first hit of "electrician"?</p> <p>22 MR. SALEN: Objection to form. Foundation.</p> <p>23 THE WITNESS: It would depend on where they</p> <p>24 are in the remainder of the file. Certainly, in some</p> <p>25 instances, that first instance of "electrician" would</p>	<p style="text-align: right;">Page 69</p> <p>1 no longer be on the screen. So it --</p> <p>2 BY MR. GOKHALE:</p> <p>3 Q I'm asking --</p> <p>4 Sorry. Go ahead.</p> <p>5 A And so it wouldn't be present at all.</p> <p>6 Q If it was on the screen, would it be</p> <p>7 highlighted still, or does it describe removing the</p> <p>8 highlight explicitly?</p> <p>9 MR. SALEN: Objection to form and foundation.</p> <p>10 THE WITNESS: I'm not sure that it addresses</p> <p>11 that particular situation at all. I believe that --</p> <p>12 that the way that it works is that whatever -- in this</p> <p>13 Figure 5 example, whatever instances of the word</p> <p>14 "electrician" are dis- -- are on the screen within the</p> <p>15 window after the scrolling would be highlighted.</p> <p>16 BY MR. GOKHALE:</p> <p>17 Q Okay. Can you refer back to Exhibit 1001,</p> <p>18 which is the '931 patent.</p> <p>19 A Yes.</p> <p>20 Q Okay. Could you turn to column 8 in the</p> <p>21 paragraph starting on line 29.</p> <p>22 A Okay.</p> <p>23 Q Okay. In line 44, starting there, it says,</p> <p>24 "A plurality of rows may be displayed on the display</p> <p>25 (120) and a selected one of the display rows may be</p>

<p style="text-align: right;">Page 70</p> <p>1 highlighted or otherwise identified in response to 2 user input."</p> <p>3 A Yes.</p> <p>4 Q Okay. Now, does this description of selected 5 display -- selected display in an item in the '931 6 patent refer us to highlighting one row amongst the 7 plurality of display row -- display rows?</p> <p>8 MR. SALEN: Objection to form.</p> <p>9 THE WITNESS: It -- it's inclusive, but it 10 does say, in this particular description, that a 11 selected one may be highlighted. It doesn't say what 12 you do with the other rows. And -- and, you know, 13 again, I didn't -- I didn't render my opinions based 14 on comparing the prior art to the description -- 15 figure. I compared it to the claim.</p> <p>16 Q Okay. But you state that the same type 17 of -- in paragraph 206 of your declaration -- 18 Are you on paragraph 206?</p> <p>19 A Yes.</p> <p>20 Q You describe the concept of selectively 21 displaying illustrated in Figure 7(b) of the '931 22 patent above. You later state, "Indeed this is 23 precisely the type of selective displays disclosed by 24 Iwata in combination with Stephan and Capps." 25 So if the '931 patent is describing having</p>	<p style="text-align: right;">Page 71</p> <p>1 only one entry selected at a time, would that be 2 different, then, than what Capps is describing?</p> <p>3 MR. SALEN: Objection to form.</p> <p>4 THE WITNESS: Not in any substantive way. 5 Again, they're -- they're both examples. So there's 6 certainly --</p> <p>7 What I said is they're the same type of 8 display, not that they're identical to each other. 9 You can see, just by looking at them, they're not 10 identical to each other.</p> <p>11 BY MR. GOKHALE:</p> <p>12 Q But is --</p> <p>13 A They both --</p> <p>14 Q Sorry. Go ahead.</p> <p>15 A They both involve -- they both teach that, 16 when you scroll down the display, at least one item 17 can be selected, and in that sense they're -- can be 18 highlighted and selected, can be displayed as 19 highlighted, and in that sense, they're -- they're the 20 same. Iwata itself has a search feature where it 21 highlights one or more rows in a -- in a -- in a list 22 of displays.</p> <p>23 It doesn't show the same type of highlighting 24 as in Capps, but you don't have to go to Capps for the 25 complete structure as much as you need to go to Capps</p>
<p style="text-align: right;">Page 72</p> <p>1 for the form of highlighting, because the selection 2 itself is shown right in Figure 6 of Iwata.</p> <p>3 Q Okay. But you -- you previously stated that, 4 in Capps, if you're scrolling --</p> <p>5 A Yes.</p> <p>6 Q -- and the previous entry that is highlighted 7 in another entry with the term "electrician" is 8 visible then on the page, then multiple ones could be 9 highlighted.</p> <p>10 A That's right. In Capps, you can either have 11 one item highlighted or you can have more than one 12 item highlighted. It certainly shows us lots of 13 examples where there's only a single one.</p> <p>14 Q But Capps does not explicitly describe that, 15 when you're scrolling, a highlighted item will be 16 removed from one item and another item that's visible 17 will then be highlighted?</p> <p>18 MR. SALEN: Objection to form.</p> <p>19 THE WITNESS: For two things that are both 20 shown on the screen?</p> <p>21 BY MR. GOKHALE:</p> <p>22 Q Yes.</p> <p>23 A I don't think it says that. I don't think 24 '931 explicitly says that that always happens, either. 25 Q Could you turn to column 9 of the '931</p>	<p style="text-align: right;">Page 73</p> <p>1 patent.</p> <p>2 A Yes.</p> <p>3 Q Now, on -- starting on line -- I believe it's 4 18 -- it describes Figure 9 as the first word, and it 5 mentions a momentary contact being detected.</p> <p>6 A Yes.</p> <p>7 Q What is your understanding of what occurs in 8 the '931 patent after the momentary contact is 9 detected?</p> <p>10 A What do you mean, in the patent? You mean in 11 the particular example disclosed for Figure 9?</p> <p>12 Q Yeah. In the example of Figures -- 13 What are the -- what is the '931 patent doing 14 as a result of detecting a momentary contact?</p> <p>15 MR. SALEN: Objection to form.</p> <p>16 THE WITNESS: That paragraph, I don't think, 17 says it's doing anything. Hold on. Let me -- let me 18 read it more carefully.</p> <p>19 I don't see any description in any action 20 other than detecting the tap where the momentary 21 contact has happened with respect to Figure 9.</p> <p>22 BY MR. GOKHALE:</p> <p>23 Q Okay. Can you please look at Claim 10 of the 24 '931 patent. 25 A Okay.</p>

<p style="text-align: right;">Page 74</p> <p>1 Q Okay. Now, Claim 10 describes, "Wherein the 2 controller is operative to cause" -- 3 THE COURT REPORTER: I'm sorry, Counsel. 4 Could you slow down just a bit for me, please? 5 Thanks. 6 BY MR. GOKHALE: 7 Q Claim 10 describes "Wherein the controller is 8 operative to cause at least one of the display or the 9 radiotelephone communications transceiver to perform a 10 plurality of actions wherein an action of the 11 plurality of its actions is associated with the 12 identified graphical object and wherein the controller 13 is further operative responsive to the contact 14 transducer" -- sorry -- "contact-sensitive transducer 15 to initiate the action associated with the identified 16 graphical object." 17 And Claim 11 then describes, "Wherein the 18 controller is operative responsive to the 19 contact-sensitive transducer to detect a momentary 20 contact with the contact-sensitive transducer and to 21 initiate the action associated with the identified 22 graphical object responsive to detection of the 23 momentary contact." 24 Now, if you wanted to initiate an action 25 associated with an identified graphical object with</p>	<p style="text-align: right;">Page 75</p> <p>1 respect to a radiotelephone communications 2 transceiver, how are you interpreting that in Claims 3 10 and 11? 4 A I haven't separately interpreted it because 5 it's only one of two options in the -- in the claim, 6 so I haven't tried to separate them out. And what it 7 clearly says is that you either cause the display or 8 the radiotelecommunications transceiver to perform a 9 plurality of actions. 10 There are lots of things that might qualify 11 from that, everything from turning a box to a 12 different color or highlighting an object or -- or -- 13 or searching for some information on the display and 14 showing the results, to -- to hanging up the phone, 15 dialing a phone number, any of those. 16 Q If -- if you were dialing a phone number and 17 you were scrolling through a list of phone numbers -- 18 A Uh-huh. 19 Q -- which appears to be one of the examples 20 shown in the '931 patent, if you were to scroll 21 through it and select one of them, could the action be 22 to dial that phone number in response to the momentary 23 contact? 24 MR. SALEN: Objection to form and foundation. 25 THE WITNESS: I think I already said that it</p>
<p style="text-align: right;">Page 76</p> <p>1 could, but it doesn't have to be. There are lots of 2 different actions that would satisfy Claims 10 and 11, 3 but -- but one of them could be -- could be dialing 4 the phone number. 5 BY MR. GOKHALE: 6 Q Okay. Would it make sense for multiple phone 7 numbers to be highlighted and then try and initiate a 8 phone call? 9 MR. SALEN: Objection to form. Foundation. 10 THE WITNESS: It could, because -- because 11 the phone call here is not -- it doesn't say that it 12 requires no further action; right? It doesn't say 13 that it has to happen immediately in response to the 14 highlighting without any additional selection. 15 And in particular to Claim 11, it clearly 16 requires an additional action, so it could dial a 17 different number depending on where you make the 18 momentary contact. It could always dial the number on 19 top as the preferred number for somebody. So there's 20 lots of situations where that would make perfect 21 sense. 22 BY MR. GOKHALE: 23 Q Does -- now, does Stephan disclose that when 24 you're scrolling through a work space using a sliding 25 motion, using one of the scrolling menus we've talked</p>	<p style="text-align: right;">Page 77</p> <p>1 about -- does it disclose highlighting anything in the 2 corresponding documents as a result of that 3 movement? 4 MR. SALEN: Objection to form. 5 THE WITNESS: I don't know. I'd have to 6 look. 7 MR. GOKHALE: Do you guys want to take a 8 break while -- while you look up this -- 9 MS. MANDRUSIAK: Is this off the record? 10 MR. BAKER: It's off the record. We're 11 having scrolling issues. While he's looking, we're 12 wondering if we can just go off the record and talk to 13 the court reporter. 14 MR. SALEN: Yeah. That's fine. 15 Go off the record. 16 THE VIDEOGRAPHER: Okay. All agreed to go 17 off the record. 18 We're going off the record at 11:36 a.m. 19 (Recess from 11:36 a.m. - 11:40 a.m.) 20 THE VIDEOGRAPHER: We are back on the record 21 at 11:40 a.m. 22 BY MR. GOKHALE: 23 Q Have you had a chance to review Stephan yet? 24 A I have. 25 Q Does it describe highlighting items in</p>

