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UNITED STATES DISTRICT COURT  
FOR THE CENTRAL DISTRICT OF CALIFORNIA

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BLACKBERRY LIMITED, a ) Case No.  
Canadian corporation, ) 2:18-cv-01844-GW-KS  
Plaintiff, ) Lead Consolidating Case  
vs. ) Related Case:  
FACEBOOK, INC., a Delaware ) 2:18-cv-02693-GW-KS  
corporation, WHATSAPP INC., a )  
Delaware corporation, and )  
INSTAGRAM, INC., a Delaware )  
corporation, and INSTAGRAM, )  
LLC, a Delaware limited )  
liability company, )  
Defendants. )  

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VIDEOTAPED DEPOSITION OF DAN SCHONFELD, PH.D.  
San Francisco, California  
Tuesday, July 30, 2019

Reported by:  
ASHALA TYLOR, CSR #2436, CLR, CRR, RPR  
JOB NO. 3476210  
PAGES 1 - 160



<p>1 UNITED STATES DISTRICT COURT  2 FOR THE CENTRAL DISTRICT OF CALIFORNIA  3 _____  4 BLACKBERRY LIMITED, a ) Case No.  5 Canadian corporation, ) 2:18-cv-01844-GW-KS  6 Plaintiff, ) Lead Consolidating Case  7 vs. ) Related Case:  8 FACEBOOK, INC., a Delaware ) 2:18-cv-02693-GW-KS  9 corporation, WHATSAPP INC., a )  10 Delaware corporation, and )  11 INSTAGRAM, INC., a Delaware )  12 corporation, and INSTAGRAM, )  13 LLC, a Delaware limited )  14 liability company, )  15 Defendants. )  16 _____)  17  18 Videotaped deposition of DAN SCHONFELD, PH.D.,  19 taken at Quinn Emanuel Urquhart &amp; Sullivan, LLP,  20 50 California Street, San Francisco, California,  21 commencing at 9:35 a.m. and ending at 3:42 p.m., on  22 Tuesday, July 30, 2019, before Ashala Tylor, CSR No.  23 2436, RPR, CRR, CLR.  24  25</p> <p style="text-align: right;">Page 2</p>	<p style="text-align: center;">I N D E X</p> <table border="0"> <tr> <td>2 WITNESS</td> <td>EXAMINATION BY</td> <td>PAGE</td> </tr> <tr> <td>3 DAN SCHONFELD, PH.D.</td> <td></td> <td></td> </tr> <tr> <td>4 Mr. Weinstein</td> <td>7, 96, 146</td> <td></td> </tr> <tr> <td>5 Mr. Schmidt</td> <td>140</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">E X H I B I T S</td> </tr> <tr> <td>8 NO.</td> <td>DESCRIPTION</td> <td>PAGE</td> </tr> <tr> <td>9 Exhibit 1</td> <td>Declaration of Dan Schonfeld, Ph.D.</td> <td>10</td> </tr> <tr> <td>10 Exhibit 2</td> <td>Patent No.: US 8,677,250 B2, BB_Facebook00031819 - 838</td> <td>10</td> </tr> <tr> <td>11</td> <td></td> <td></td> </tr> <tr> <td>12 Exhibit 3</td> <td>Patent No.: US 8,279,173 B2, BB_Facebook00031721 - 737</td> <td>10</td> </tr> <tr> <td>13</td> <td></td> <td></td> </tr> <tr> <td>14 Exhibit 4</td> <td>Blackberry's Notice of Motion and Motion for Partial Summary Judgment of Infringement of U.S. Patent Nos. 8,677,250, 8,279,173 and 9,349,120</td> <td>133</td> </tr> <tr> <td>15</td> <td></td> <td></td> </tr> <tr> <td>16</td> <td></td> <td></td> </tr> <tr> <td>17</td> <td></td> <td></td> </tr> <tr> <td>18 Exhibit 5</td> <td>Deposition of Kun Chen, 6-26-19</td> <td>142</td> </tr> <tr> <td>19</td> <td></td> <td></td> </tr> <tr> <td>20</td> <td></td> <td></td> </tr> <tr> <td>21</td> <td></td> <td></td> </tr> <tr> <td>22</td> <td></td> <td></td> </tr> <tr> <td>23</td> <td></td> <td></td> </tr> <tr> <td>24</td> <td></td> <td></td> </tr> <tr> <td>25</td> <td></td> <td></td> </tr> </table> <p style="text-align: right;">Page 4</p>	2 WITNESS	EXAMINATION BY	PAGE	3 DAN SCHONFELD, PH.D.			4 Mr. Weinstein	7, 96, 146		5 Mr. Schmidt	140		6			E X H I B I T S			8 NO.	DESCRIPTION	PAGE	9 Exhibit 1	Declaration of Dan Schonfeld, Ph.D.	10	10 Exhibit 2	Patent No.: US 8,677,250 B2, BB_Facebook00031819 - 838	10	11			12 Exhibit 3	Patent No.: US 8,279,173 B2, BB_Facebook00031721 - 737	10	13			14 Exhibit 4	Blackberry's Notice of Motion and Motion for Partial Summary Judgment of Infringement of U.S. Patent Nos. 8,677,250, 8,279,173 and 9,349,120	133	15			16			17			18 Exhibit 5	Deposition of Kun Chen, 6-26-19	142	19			20			21			22			23			24			25		
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<p>1 APPEARANCES OF COUNSEL:  2  3 FOR THE PLAINTIFF:  4 QUINN EMANUEL URQUHART &amp; SULLIVAN, LLP,  5 BY: PATRICK SCHMIDT, ESQ.  6 865 South Figueroa Street, 10th Floor  7 Los Angeles, California  8 213.443.3000  9 patrickschmidt@quinnemanuel.com  10  11 FOR THE DEFENDANTS:  12 COOLEY LLP  13 BY: MARK WEINSTEIN, ESQ.  14 HEIDI KEEFE, ESQ.  15 3175 Hanover Street  16 Palo Alto, California 94304-1130  17 650.843.5001  18 mweinstein@cooley.com  19 hkeefe@cooley.com  20  21 Also Present:  22 Brandon Miller, Videographer  23  24  25</p> <p style="text-align: right;">Page 3</p>	<p>1 San Francisco, California; Tuesday, July 30, 2019  2 9:35 a.m.  3 --000--  4 09:31  5 THE VIDEOGRAPHER: Good morning. We're 09:35  6 going on the record at 9:35 a.m. on July 30, 2019. 09:35  7 Please note that the microphones are very, 09:35  8 very sensitive and may pick up whispering, rubbing 09:35  9 of clothing, hair and microphone cable. Please 09:35  10 silence all cell phones and place them away from the 09:35  11 microphones as they can interfere with deposition 09:35  12 audio. 09:35  13 Audio-video recording will continue to 09:35  14 take place unless all parties agree to go off the 09:35  15 record. 09:35  16 This is Media Number 1 of the 09:35  17 video-recorded deposition of Dr. Dan Schonfeld taken 09:35  18 by counsel for the defendant in the matter of 09:35  19 BlackBerry Limited versus Facebook, Inc., WhatsApp, 09:35  20 Inc., and Instagram, Inc., filed in the 09:35  21 United States District Court, Central District of 09:36  22 California. Lead -- excuse me, case number 09:36  23 2:18-cv-01844-GW-KS, lead consolidated case. 09:36  24 This deposition is being held at 50 09:36  25 California Street, 22nd Floor, San Francisco, 09:36</p> <p style="text-align: right;">Page 5</p>																																																																								

1 California 94111. 09:36  
2 My name is Brandon Miller with the firm 09:36  
3 Veritext Legal Solutions, and I'm the videographer. 09:36  
4 The court reporter is Ashala Tylor for the firm 09:36  
5 Veritext Legal Solutions. 09:36  
6 I'm not related to any party in this 09:36  
7 action, nor am I financially interested in the 09:36  
8 outcome. 09:36  
9 Counsel and all present in the room will 09:36  
10 now say their appearances and affiliations for the 09:36  
11 record. 09:36  
12 MR. WEINSTEIN: Mark Weinstein of Cooley 09:36  
13 LLP, representing the defendants. And with me is 09:36  
14 Heidi Keefe, also from Cooley LLP, also representing 09:36  
15 the defendants. 09:37  
16 MR. SCHMIDT: Good morning. Patrick 09:37  
17 Schmidt from Quinn Emanuel on behalf of the 09:37  
18 plaintiff BlackBerry. 09:37  
19 THE VIDEOGRAPHER: Thank you. You may now 09:37  
20 swear the witness. 09:37  
21 DAN SCHONFELD, Ph.D., 09:37  
22 being first duly sworn or affirmed to testify 09:37  
23 to the truth, the whole truth, and nothing but 09:37  
24 the truth, was examined and testified as follows: 09:37  
25 ///