<p style="text-align: right;">Page 78</p> <p>1 response to an input in the -- in the scrolling region</p> <p>2 in its embodiments?</p> <p>3 A Not specifically. It's really focused on</p> <p>4 scrolling and cursor control, and it does the same</p> <p>5 things that the underlying device would normally do</p> <p>6 with scrolling and cursor control.</p> <p>7 Q Does Stephan describe inputting a search</p> <p>8 string by using the scrolling regions in its -- in its</p> <p>9 interface?</p> <p>10 A Again, not specifically. Stephan is --</p> <p>11 teaches one how to scroll and how to move the cursor</p> <p>12 and essentially refers to the prior art, the -- the --</p> <p>13 the rest of the art for any other user interface</p> <p>14 functions.</p> <p>15 Q What happens if you make a momentary contact</p> <p>16 on the scrolling region in Stephan, to the best of</p> <p>17 your understanding?</p> <p>18 A In the scrolling region?</p> <p>19 Q Yeah. Like the -- if you were to, say, maybe</p> <p>20 tap that scrolling region, what would be the result of</p> <p>21 that?</p> <p>22 A It would depend whether or not there was any</p> <p>23 motion involved in the tap or not.</p> <p>24 Q Okay. So it could be nothing; it could be</p> <p>25 something?</p>	<p style="text-align: right;">Page 79</p> <p>1 A It would either scroll or not scroll when --</p> <p>2 if -- if you tapped in the scrolling region.</p> <p>3 Q If -- if any --</p> <p>4 A Basically what -- what -- what you're</p> <p>5 instructed to do is -- is to move the cursor first and</p> <p>6 then tap in the -- in the cursor region if you want to</p> <p>7 do a select operation.</p> <p>8 MR. GOKHALE: Okay. Okay. I think we can</p> <p>9 probably break for lunch now. Sorry for the -- the --</p> <p>10 the momentary -- the brief amount of questioning. If</p> <p>11 that's okay with everyone. We may start on the next</p> <p>12 batch of -- of IPRs after the lunch break.</p> <p>13 THE WITNESS: Sure.</p> <p>14 MR. SALEN: No objection to brief</p> <p>15 questioning.</p> <p>16 MR. GOKHALE: Huh?</p> <p>17 MR. SALEN: No objection to brief</p> <p>18 questioning.</p> <p>19 MR. GOKHALE: Okay.</p> <p>20 THE VIDEOGRAPHER: Okay. All agreed to go</p> <p>21 off the record.</p> <p>22 We're off the record at 11:44 a.m.</p> <p>23 (Lunch recess from 11:44 a.m. - 1:06 p.m.)</p> <p>24</p> <p>25</p>
<p style="text-align: right;">Page 80</p> <p>1 SAN DIEGO, CALIFORNIA; MONDAY, APRIL 11, 2016</p> <p>2 1:06 P.M. - 4:01 P.M.</p> <p>3 - - - -</p> <p>4 THE VIDEOGRAPHER: We're back on record at</p> <p>5 1:06 p.m.</p> <p>6 EXAMINATION (Continued)</p> <p>7 BY MR. GOKHALE:</p> <p>8 Q All right, Dr. Wolfe. I'm going to revisit</p> <p>9 Exhibit 1201. If you could please turn to</p> <p>10 paragraph 198.</p> <p>11 Now, this paragraph describes the recitation</p> <p>12 in the Claim 1 regarding a second mode wherein the</p> <p>13 controller is unresponsive to contact with the</p> <p>14 contact-sensitive transducer. And you reference a</p> <p>15 portion of Iwata on column 13, lines 45 to 63. If you</p> <p>16 could please turn to Iwata for that -- for that column</p> <p>17 and -- and line number, please.</p> <p>18 Now, in the last three lines of that</p> <p>19 paragraph, it says, "In the cover closed status,</p> <p>20 touchscreen (20) is in a sleeping status, and is" --</p> <p>21 "thus does not respond to a touch made with a pen or a</p> <p>22 finger."</p> <p>23 Could you elaborate on what is actually</p> <p>24 happening in a sleeping status with the hardware of</p> <p>25 the device, to your -- to your understanding?</p>	<p style="text-align: right;">Page 81</p> <p>1 MR. SALEN: Object to form.</p> <p>2 THE WITNESS: I'm not sure. I mean, it tells</p> <p>3 you what it tells you, that -- that when the cover's</p> <p>4 closed -- and you can see the cover -- for example,</p> <p>5 cover -- let's see which drawing that corresponds to.</p> <p>6 Cover 302 in Figure 47.</p> <p>7 When that cover's closed, then the</p> <p>8 touchscreen -- then the touchscreen is going to be in</p> <p>9 a sleeping status, which means that whatever control</p> <p>10 electronics drive it are either not going to drive the</p> <p>11 touchscreen or are not going to respond to the signals</p> <p>12 that come back through the touchscreen. And it</p> <p>13 appears from Figure 3 that that's processor (21).</p> <p>14 BY MR. GOKHALE:</p> <p>15 Q Okay. Now, the term "sleeping status," as</p> <p>16 you understand it, is that -- can a device be brought</p> <p>17 out of a sleeping state by a touch to a touchscreen?</p> <p>18 MR. SALEN: Object to form.</p> <p>19 THE WITNESS: Any device anywhere?</p> <p>20 BY MR. GOKHALE:</p> <p>21 Q I'm trying to get --</p> <p>22 A Just as a general concept?</p> <p>23 Q -- a better understanding what the term --</p> <p>24 what the term "sleeping status" means in your</p> <p>25 understanding in this art.</p>

<p style="text-align: right;">Page 82</p> <p>1 A In this case, it means that it doesn't 2 respond to a touch made with a pen or a finger. 3 That's -- that's the description that's given in 4 Iwata, and that's -- that's as much as I need to know 5 about it to form my opinions. 6 Q Okay. Is the processor (21) receiving 7 voltage during this sleep status? 8 MR. SALEN: Object to form and foundation. 9 THE WITNESS: Might; it might not be. 10 That's -- that's not -- I mean, it's not responding to 11 it. It tells us that much. It doesn't tell us -- I 12 mean, everything receives a voltage. It's just a 13 question of what that voltage value is, as to whether 14 it's zero volts or some other value. There's always a 15 voltage present between any two things, just like any 16 two things have a distance between them. 17 BY MR. GOKHALE: 18 Q Okay. But to your knowledge, Iwata does not 19 provide that detail about what voltages would be 20 provided to the processor during the sleeping status? 21 A No. It's not -- not relevant to anything. 22 I mean, it tells us that, during sleeping 23 status, the processor does not respond to a touch and 24 that during a -- the normal operation, that it does. 25 I mean, I don't think the '331 patent tells</p>	<p style="text-align: right;">Page 83</p> <p>1 us what voltage is received anywhere during its 2 nonresponsive mode. I wouldn't expect that it needs 3 to. 4 Q Okay. I'm going to ask if you can please be 5 provided with Exhibit 1205. 6 MR. SALEN: There you go. 7 (Exhibit 1205 was referenced.) 8 BY MR. GOKHALE: 9 Q Could you identify what the document is that 10 you were just provided? 11 A This is a declaration I put in with respect 12 to IPR Case No. IPR2015-01674. It is my testimony 13 with respect to Claims 1 through 12 and Claim 15 of 14 the '931 patent with respect to three other prior art 15 references: Palatsi, Moore, and Tiilikainen, as well 16 as general testimony about the background of the art 17 and other related matters. 18 Q Okay. And in -- on page 132 of Exhibit 1205, 19 can you please verify that that is your signature? 20 A It is. 21 Q And it's signed on August 12th, 2015? 22 A Correct. 23 Q Now, could you please turn to -- 24 Sorry. Give me one second here. 25 Could you please be provided with</p>
<p style="text-align: right;">Page 84</p> <p>1 Exhibit 1087. 2 MR. SALEN: Sure. 3 (Exhibit 1087 was referenced.) 4 BY MR. GOKHALE: 5 Q Can you please describe what this exhibit is. 6 A Exhibit 1087 is U.S. Patent 5,892,475, a 7 patent assigned to Nokia Mobile Phones. The inventor 8 is Mikko -- I think probably Juhani Palatsi. And I 9 refer to this as "the Palatsi patent" in my 10 declaration. 11 Q Okay. And is this a reference that you 12 relied upon in your analysis of Claim 1 of the '931 13 patent? 14 A With respect to Exhibits 1205 through 1208, I 15 did. 16 Q Okay. Thank you. 17 Would you please turn to paragraph 132 of 18 Exhibit 1205. 19 Okay. The first sentence of paragraph 132 20 states that "The Palatsi patent is one of many patents 21 directed towards Nokia's line of mobile telephones 22 that were available as of the Alleged Priority Date." 23 Is there a particular model of a Nokia phone 24 which you are aware of that corresponds to the 25 features described in Palatsi?</p>	<p style="text-align: right;">Page 85</p> <p>1 A I have not looked to see whether or not 2 there's one that corresponds to all the features in 3 Palatsi, but there certainly were many Nokia phones at 4 the time that had certain characteristics of Palatsi. 5 For example, the way they would be held in 6 the hand, the size -- the rele- -- general size of the 7 display, the ability of buttons, the way you would 8 make a phone call. Things like that. 9 So part of the point of this paragraph is 10 that there are certain characteristics of an ordinary 11 Nokia mobile phone at the time that would have been 12 familiar to a person of ordinary skill at the art -- 13 of the art -- or person of ordinary skill in the art. 14 But the -- the -- the specific details that I rely on 15 to make my conclusions generally come from the actual 16 text and illustrations of the Palatsi patent. 17 Q Okay. Are you familiar with the hardware 18 design of Nokia phones leading up to the priority date 19 of the '931 patent? 20 A Some aspects of it, not necessarily every 21 aspect. 22 Q Can you describe which aspects you're 23 familiar with? 24 A I know some of the details of their general 25 physical construction. I know some of the</p>