Page 6

1 EXAMINATION 09:37  
2 BY MR. WEINSTEIN: 09:37  
3 Q. Good morning, sir. 09:37  
4 A. Good morning. 09:37  
5 Q. Would you state your name for the record? 09:37  
6 A. Yeah, it's Dan Schonfeld. 09:37  
7 Q. Okay. And for ease of reference, do you 09:37  
8 prefer Dr. Schonfeld or Mr. Schonfeld? 09:37  
9 A. Dr. Schonfeld is fine. 09:37  
10 Q. Okay. Thank you. 09:37  
11 A. Any which way you prefer is fine. 09:37  
12 Q. Thank you, Dr. Schonfeld. You're 09:37  
13 currently employed, right? 09:37  
14 A. I am. 09:37  
15 Q. Who is your current employer? 09:37  
16 A. The University of Illinois in Chicago. 09:37  
17 Q. Do you have any residences in California? 09:37  
18 A. No. 09:37  
19 Q. Okay. Have you had your deposition taken 09:37  
20 before? 09:37  
21 A. Yes. 09:37  
22 Q. Approximately how many times? 09:37  
23 A. It depends on how you count, but I would 09:37  
24 say somewhere around probably slightly higher than 09:38  
25 40. 09:38

Page 7

1 Q. You haven't been deposed in this case, 09:38  
2 have you? 09:38  
3 A. No. 09:38  
4 Q. So I'm going to give you the speech that 09:38  
5 basically every deposition in the United States has 09:38  
6 ever begun within the last 50 years. I'm sure you 09:38  
7 know everything, but we have to have it on the 09:38  
8 record. 09:38  
9 This deposition and everything you say is 09:38  
10 under oath. It has the same force and effect as if 09:38  
11 we were in open court. 09:38  
12 You understand that, correct? 09:38  
13 A. I do. 09:38  
14 Q. If at any time during the deposition you 09:38  
15 don't understand a question I'm asking, feel free to 09:38  
16 ask me to clarify; otherwise I have no choice but to 09:38  
17 assume that you understood my question. Agreed? 09:38  
18 A. I will do so to the best -- to the extent 09:38  
19 that I misunderstand the question. 09:38  
20 Q. Thank you so much. 09:38  
21 The court reporter next to us is going to 09:38  
22 take down everything you and I say, so there's a 09:38  
23 reciprocal rule that we both have to follow based on 09:38  
24 the fact that the court reporter can only take down 09:38  
25 one person speaking at a time, which is that I would 09:38

Page 8

1 ask that you wait for me to finish the question 09:38  
2 before providing an answer, and I, in turn, will 09:39  
3 endeavor to wait for you to finish your answer until 09:39  
4 proceeding to the next question. 09:39  
5 Sounds reasonable? 09:39  
6 A. Yes. 09:39  
7 Q. Okay. Are you taking any medication, 09:39  
8 Dr. Schonfeld, that could affect the testimony that 09:39  
9 you are giving here today? 09:39  
10 A. Not that I'm aware of, no. 09:39  
11 Q. Are there any reasons that you can 09:39  
12 identify that you can't give your best and most 09:39  
13 accurate testimony here today? 09:39  
14 A. Not that I'm aware of, no. 09:39  
15 Q. Okay. Thank you, sir. 09:39  
16 So you have been retained by the plaintiff 09:39  
17 BlackBerry in this case, correct? 09:39  
18 A. Yes. 09:39  
19 Q. Approximately when were you retained in 09:39  
20 this action? 09:39  
21 A. I am -- I believe it was -- in or around 09:39  
22 April 2018. 09:39  
23 Q. Okay. So right around the time this 09:39  
24 litigation got started? 09:39  
25 A. Yes, I presume so. I'm not sure. 09:39