<p style="text-align: right;">Page 86</p> <p>1 characteristics of some of the components. I know  2 some of the characteristics of some of the software up  3 to that date, but -- but we'd have to get into  4 specific details to figure out what I know and what I  5 don't, as there's lots of aspects of a -- of a  6 cellular phone.</p> <p>7 Q Okay. Could you please be provided with  8 Exhibit 1012. It's the Moore patent.</p> <p>9 MR. SALEN: Sure.  10 (Exhibit 1012 was referenced.)</p> <p>11 BY MR. GOKHALE:</p> <p>12 Q Could you please describe what Exhibit 1012  13 is for the record, please.</p> <p>14 A It is U.S. Patent 4,566,001, a patent  15 assigned to Northern Telecom. The first named  16 inventor is Timothy G. Moore, and this -- I usually  17 refer to this as "the Moore patent."</p> <p>18 Q Does Moore describe a portable handheld  19 device?</p> <p>20 A Not specifically. Moore describes a phone.  21 It doesn't specifically say what kind of phone it is,  22 but I think that a person of ordinary skill would  23 probably recognize it as a desk phone.</p> <p>24 And then it describes an input device that is  25 a component of that phone and a user interface</p>	<p style="text-align: right;">Page 87</p> <p>1 paradigm that's software for that phone, that both of  2 those would be, you know, wide -- widely applicable to  3 any kind of a phone.</p> <p>4 Q Okay. Does Moore describe a handheld phone?</p> <p>5 A I don't think a person would necessarily find  6 a specific description of a handheld phone in Moore.  7 It's certainly small enough that you could pick it up  8 and hold it in your hand, but you wouldn't normally do  9 that. You would -- you would normally think of it as  10 a -- as a desktop phone.</p> <p>11 Q What kind of display does Moore use in his  12 description?</p> <p>13 A In his preferred embodiment, it is a cathode  14 ray tube, a CR -- CRT; but he generally describes it  15 just as a rectangular display.</p> <p>16 Q Could you please go to paragraph 143 of the  17 Exhibit 1205 declaration.</p> <p>18 A Okay.</p> <p>19 Q Okay. You -- the paragraph indicates that  20 Palatsi -- "Specifically, Palatsi teaches that  21 '[t]here is a need for portable telephones (especially  22 handheld portable telephones) to be smaller, to make  23 them more convenient to carry,' while...maintaining  24 ease of use by not making the input keys too small.  25 Palatsi relies on programmable soft-keys having</p>
<p style="text-align: right;">Page 88</p> <p>1 multiple functions (instead of function-dedicated  2 keys) to avoid overcrowding the front housing of the  3 mobile phone [sic]."</p> <p>4 In your proposed modification, are you  5 proposing to replace the soft keys of Palatsi with the  6 touch strips of Moore?</p> <p>7 A Yes. In general, we would replace soft keys  8 11, 12, and 13 with touch strips of the type  9 illustrated in Figure 2 of Moore.</p> <p>10 Q How does using the touch strip of Moore  11 achieve the purpose of avoiding overcrowding the front  12 housing of a mobile telephone?</p> <p>13 A We move some of the functionality to the side  14 where it's very unobtrusive. It -- we take the  15 function of three different keys, and we place them on  16 two different touch strips. And we replace smaller  17 buttons with larger, more easily controlled devices in  18 a way that Palatsi actually suggests. Palatsi  19 specifically suggests substituting touch sensors for  20 keys.</p> <p>21 Q Do they take up less space than the actual  22 soft keys of Palatsi, the touch strips?</p> <p>23 A That would depend on how you implement them  24 in terms of the total amount of space, but they  25 certainly move the congestion away from the keypad,</p>	<p style="text-align: right;">Page 89</p> <p>1 which is where one would often be performing key-press  2 functions.</p> <p>3 Q Are the --</p> <p>4 A You can't -- I mean, it would be a design  5 choice as to what the actual area is, but since these  6 type of strips are only used for one-dimensional  7 control, they can be quite narrow.</p> <p>8 Q Does the touch strips of Moore have any other  9 hardware connected to them besides what we see on the  10 front of the -- the embodiments shown in -- on the  11 figure of Moore?</p> <p>12 MR. SALEN: Object to the form.</p> <p>13 THE WITNESS: I'm not quite sure what you're  14 asking in terms of hardware. They are -- they are  15 adhered to a housing. Housing is hardware. They are  16 also connected to a measurement circuit, as is  17 illustrated in Figure 3 on Moore.</p> <p>18 BY MR. GOKHALE:</p> <p>19 Q Okay. Okay. So would you agree that the  20 touch strips actually shown in Moore are larger than  21 the touch strips you're proposing to use in the  22 combination of Palatsi and Moore?</p> <p>23 MR. SALEN: Objection. Foundation. Form.</p> <p>24 THE WITNESS: Again, I think there's --  25 there's no actual size, I don't think, described in</p>

<p style="text-align: right;">Page 90</p> <p>1 Moore. And one would generally, as I said, not read 2 any particular proportions or scaling into a patent 3 drawing without some guidance to do so.</p> <p>4 I would expect that the preferred embodiment 5 in Figure 1, just based on my general experience at 6 the time, might be something that would have about a 7 four-inch diagonal display. And if that were the 8 case, then the strips are illustrated as being 9 somewhat longer than you might want to use on a 10 cell phone. But the teachings of Moore are all 11 agnostic as to the size, and the electrical teachings 12 teach you how to make a touch strip of any size.</p> <p>13 So there's nothing other than the 14 illustrations that would lead you to make any 15 assumptions about the size of touch strips that are 16 being taught by Moore.</p> <p>17 Q So in -- after paragraph 145, there is a 18 demonstrative drawing shown illustrating the 19 combination of Palatsi and Moore, and it depicts touch 20 strips on the housing of the Palatsi mobile phone. Do 21 you have a specific idea of what size those modified 22 touch strips are?</p> <p>23 A Again, the size isn't very important, but in 24 an exemplary embodiment, a typical Nokia phone of the 25 day might have been about 100 millimeters tall, so</p>	<p style="text-align: right;">Page 91</p> <p>1 maybe these would have been maybe 35-to-50-millimeter 2 strips.</p> <p>3 Q In length?</p> <p>4 A In length. They could be 1 or 2 millimeters 5 in -- in width, and they would work just fine, or just 6 for design aesthetics or -- or comfort, somebody could 7 make them wider.</p> <p>8 Q Is -- in your Demonstrative Figure 2, that 9 we're just talking about, is there something attached 10 to those touch strips within the housing?</p> <p>11 MR. SALEN: Objection to form.</p> <p>12 THE WITNESS: They would be exactly as taught 13 in Moore, so they would be connected to the same kind 14 of circuitry that's taught in Figure 3 in Moore. They 15 would have the same kind of connections as is shown in 16 Figure 2.</p> <p>17 So typically this type of a touch strip has 18 three connections to the -- to the measurement 19 circuitry, one from each end of one layer and one 20 connected to the alternate layer.</p> <p>21 BY MR. GOKHALE:</p> <p>22 Q Can you please look at paragraph 178 of your 23 declaration.</p> <p>24 A Of 1205?</p> <p>25 Q Yeah. Sorry. At Exhibit 1205. Now, just</p>
<p style="text-align: right;">Page 92</p> <p>1 above paragraph 178, they show a drawing, which is 2 similar to Figure 3 of Moore; correct?</p> <p>3 A Yes.</p> <p>4 Q Okay. And within that drawing, there is an 5 "MPU." Does that stand for microprocessor unit?</p> <p>6 A Yes, or something -- some acronym very 7 similar to that that would mean the same thing.</p> <p>8 Q In paragraph 178, towards the end, there's a 9 sentence that starts with "By virtue."</p> <p>10 You say by virtue of Palatsi's description of 11 controlling telephone functions with the digital 12 processing unit 4 responsive to the 'scroll-and-select 13 menu system,' (e.g. operated via the soft keys 11 and 14 12), would seem to have appreciated that the 15 microprocessor of Moore, as combined with the 16 processor of Palatsi to accommodate the touch strips 17 of the proposed modification to Palatsi by Moore, 18 would also control the radiotelephone communications 19 transceiver in the same way.</p> <p>20 Now, you -- you just indicated that you're 21 taking all the circuits from Figure 3 of Moore. So 22 this paragraph mentions you're modifying the processor 23 of Palatsi with the microprocessor of Moore. So are 24 you actually taking the additional circuits shown in 25 Figure 3 as well for Moore?</p>	<p style="text-align: right;">Page 93</p> <p>1 A I think you're implying a specificity that 2 just doesn't exist in the art under ordinary use.</p> <p>3 In 1983, when Moore was developed, and also 4 in 1997, when Palatsi was developed, the 5 microprocessor in a typical telephone device would be 6 a microcontroller or a microcomputer or sometimes 7 called a system on a chip or sometimes just called a 8 microprocessor because it was so common. And that 9 includes not just the part that processes, but it 10 includes memory, interfaces, peripheral circuits, 11 clocking circuitry. Those were all part of an 12 ordinary microprocessor in this field of endeavor at 13 the time.</p> <p>14 So when I talk about a microprocessor, 15 whether we're talking about in Moore or in Palatsi, it 16 would ordinarily include additional circuitry. And in 17 this particular case, it would ordinarily include 18 analog-to-digital converter circuitry capable of 19 connecting to the touch strips of Moore.</p> <p>20 And many of the devices that I worked on or 21 designed, beginning in '83 and all the way through to 22 '97, used A-D converters that were built into 23 microprocessors or things that had other similar names 24 to microprocessors but would have all been lumped 25 together in the mind of a person of ordinary skill to</p>



<p style="text-align: right;">Page 94</p> <p>1 perform those measurements.</p> <p>2 And that's what a person of ordinary skill</p> <p>3 would do here as well, and it's consistent with the</p> <p>4 disclosures in both Moore and Palatsi. And neither</p> <p>5 one of them cares very much as to whether or not the</p> <p>6 interface circuitries are on the same chip as the</p> <p>7 microprocessor or on a companion chip, because in</p> <p>8 either way -- in either case, for something this</p> <p>9 simple, they would be small and affordable.</p> <p>10 Q Okay. So you're suggesting --</p> <p>11 That's not in your declaration, though --</p> <p>12 correct? -- your explanation right now?</p> <p>13 A I think that's what I'm referring to. When I</p> <p>14 talk about how these things would be part of the</p> <p>15 microprocessor that's disclosed, I'm talking about the</p> <p>16 microprocessors that one would have used or that --</p> <p>17 that a person of ordinary skill would have understood</p> <p>18 was being disclosed in Moore and Palatsi.</p> <p>19 That would be a microprocessor of a type that</p> <p>20 was ordinarily used in a phone at the time, which</p> <p>21 would have had substantial I/O capabilities.</p> <p>22 Q So there's no difference between the terms</p> <p>23 "processor" and "microprocessor" the way you're</p> <p>24 applying this analysis?</p> <p>25 MR. SALEN: Object. Foundation.</p>	<p style="text-align: right;">Page 95</p> <p>1 THE WITNESS: Within the scope of the art</p> <p>2 that we're looking at, I think that's right, because</p> <p>3 nobody would use a processor other than a</p> <p>4 microprocessor in a phone. Nobody's going to use an</p> <p>5 IBM main frame in a phone.</p> <p>6 So when somebody says "processor" or</p> <p>7 "microprocessor" in the context of these kind of</p> <p>8 telephony devices, a person of ordinary skill would</p> <p>9 understand that they mean the ordinary kind of</p> <p>10 products that were used at the time, which would be a</p> <p>11 highly integrative, low-cost microprocessor.</p> <p>12 BY MR. GOKHALE:</p> <p>13 Q In the annotated figure, the blue-box figure</p> <p>14 of Moore's Figure 3 that we're talking about, you do</p> <p>15 not include a power unit in that blue box.</p> <p>16 A I'm sorry. I don't know what figure you're</p> <p>17 referring to.</p> <p>18 Q In the -- just above paragraph 178, there's a</p> <p>19 figure of Moore's hardware, and there's a blue box --</p> <p>20 A I'm sorry. The --</p> <p>21 Q -- made around --</p> <p>22 A Need bright light to see that it's blue.</p> <p>23 Okay.</p> <p>24 Q So it -- sorry.</p> <p>25 And there's a power unit that's powering the</p>
<p style="text-align: right;">Page 96</p> <p>1 touch strip that is not included in the blue box. Are</p> <p>2 you using that power unit as well in the combination?</p> <p>3 A So that power unit is -- is trivial; right?</p> <p>4 If you read Moore, you would understand that it's just</p> <p>5 a positive voltage and a lower voltage, or a negative</p> <p>6 voltage and a higher. It's just any two voltages in</p> <p>7 the system that are stable.</p> <p>8 So it could be two pins on a microprocessor,</p> <p>9 one of which is set high and one of which is set low.</p> <p>10 It could be the plus and minus terminal of the</p> <p>11 battery. The system will work just fine using any</p> <p>12 two -- any two reference voltage levels.</p> <p>13 So when it talks about power unit, it's just</p> <p>14 whatever supplies power to the touch strip; it's not</p> <p>15 necessarily -- it's not necessarily a physical</p> <p>16 structure as much as -- it's not necessarily a</p> <p>17 distinct physical structure. It could just be two</p> <p>18 general-purpose output pins on a microprocessor. It</p> <p>19 could be the power and ground pin on the</p> <p>20 microprocessor. It could be any one of a number of</p> <p>21 things based on just a simple design choice.</p> <p>22 Q So you're suggesting, then, to use the same</p> <p>23 existing power unit the battery -- the phone of</p> <p>24 Palatsi already offers; is that correct?</p> <p>25 A Yes. Or in an even simpler case, again, you</p>	<p style="text-align: right;">Page 97</p> <p>1 may just pick two general-purpose I/O pins that are on</p> <p>2 Palatsi's CPU.</p> <p>3 Q Is there -- in the mobile phone art, is power</p> <p>4 consumption a concern?</p> <p>5 MR. SALEN: Object to form.</p> <p>6 THE WITNESS: In some cases, it is; in other</p> <p>7 cases, it isn't. It depends what your scale is. It</p> <p>8 depends how much power is being consumed as to whether</p> <p>9 or not it's significant.</p> <p>10 BY MR. GOKHALE:</p> <p>11 Q And does your declaration address power</p> <p>12 consumption requirements or issues for a mobile phone</p> <p>13 when making this combination?</p> <p>14 A No. It's not relevant to any of the claims.</p> <p>15 None -- none of these proposed embodiments use a</p> <p>16 substantial amount of power. And in the combination</p> <p>17 that is being proposed, there's, among other things,</p> <p>18 an ability to turn on and off the touch strips --</p> <p>19 touch strips or at least the responsiveness to the</p> <p>20 touch strips.</p> <p>21 But these types of touch strips don't tend to</p> <p>22 use a substantial amount of power as compared to the</p> <p>23 other functions in the phone. And using adjustments</p> <p>24 to material or adjustments to shape, the power can be</p> <p>25 reduced even further. They -- depending on how you</p>

<p style="text-align: right;">Page 98</p> <p>1 decide to power it up, you can be in the -- well under  2 a milliamp of power to -- to -- to these kinds of  3 devices, which at this time would have been  4 insubstantial.</p> <p>5 Q Could you please turn to paragraph 185 in  6 Exhibit 1205.</p> <p>7 Are you relying on Moore to disclose the  8 future of the recitation in Claim 1 for a second mode  9 wherein the controller is unresponsive to contact with  10 the contacts --</p> <p>11 (Reporter clarification.)</p> <p>12 BY MR. GOKHALE:</p> <p>13 Q Are you relying on Moore to disclose the  14 feature of Claim 1 of the '931 patent where it  15 discloses a second mode wherein the controller is  16 unresponsive to contact with the contact-sensitive  17 transducer?</p> <p>18 A Yes, as proposed in the combination recited  19 in my declaration.</p> <p>20 Q Now, towards the end of paragraph 185, it  21 says -- it starts with "Specifically."  22 It says -- first of all, previously, it says,  23 "Notably, Moore teaches this exact functionality."  24 Sorry.  25 Starting with the phrase "Notably, Moore</p>	<p style="text-align: right;">Page 99</p> <p>1 teaches this exact functionality."</p> <p>2 "Specifically, Moore discloses 'switching  3 between ones of the banks of touch strips,'" end  4 quote, "to disable one bank of touch strips such that  5 the controller is unresponsive to contact with the one  6 bank of touch strips while enabling another bank of  7 touch strips such that the controller is responsive to  8 contact with the other bank of touch strips."</p> <p>9 Where does Moore use the term "and disable,"  10 that it's disabling a bank of touch strips?</p> <p>11 A I don't think he does use the term. He  12 teaches the concept.</p> <p>13 Q Where does it say it's disabling one bank of  14 touch strips?</p> <p>15 A It doesn't say that. It teaches the concept  16 through the teachings of the patent as a whole. Moore  17 teaches that you can accomplish substantial scrolling  18 capabilities or soft-button capabilities using two  19 touch strips, and then he teaches that there's an  20 interesting embodiment in which you have four, two  21 sets of two, in which you don't need all four, but you  22 can switch between them.</p> <p>23 And I think a person of ordinary skill  24 reading that would understand that these switching  25 between them means either selecting two of them to be</p>
<p style="text-align: right;">Page 100</p> <p>1 operable or the other two to be operable.</p> <p>2 Q Could switching have another meaning?</p> <p>3 A I guess, hypothetically. But that's not the  4 way I would understand it in the context of the way  5 it's taught in this patent.</p> <p>6 Q Now -- so the Moore does not use a term --  7 does not explicitly describe as disabling a touch  8 strip or that the controller is unresponsive to  9 contact with one of the banks of touch strips; is that  10 correct?</p> <p>11 MR. SALEN: Object to form.</p> <p>12 THE WITNESS: I'm not sure if I understand  13 your question. He -- as I noted, he doesn't  14 specifically use those words, but he specifically  15 teaches those concepts to a person of ordinary skill  16 in the art.</p> <p>17 BY MR. GOKHALE:</p> <p>18 Q So the portion outside of the quotation --  19 because there's a quotation in this -- in this  20 sentence. You've quoted the term "switching between  21 ones of the banks of touch strips," but Moore does not  22 actually say it disables one bank of touch strips  23 explicitly; is that correct?</p> <p>24 MR. SALEN: Object to form. Asked and  25 answered.</p>	<p style="text-align: right;">Page 101</p> <p>1 THE WITNESS: As I said, he teaches the  2 concept to a person of ordinary skill, but he does not  3 use the word "disable" in teaching the concept.</p> <p>4 BY MR. GOKHALE:</p> <p>5 Q And yes or no. Does Moore use the word  6 "unresponsive" -- or the phrase "unresponsive to  7 contact"?</p> <p>8 A No. As I said, he teaches the concept, but  9 he doesn't use those words.</p> <p>10 Q And the concept is based on the term  11 "switching"; is that correct?</p> <p>12 MR. SALEN: Object to form.</p> <p>13 THE WITNESS: No. It's based on the  14 teachings and that particular paragraph of explanation  15 in context, in the way that I've previously explained.</p> <p>16 BY MR. GOKHALE:</p> <p>17 Q Now, Moore describes you can have different  18 modes for a touch strip; correct?</p> <p>19 A Yes. Using a general idea of modes, he  20 does -- he does teach -- as I said, he teaches that  21 you can have touch strips be either on or off, and he  22 also teaches that touch strips can be used for a  23 scrolling function or for a soft-key function or for  24 other kinds of controls.</p> <p>25 Q Okay. So in -- in terms of modes of a touch</p>

<p style="text-align: right;">Page 102</p> <p>1 strip, it switches between different modes where it  2 can be a soft key, a scrolling key, but it doesn't --  3 does it describe a mode where it's nonresponsive to  4 contact?  5 MR. SALEN: Object to form.  6 THE WITNESS: It depends where. Certainly  7 when -- as I've explained, it's my understanding that  8 a person of ordinary skill reading this, when they saw  9 a description of how there were extra touch strips,  10 more than you needed, and a discussion of switching  11 between them, that I would understand that as being  12 switching be -- one set on and one set off; that --  13 that in the total context of how many touch strips are  14 being provided in that embodiment and how many are  15 needed for the functionality, that's the way I'd  16 understand it.  17 BY MR. GOKHALE:  18 Q But does it describe actually switching the  19 touch strips off?  20 MR. SALEN: Object to form. Asked and  21 answered.  22 THE WITNESS: Yes. I believe it does. And  23 by --  24 If you read these statements in context and  25 understand what is being taught to a person of</p>	<p style="text-align: right;">Page 103</p> <p>1 ordinary skill, I believe that that's how a person of  2 ordinary skill would understand this teaching.  3 BY MR. GOKHALE:  4 Q And that's based on the description of  5 "switching," the use of the word "switching" in -- in  6 Moore?  7 MR. SALEN: Object to form.  8 THE WITNESS: No. It's based on the entirety  9 of the teachings and -- and the paragraph that I  10 cited, as I previously explained. It's not based on a  11 single word.  12 BY MR. GOKHALE:  13 Q In that same paragraph, paragraph 185 of the  14 Exhibit 1205, you describe "a POSITA would intuitively  15 locate a first and second touch strip on opposite  16 sides of the display for scrolling or soft-key  17 functionality, and a third or fourth touch strip on  18 opposite sides of the housing for volume control.  19 However, by virtue of the ability to hold the portable  20 telephone in a user's hand with a thumb extending  21 around one side and the thumb extending around the  22 other, as described...with respect to Claim 1a, a  23 configuration with touch strips flanking either side  24 of the display would create a risk of the user  25 accidentally activating an unintended touch strip on</p>
<p style="text-align: right;">Page 104</p> <p>1 the opposite side of the display."  2 Now, is this a problem that would exist in  3 Moore, what you've just described, the accidental  4 activating with the thumb extending around one side of  5 the housing?  6 A No. Not in Moore alone. It's a problem that  7 would exist in Palatsi and any handheld device that  8 had the form factor of Palatsi.  9 Q So is there any reason why a person trying to  10 solve this problem would look to Moore for that  11 solution?  12 A A person looks to Moore because Palatsi tells  13 you that it would be good to have touch sensors. A  14 person would integrate the touch sensors from Moore  15 onto Palatsi in the way that I've described based just  16 on common sense and the teachings of Palatsi as to the  17 form factor, because you've got to make some decision  18 as to where you're going to put these around the  19 display.  20 So when you look at Moore, Moore teaches one  21 particular embodiment in which you can switch between  22 two different sets of touch strips, and in a device  23 that is going to be held by both right-handed and  24 left-handed users, it would just be common sense to  25 adopt that particular embodiment as opposed to one of</p>	<p style="text-align: right;">Page 105</p> <p>1 the other embodiments.  2 Q So are you suggesting that this problem  3 exists in any touchscreen device, the one that you  4 described in this paragraph?  5 MR. SALEN: Object to form and foundation.  6 THE WITNESS: I didn't say that, no.  7 BY MR. GOKHALE:  8 Q But you're looking to Moore for the solution  9 to that problem.  10 A I didn't say that, either. I said that  11 you're looking to Moore to replace the soft buttons  12 with touch sensors because Palatsi suggests as much.  13 The question then is: Which embodiment in Moore is  14 best? And there, you would use common sense that to  15 have a left -- there is an embodiment in Moore that  16 talks about having sensors on separate sides that are  17 alternately selectable. And in a device that's being  18 used by both left-handed and right-handed people, that  19 would clearly be the most sensible of Moore's  20 embodiments to incorporate.  21 Q But this is a separate feature of the claim  22 we're talking about, about the second mode wherein the  23 controller is unresponsive to contact with the  24 contact-sensitive transducer.  25 So why would a person look to Moore for that</p>

<p style="text-align: right;">Page 106</p> <p>1 particular -- a solution to that particular problem?</p> <p>2 A I'm not --</p> <p>3 MR. SALEN: Object to form.</p> <p>4 THE WITNESS: I'm not looking to Moore to --</p> <p>5 I'm not looking at the claim at all as a</p> <p>6 motivation to look to Moore. I'm looking at Palatsi,</p> <p>7 and Palatsi tells me that it would be interesting to</p> <p>8 incorporate a touch sensor in -- as a replacement for</p> <p>9 the soft keys. That's why I'm looking to Moore.</p> <p>10 BY MR. GOKHALE:</p> <p>11 Q But you're also incorporating what you</p> <p>12 interpret to be the controller unresponsive to contact</p> <p>13 into -- into the combination as well from Moore.</p> <p>14 A I'm including the embodiment in Moore that</p> <p>15 makes the most sense in a device that I start with in</p> <p>16 Palatsi, because Palatsi tells me that touch sensors</p> <p>17 are interesting, and -- and Palatsi has three</p> <p>18 soft keys. And so I then look to Moore to find out</p> <p>19 what kind of touch sensors are known in the art, and I</p> <p>20 partic- -- use just my common sense in reading Moore</p> <p>21 to pick which of the embodiments taught in Moore makes</p> <p>22 the most sense.</p> <p>23 MR. GOKHALE: All right. I think we can take</p> <p>24 a break now.</p> <p>25 MR. SALEN: Yeah.</p>	<p style="text-align: right;">Page 107</p> <p>1 MR. GOKHALE: All right.</p> <p>2 THE VIDEOGRAPHER: All agreed to go off the</p> <p>3 record.</p> <p>4 We're off the record at 1:53 p.m.</p> <p>5 (Recess from 1:53 p.m. - 2:08 p.m.)</p> <p>6 THE VIDEOGRAPHER: We're back on record at</p> <p>7 2:08 p.m.</p> <p>8 BY MR. GOKHALE:</p> <p>9 Q Okay. With regards to the Palatsi reference,</p> <p>10 Exhibit 1087, there are two soft keys shown in</p> <p>11 Figure 2 labeled "11" and "12"; is that correct?</p> <p>12 A Yes.</p> <p>13 Q Okay. Now, is it your understanding that</p> <p>14 these soft keys, 11 and 12, are being used to perform</p> <p>15 scrolling functions in the Palatsi reference?</p> <p>16 A At times, they are. That's one of the</p> <p>17 teachings, that -- that key 12 is a scrolling key.</p> <p>18 Q Okay. How does Palatsi make a selection of</p> <p>19 an item with the two scrolling keys?</p> <p>20 MR. SALEN: Object to form.</p> <p>21 THE WITNESS: Well, in at least one mode, the</p> <p>22 keys, 11 and 12, are initially used for scrolling, and</p> <p>23 then if you pause and don't scroll for a certain set</p> <p>24 time, then key 11 changes to display "Okay," and you</p> <p>25 would press that key to confirm your selection.</p>
<p style="text-align: right;">Page 108</p> <p>1 BY MR. GOKHALE:</p> <p>2 Q So does Palatsi require that that pause or</p> <p>3 that waiting period because they're only trying to use</p> <p>4 those two buttons to perform the -- the operations?</p> <p>5 A I don't know that it requires it at all. It</p> <p>6 teaches that that's one embodiment and one way to</p> <p>7 perform selection.</p> <p>8 Q Okay. And does -- does Moore have a soft-key</p> <p>9 mode for its touch strips?</p> <p>10 A That is one of the things that Moore teaches,</p> <p>11 yes, that -- that programmatically, the soft -- the</p> <p>12 strips can be used as soft keys.</p> <p>13 Q Okay. What happens after this mode is</p> <p>14 entered in Moore?</p> <p>15 A I don't understand the question.</p> <p>16 Q If you -- if you enter the soft-key mode in</p> <p>17 Moore, does it display menu functions on the screen</p> <p>18 next to the soft keys?</p> <p>19 A It's described broadly enough that you can</p> <p>20 enter the soft-key mode in any situation. Now, there</p> <p>21 is -- there are some specific examples given. I can</p> <p>22 check them again, but they're certainly not -- not</p> <p>23 limiting as to what happens.</p> <p>24 Q And is there a moving contact mode in Moore</p> <p>25 that is separate from the soft-key mode in Moore?</p>	<p style="text-align: right;">Page 109</p> <p>1 A At least one. There's scrolling. There's</p> <p>2 graded control, which would be a moving contact mode.</p> <p>3 There's cursor generation, which would presumably be</p> <p>4 a -- a moving mode. And there's menu selection, which</p> <p>5 may or may not be a moving mode.</p> <p>6 Q Does Moore describe that, when you're in the</p> <p>7 moving contact mode where it accepts a moving contact</p> <p>8 along the strip, that an item in a row can be selected</p> <p>9 or highlighted?</p> <p>10 A It certainly says that a function can be</p> <p>11 selected.</p> <p>12 Q In -- in the moving contact mode, when you're</p> <p>13 sliding your finger across the strip, is it</p> <p>14 highlighting any rows on the screen as it's doing</p> <p>15 that?</p> <p>16 A I don't think Moore alone discloses</p> <p>17 highlighting, but again, there's never been a</p> <p>18 suggestion that we would adopt the entirety of the</p> <p>19 user interface from Moore into Palatsi. We'd simply</p> <p>20 adopt the controllers in the manner that's described.</p> <p>21 Palatsi already has highlighting. It wouldn't go away</p> <p>22 if you changed the method of scroll control.</p> <p>23 Q But yes or no. So Moore --</p> <p>24 Sorry.</p> <p>25 Moore itself does not explicitly describe</p>

<p style="text-align: right;">Page 110</p> <p>1 highlighting a -- a row when you're performing a</p> <p>2 moving contact along the touch strip; is that</p> <p>3 correct?</p> <p>4 MR. SALEN: Object to form.</p> <p>5 THE WITNESS: I believe that's correct. I</p> <p>6 don't recall a discussion of highlighting. Moore is</p> <p>7 about how to use and incorporate a touch -- touch</p> <p>8 strip on the outside of the housing of a display</p> <p>9 device for performing, among other things, scrolling</p> <p>10 control.</p> <p>11 BY MR. GOKHALE:</p> <p>12 Q When you're in the mode in Moore to accept a</p> <p>13 moving contact -- I believe they describe different</p> <p>14 functions such as volume control or the like, or</p> <p>15 scrolling through a document -- what would happen if</p> <p>16 you made a single contact to the touch strip when</p> <p>17 you're in that mode?</p> <p>18 MR. SALEN: Objection to form and foundation.</p> <p>19 THE WITNESS: It would depend on -- on the</p> <p>20 particular software. In -- in at least some cases,</p> <p>21 you would jump to a particular value, but certainly</p> <p>22 you could also use that same motion to simply adjust</p> <p>23 the value, like brightness or volume.</p> <p>24 BY MR. GOKHALE:</p> <p>25 Q So would a single contact in Moore just be a</p>	<p style="text-align: right;">Page 111</p> <p>1 smaller degree, then, of the type of output that's</p> <p>2 performed in a moving contact if you're in that moving</p> <p>3 contact mode?</p> <p>4 MR. SALEN: Object to form and foundation.</p> <p>5 THE WITNESS: I don't know. It's not</p> <p>6 something that's particularly described. I mean, the</p> <p>7 technology in Moore is very, very simple. It simply</p> <p>8 says that you can have a particular type of a -- of a</p> <p>9 finger-position measuring device and that you can use</p> <p>10 that to perform measurements of moving inputs for</p> <p>11 functions like adjustments or scrolling.</p> <p>12 Within that, you have the whole scope</p> <p>13 of -- of known software capabilities. There's --</p> <p>14 there's no -- nothing about Moore that attempts to</p> <p>15 teach you that any one particular type of software is</p> <p>16 any more or less appropriate than any other.</p> <p>17 MR. GOKHALE: Okay. I'm going to suggest</p> <p>18 another break now, so we can reconvene another time.</p> <p>19 MR. SALEN: I'm sorry? I don't understand.</p> <p>20 What are you asking for?</p> <p>21 MR. GOKHALE: Another break. I think we will</p> <p>22 just reconvene one more time before we --</p> <p>23 MR. SALEN: Okay. So -- so -- just to be</p> <p>24 clear, so you still have more questions on cross?</p> <p>25 MR. GOKHALE: We may. We may. I'm going</p>
<p style="text-align: right;">Page 112</p> <p>1 to --</p> <p>2 I want to reconvene. Take a break and --</p> <p>3 MR. SALEN: All right.</p> <p>4 MS. MANDRUSIAK: But I -- I think you're</p> <p>5 almost done, though. So maybe --</p> <p>6 MR. GOKHALE: Yeah.</p> <p>7 MS. MANDRUSIAK: -- if you guys want to take</p> <p>8 a longer break and think about redirect, that would</p> <p>9 maybe make sense to do that now, or not until we're</p> <p>10 all done.</p> <p>11 MR. SALEN: Yeah. We can go off the record.</p> <p>12 It's okay. You can go off the record.</p> <p>13 THE VIDEOGRAPHER: All agreed to go off the</p> <p>14 record. We're off the record at 2:19 p.m.</p> <p>15 (Recess from 2:19 p.m. - 3:02 p.m.)</p> <p>16 THE VIDEOGRAPHER: We're back on record at</p> <p>17 3:02 p.m.</p> <p>18 BY MR. GOKHALE:</p> <p>19 Q Dr. Wolfe, could you please retrieve the</p> <p>20 Moore reference. It's Exhibit 1012.</p> <p>21 Could you please go to column 3, starting at</p> <p>22 line 5, please. Could you please read the paragraph,</p> <p>23 starting at line 5, to yourself, please.</p> <p>24 Okay. In this paragraph --</p> <p>25 A I'm sorry. I'm not quite finished.</p>	<p style="text-align: right;">Page 113</p> <p>1 Okay.</p> <p>2 Q In this paragraph, they refer to a finger</p> <p>3 contact resolution being within 1 centimeter. Have</p> <p>4 you heard the expression "finger contact resolution"</p> <p>5 before?</p> <p>6 A I would not know the specific definition of</p> <p>7 that term. I think that's somewhat unique to this</p> <p>8 patent. I bel- -- it's not -- not quite clear what it</p> <p>9 means here.</p> <p>10 Q Okay. Does that seem accurate, though, that</p> <p>11 they would account for a finger contact resolution of</p> <p>12 within 1 centimeter?</p> <p>13 A No.</p> <p>14 MR. SALEN: Object to form and foundation.</p> <p>15 THE WITNESS: No. A finger contact</p> <p>16 resolution would depend on the actual length of the --</p> <p>17 Well, the resolution of measurement would</p> <p>18 depend on the resolution of the A-D converter and the</p> <p>19 length of the strip. Let's see. It would depend --</p> <p>20 So if that were a 100-millimeter strip, then</p> <p>21 this -- then you would get about -- and you had a</p> <p>22 10-bit A-D converter, then you would get about a tenth</p> <p>23 of a millimeter. Their number is about 1 millimeter,</p> <p>24 which is ten units per centimeter. That seems awfully</p> <p>25 low, even as of 1986. But just the normal progress of</p>

<p style="text-align: right;">Page 114</p> <p>1 technology would have improved that over time.  2 BY MR. GOKHALE:  3 Q Is Moore taking into account the width of a  4 user's finger in this description?  5 MR. SALEN: Object to form.  6 THE WITNESS: He mentions it, but he doesn't  7 seem to take it into account. He mentions that it's  8 about 1 centimeter, but he clearly says that he's  9 measuring to a tenth of a centimeter, which is much  10 less than the width of a finger. And he talks about  11 how he filters that measurement.  12 At the time I was making measurements that  13 were even ten times greater than that, but -- but --  14 BY MR. GOKHALE:  15 Q What does that mean, that --  16 Sorry. Could you clarify?  17 MR. SALEN: Was he still --  18 MR. GOKHALE: I'm sorry. I'm sorry.  19 MR. SALEN: -- answering the question, I  20 think?  21 THE WITNESS: Yeah. I'll just kind of  22 complete my answer, which is he mentions that a finger  23 is about 1 centimeter, but what one would measure on  24 this device would be the centroid, the -- the average  25 of contact of the finger. And he does mention that he</p>	<p style="text-align: right;">Page 115</p> <p>1 measures that to within a tenth of a centimeter, and  2 that's -- that's the relevant measurement.  3 BY MR. GOKHALE:  4 Q Okay. But -- so he -- he is taking into  5 account 1-centimeter finger contact resolution, and  6 you said that you took into account higher resolutions  7 in this at the time. Is that what you just said?  8 A No. He is -- I don't know what it means,  9 that he's taking it into account, because what he's  10 saying is that, even though a finger is 1 centimeter,  11 he can measure ten times more accurately than that.  12 And what I'm telling you is that, in fact, as  13 of 1983, I was building touch sensors that were  14 measuring 100 times more accurate than that, not ten  15 times more accurate. But -- but in either case, the  16 point is that you can make the measurements much more  17 accurately than the width of a finger, and he  18 discloses that.  19 Q Have you ever heard of a term called "the fat  20 finger problem" in terms of touchscreen inputs?  21 A I've heard people talking about that, but --  22 but, again, the -- the idea is that -- that -- that  23 not every touchscreen input mechanism will work with a  24 very small target, but certain kinds of touchscreen  25 inputs, like sliders and scroll bars, don't have that</p>
<p style="text-align: right;">Page 116</p> <p>1 problem.  2 Q So you're -- you're --  3 What would make a certain kind of touchscreen  4 not have that problem?  5 MR. SALEN: Object to form and foundation.  6 Outside the scope of direct.  7 THE WITNESS: That's not what I said, so I'm  8 not sure how to answer the question.  9 BY MR. GOKHALE:  10 Q You said, "I've heard" --  11 I'm going back on the -- on the transcript  12 here.  13 You said, "I've heard people talking about  14 that, but, again, the -- the idea is that not every  15 touchscreen mechanism will work with a very small  16 target, but certain kinds of touchscreen" -- I don't  17 know what that word is -- "like sliders and" -- I  18 don't know what that word is either -- "don't have  19 that problem."  20 A What I said was that certain kinds of  21 touchscreen controls, like sliders and scroll bars,  22 don't have that problem. That's a problem that has to  23 do with stand-alone buttons needing to be a certain  24 size or have a certain spacing around them in order  25 for a large number of users to be able to reliably</p>	<p style="text-align: right;">Page 117</p> <p>1 touch them the first try.  2 BY MR. GOKHALE:  3 Q Is there a problem if one of these scrolling  4 regions is next to one of these small buttons?  5 MR. SALEN: Object to form. Foundation.  6 Outside the scope of direct.  7 THE WITNESS: I'm not aware of any such  8 problem.  9 BY MR. GOKHALE:  10 Q In the column we just read in Moore, column  11 3, starting on line 13, it says, "If this difference  12 is greater than a preset magnitude, then a new value  13 from the strip is generated and is either stored in a  14 memory location to be pulled by the microprocessor or  15 generated a software" -- "or generates a software  16 interrupt."  17 Can you explain what Moore is doing in this  18 paragraph --  19 A Yes.  20 Q -- in particular what that -- that -- what  21 it's taking into account right there?  22 A Yes.  23 MR. SALEN: Object to form. Outside the  24 scope of direct.  25 THE WITNESS: Moore, in one of -- specific</p>

<p style="text-align: right;">Page 118</p> <p>1 embodiment, will determine whether or not there's been  2 a substantial amount of movement during the same touch  3 from a previously reported point, and if so, will  4 report that from one part of the microprocessor to  5 another by generating a software interrupt or storing  6 in the location to be tested.</p> <p>7 What that does is it simplifies certain kinds  8 of software by eliminating certain random generating  9 movements that can be filtered out in a number of  10 ways. But this is one particular way to do that.  11 This was very common and very ordinary technology at  12 the time.</p> <p>13 BY MR. GOKHALE:</p> <p>14 Q So, then, is this preset magnitude based on  15 the size of ten units being mentioned in this  16 paragraph?</p> <p>17 MR. SALEN: Object to form. Outside the  18 scope of direct.</p> <p>19 THE WITNESS: In the sense that it can't have  20 any more resolution than you measure, it is. So it  21 would be -- you would not -- since you are going to  22 measure with an integral value, in other words, a --  23 an integer number -- 0, 1, 2, 3, 4 -- you would need  24 to see a difference of at least one unit if you were  25 implementing this algorithm as taught in Moore in</p>	<p style="text-align: right;">Page 119</p> <p>1 order to report it. And only in that sense is that  2 tied to the resolution of the measurement.</p> <p>3 BY MR. GOKHALE:</p> <p>4 Q What is the input error that Moore is talking  5 about in this paragraph --</p> <p>6 MR. SALEN: Object --</p> <p>7 BY MR. GOKHALE:</p> <p>8 Q -- on line 10?</p> <p>9 A The input error is the --</p> <p>10 MR. SALEN: Object -- objection to form.</p> <p>11 THE WITNESS: Whenever you make a  12 measurement, there is potential input error caused by  13 electrical noise or, in this case, caused by some  14 vibration of the finger or variations in pressure of  15 the finger. And it was ordinary at the time to filter  16 that out of a touch sensor.</p> <p>17 BY MR. GOKHALE:</p> <p>18 Q Okay. So Moore, in this paragraph, describes  19 the size of a finger -- finger contact resolution. It  20 deci- -- it describes that the sampling resolution can  21 be as high as ten units, and then it describes,  22 "Consequently, while a contact is made, many values  23 within a range of 10 units can be generated."  24 It then describes that "To avoid an input  25 error, the micro" -- "at the microprocessor, previous</p>
<p style="text-align: right;">Page 120</p> <p>1 values generated are stored [sic] and the difference  2 between them [sic] stored and the current input...are  3 computed."</p> <p>4 Then it's trying to check for a difference  5 being greater than the preset magnitude.</p> <p>6 Are you saying that the preset magnitude does  7 not tie into the size of the finger?</p> <p>8 MR. SALEN: Objection. Form. Foundation.  9 Outside the scope of direct.</p> <p>10 THE WITNESS: I don't see disclosure that the  11 preset magnitude has to be related to the size of the  12 finger. Certainly the preset magnitude could be --  13 could be one measurement unit.</p> <p>14 BY MR. GOKHALE:</p> <p>15 Q Okay. Is it possible that Moore, in this  16 paragraph, is describing that they want to set the  17 preset magnitude so that values with -- that are less  18 than ten units may not result in anything because they  19 may be an input error?</p> <p>20 MR. SALEN: Objection to form. Foundation.  21 Outside the scope of direct.</p> <p>22 THE WITNESS: He certainly hasn't said that.  23 He certainly could have said that. He certainly could  24 have said a preset magnitude of at least ten units,  25 but he didn't.</p>	<p style="text-align: right;">Page 121</p> <p>1 BY MR. GOKHALE:</p> <p>2 Q Okay.</p> <p>3 A So just to be clear, my answer is no. I  4 mean, I'm not speculating that that could -- is what  5 this could mean. I'm telling you that -- that I read  6 it, and it specifically does not say that.</p> <p>7 Q Could a unintentional movement in Moore cause  8 a movement that only moves one unit in this sampling  9 resolution he's ascribing about?</p> <p>10 MR. SALEN: Objection. Form. Foundation.  11 Outside the scope of direct.</p> <p>12 THE WITNESS: Certainly it could.</p> <p>13 BY MR. GOKHALE:</p> <p>14 Q Okay. Would -- would Moore want to disregard  15 that unintentional movement?</p> <p>16 A I don't know what --</p> <p>17 MR. SALEN: Objection. Form. Foundation.  18 Outside the scope of direct.</p> <p>19 THE WITNESS: I don't know what Moore wants,  20 but he doesn't tell us anywhere in this patent that he  21 wants to ignore that.</p> <p>22 MR. GOKHALE: Okay. I'll introduce a new  23 exhibit into evidence. We are going to mark this  24 submission as Exhibit 2002.  25 ///</p>

<p style="text-align: right;">Page 122</p> <p>1 BY MR. GOKHALE:</p> <p>2 Q And do you recognize this document?</p> <p>3 A Yes.</p> <p>4 Q Can you please describe this document.</p> <p>5 A This is U.S. Patent No. 6,037,930. I am the</p> <p>6 first named inventor. It was filed initially in 1984</p> <p>7 and issued in March of 2000.</p> <p>8 Q Could you please turn to --</p> <p>9 MR. SALEN: Counsel, I'm sorry. I have a</p> <p>10 question about the exhibit. May I ask him a question?</p> <p>11 Just for the record, this exhibit -- this</p> <p>12 patent is Exhibit 1023 as well in the record. Is</p> <p>13 there a difference between this -- this exhibit and --</p> <p>14 MS. MANDRUSIAK: Oh, I'm --</p> <p>15 Maybe I sent the wrong patent.</p> <p>16 MR. SALEN: I just want to know if there's</p> <p>17 something different about this one than --</p> <p>18 MS. MANDRUSIAK: It should -- yeah.</p> <p>19 No. It should --</p> <p>20 That's Wolfe No. 6,037,930. Okay. I think</p> <p>21 we just didn't realize it was already --</p> <p>22 MR. SALEN: So it's the same --</p> <p>23 There's nothing different about this? Okay.</p> <p>24 That's fine. All right.</p> <p>25 MR. GOKHALE: Our apologies.</p>	<p style="text-align: right;">Page 123</p> <p>1 Q Could you please turn to column 2, line 57.</p> <p>2 And up to the point of line 65, could you</p> <p>3 please read that portion.</p> <p>4 A Okay.</p> <p>5 Q Does this portion describe certain problems</p> <p>6 with touchscreens at the time of the filing of this</p> <p>7 patent?</p> <p>8 A As of 1983 or 1984, yes.</p> <p>9 Q Okay. Could you please clarify what is meant</p> <p>10 by the phrase "The above-described devices are also</p> <p>11 deficient in that they all require a significant</p> <p>12 amount of supervision, control, and interrogation by</p> <p>13 the host computer. Thus valuable computer time is</p> <p>14 used to perform relatively mundane operations."</p> <p>15 A At that time, computers were orders of</p> <p>16 magnitude less powerful than -- than today, and --</p> <p>17 Let's see.</p> <p>18 The above-described devices, generally, at</p> <p>19 the time, would have used serial port communications,</p> <p>20 which used a lot of computing time. And by the</p> <p>21 time -- by 1984, when I filed this, we were instead --</p> <p>22 instead of using a polling-type operation, we used a</p> <p>23 -- an interrupt-driven model, which -- which was just</p> <p>24 one feature of this particular device.</p> <p>25 MR. GOKHALE: Okay. Okay. Thank you.</p>
<p style="text-align: right;">Page 124</p> <p>1 I want to submit an additional document for</p> <p>2 evidence. This is -- I apologize if this overlaps an</p> <p>3 existing exhibit. This is going to be Exhibit 2003.</p> <p>4 MS. MANDRUSIAK: That -- that actually would</p> <p>5 be 2002.</p> <p>6 MR. GOKHALE: 2002. Sorry. We're --</p> <p>7 MR. SALEN: We don't have an objection to you</p> <p>8 entering the same exhibit as 2000- -- I mean as</p> <p>9 whatever --</p> <p>10 MS. MANDRUSIAK: There's no need to.</p> <p>11 MR. SALEN: That's fine. Okay.</p> <p>12 (Exhibit 2002 was marked for identification.)</p> <p>13 BY MR. GOKHALE:</p> <p>14 Q Do you recognize this document?</p> <p>15 A Yes.</p> <p>16 Q Okay. Can you please describe this document.</p> <p>17 A This is U.S. Patent 8,243,045. I am a named</p> <p>18 inventor on this patent.</p> <p>19 Q Okay. Could you please go to column 2, line</p> <p>20 20 up until line 34.</p> <p>21 A Okay.</p> <p>22 Q Does this portion describe problems with</p> <p>23 touchscreens at the time of the filing of this patent</p> <p>24 application?</p> <p>25 A Problems with some touchscreens but not all</p>	<p style="text-align: right;">Page 125</p> <p>1 touchscreens.</p> <p>2 Q Could you please describe the type of</p> <p>3 touchscreens that caused a problem in this</p> <p>4 description.</p> <p>5 MR. SALEN: Object to form.</p> <p>6 THE WITNESS: Certain kinds of touchscreens,</p> <p>7 typically the ones we referred to as analog-resistive</p> <p>8 or analog-capacitive, could drift in their signal</p> <p>9 response over time and therefore required periodic</p> <p>10 calibration.</p> <p>11 One of the problems that the '045 patent</p> <p>12 solves is that -- that need for periodic calibration</p> <p>13 is eliminated. But there were already other existing</p> <p>14 touchscreens at the time that did not require the</p> <p>15 periodic calibration as well.</p> <p>16 BY MR. GOKHALE:</p> <p>17 Q What about the additional problems described</p> <p>18 in this -- in this section?</p> <p>19 MR. SALEN: Objection to form and foundation.</p> <p>20 And outside the scope of direct. And relevance.</p> <p>21 THE WITNESS: I don't see --</p> <p>22 What is the additional problem that you're</p> <p>23 talking about?</p> <p>24 BY MR. GOKHALE:</p> <p>25 Q It says, "For example, manufacturing of</p>



<p style="text-align: right;">Page 126</p> <p>1 previous touchscreen and display devices involves  2 precise alignment of touchscreen panels and display  3 panels to ensure the placement of a touch will  4 correspond to the desired location on the display. In  5 addition, the touch-sensitive display is constructed  6 of shared circuitry and thus includes less  7 manufacturing steps than the manufacturing steps  8 involved in producing touchscreen circuitry and  9 display circuitry."  10 A I don't see the fact that a new --  11 MR. SALEN: I'll object to form. Foundation.  12 Outside the scope of direct. It's not relevant.  13 THE WITNESS: I don't see the fact that our  14 new touchscreen required less manufacturing steps to  15 be indicative of the fact that there was a problem in  16 the prior screens, just because they required more  17 manufacturing steps than a -- than a new invention.  18 BY MR. GOKHALE:  19 Q So this sentence you've mentioned,  20 "Manufacturing of previous touchscreen and display  21 devices involves precise alignment of touchscreen  22 panels and display panels to ensure the placement of a  23 touch will correspond to the desired location on the  24 display," is that describing a challenge with previous  25 touchscreens?</p>	<p style="text-align: right;">Page 127</p> <p>1 MR. SALEN: Objection. Form. Foundation.  2 Outside the scope of direct. It's not relevant.  3 THE WITNESS: It's not a challenge. It's an  4 expense. It was something that everyone did. It was  5 something that, by the time we filed this, was -- was  6 a property of things like the iPhone that were  7 extremely successful. But -- but as part of our  8 invention, we had figured out a way to eliminate one  9 of the manufacturing steps.  10 MR. GOKHALE: Okay. All right. I have no  11 further questions at this time.  12 MR. SALEN: Okay. Then, why don't we go off  13 the record again, and we'll talk and then --  14 MR. BAKER: Do we have time for sun later, or  15 shall we stay here? Ten minutes or less?  16 MR. SALEN: I -- I think --  17 Well, I mean, it's 3:30 right now.  18 Do you want to go off the record? Yeah.  19 THE VIDEOGRAPHER: This concludes Media No. 2  20 in the deposition of Dr. Andrew Wolfe.  21 We are off the record at 3:24 p.m.  22 (Recess from 3:24 p.m. - 4:01 p.m.)  23 THE VIDEOGRAPHER: This is the start of  24 Media No. 3 in the deposition of Dr. Andrew Wolfe.  25 We're back on the record at 4:01 p.m.</p>
<p style="text-align: right;">Page 128</p> <p>1 MR. SALEN: All right. So --  2 Counsel for TCL. So we don't have any  3 further questions.  4 I assume you don't have any further  5 questions, either.  6 MR. GOKHALE: We do not have further  7 questions.  8 MR. SALEN: All right. Thank you.  9 We can go off the record. We're done.  10 MR. GOKHALE: Thank you.  11 THE VIDEOGRAPHER: This concludes Media No. 3  12 of 3 in the deposition of Dr. Andrew Wolfe.  13 We're off the record at 4:01 p.m.  14 (Proceedings concluded at 4:01 p.m.)  15  16  17  18  19  20  21 _____  22 Andrew Wolfe Ph.D.  23 Subscribed and sworn to before me  24 this ____ day of _____, 2016.  25 _____  NOTARY PUBLIC</p>	<p style="text-align: right;">Page 129</p> <p>1 I, Tricia A. Rosate, Certified Shorthand  2 Reporter licensed in the State of California, License  3 No. 10891, hereby certify that the deponent was by me  4 first duly sworn, and the foregoing testimony was  5 reported by me and was thereafter transcribed with  6 computer-aided transcription; that the foregoing is a  7 full, complete, and true record of said proceedings.  8 I further certify that I am not of counsel or  9 attorney for any of the parties in the foregoing  10 proceeding and caption named or in any way interested  11 in the outcome of the cause in said caption.  12 The dismantling, unsealing, or unbinding of  13 the original transcript will render the reporter's  14 certificates null and void.  15 In witness whereof, I have hereunto set my  16 hand this day: April 21, 2016  17  18 _____ Reading and signing was requested.  19  20 _____ Reading and signing was waived.  21  22 ____x____ Reading and signing was not requested.  23  24 _____  25 Tricia Rosate, RDR, RMR, CRR, CCRR  CSR No. 10891</p>

1 NAME OF CASE:  
 2 DATE OF DEPOSITION:  
 3 NAME OF WITNESS:  
 4 Reason Codes:  
 5 1. To clarify the record.  
 6 2. To conform to the facts.  
 7 3. To correct transcription errors.  
 8 Page \_\_\_\_\_ Line \_\_\_\_\_ Reason \_\_\_\_\_  
 9 From \_\_\_\_\_ to \_\_\_\_\_  
 10 Page \_\_\_\_\_ Line \_\_\_\_\_ Reason \_\_\_\_\_  
 11 From \_\_\_\_\_ to \_\_\_\_\_  
 12 Page \_\_\_\_\_ Line \_\_\_\_\_ Reason \_\_\_\_\_  
 13 From \_\_\_\_\_ to \_\_\_\_\_  
 14 Page \_\_\_\_\_ Line \_\_\_\_\_ Reason \_\_\_\_\_  
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