Page 9

<p>1 Q. But as far as the actual displaying of the 01:41  2 tag list, that code is the JavaScript code running 01:41  3 on the browser, correct? 01:41  4 A. At least in part. Again, I don't want to 01:41  5 limit myself to saying all of it is a JavaScript 01:41  6 code. 01:41  7 Q. Okay. I'm just -- because -- maybe this 01:41  8 is more a semantic issue. 01:41  9 The claim calls for displaying a tag list, 01:41  10 including tags from one or more tag sources, and 01:41  11 matching a search string. So the claim actually 01:41  12 doesn't require that a search be run, correct? 01:41  13 MR. SCHMIDT: Objection. Calls for a 01:42  14 legal conclusion. 01:42  15 THE WITNESS: Well, I think it says 01:43  16 matching a search string. And under your 01:43  17 interpretation of the limitation, matching a search 01:43  18 string would be true whether or not the actual 01:43  19 matching is performed. And that's not how I read 01:43  20 it. I actually viewed the matching as being 01:43  21 something that needs to take place. 01:43  22 BY MR. WEINSTEIN: 01:43  23 Q. Okay. It -- 01:43  24 A. And -- 01:43  25 Q. Go ahead. I'm sorry. 01:43</p> <p style="text-align: right;">Page 106</p>	<p>1 If I could direct you to a passage in 01:45  2 column 5. It starts on line 39 through 47. I'll 01:45  3 read it into the record. 01:45  4 "In an embodiment, as the user begins to 01:45  5 type, photo tag selection module 148B may be 01:45  6 configured to search one or more selected 'tag 01:45  7 sources' for tags that match the currently entered 01:45  8 text." 01:45  9 And then it goes on from there. Do you 01:45  10 see that? 01:45  11 A. I do. 01:45  12 Q. We'll stop there. So when you read the 01:45  13 claim, do you think that the claim requires that the 01:45  14 system search one or more tag sources in order to 01:45  15 generate the tag list? 01:46  16 MR. SCHMIDT: Objection to the extent it 01:46  17 calls for a legal conclusion. 01:46  18 THE WITNESS: So when I read the 01:46  19 limitation in Claim 13, limitation A that we are 01:46  20 talking about, reading it in light of the 01:46  21 specification, I do not impose anything beyond what 01:47  22 the claim limitation requires. And the claim 01:47  23 limitation does not explicitly require what's in 01:47  24 column 5. 01:47  25</p> <p style="text-align: right;">Page 108</p>
<p>1 A. And I would say that the claim asserted in 01:43  2 this case is Claim 14. And from Claim 14, the code 01:43  3 is for providing a tag entry field for entering the 01:43  4 search string. 01:43  5 So if one were to interpret it where no 01:43  6 search takes place, then you would have to enter a 01:43  7 search string for Claim 14 and do nothing with it. 01:43  8 So it would be an unusual interpretation of the 01:43  9 claim. 01:44  10 Q. Understood. So as far as how the search 01:44  11 is conducted, does the claim provide any limitations 01:44  12 on how the search must be conducted, in your 01:44  13 opinion? 01:44  14 MR. SCHMIDT: Objection to the extent it 01:44  15 calls for a legal conclusion. 01:44  16 THE WITNESS: The only thing that I -- 01:44  17 according to my interpretation, I imposed the fact 01:44  18 that the search has to actually perform a search and 01:44  19 by at least matching a search string. 01:44  20 BY MR. WEINSTEIN: 01:44  21 Q. Does the -- does the claim require that 01:44  22 the search -- well, withdrawn. 01:44  23 Let me -- let me refer you -- I know 01:45  24 you're looking at the patent, and that's perfectly 01:45  25 fine. 01:45</p> <p style="text-align: right;">Page 107</p>	<p>1 BY MR. WEINSTEIN: 01:47  2 Q. So it does not require that what is 01:47  3 searched be one or more tag sources. Is that what 01:47  4 you're saying? 01:47  5 MR. SCHMIDT: Objection to the extent it 01:47  6 calls for a legal conclusion. 01:47  7 THE WITNESS: Well, it requires -- the 01:47  8 wording that are required are code for displaying a 01:47  9 tag list, including tags from one or more tag 01:47  10 sources. 01:47  11 So the tags have to come from one or more 01:47  12 tag sources, and they have to match a search string. 01:47  13 And I do not go beyond that to -- to determine what 01:47  14 is required. 01:47  15 BY MR. WEINSTEIN: 01:47  16 Q. How can the system search for tags that 01:47  17 come from one or more tag sources without searching 01:47  18 within those tag sources? 01:47  19 A. So I'm not sure if I completely understand 01:48  20 the question, but the limitation is only about code 01:48  21 for displaying, and specifically it's for displaying 01:48  22 a tag list. And then there is the limitation 01:48  23 requires that that list include tags that are from 01:48  24 one or more tag sources. It's silent as to where -- 01:48  25 where the search has to take place. 01:49</p> <p style="text-align: right;">Page 109</p>

<p>1 Q. Okay. Now, I'll represent to you that I 01:49  2 do not believe that any terms from the '173 patent 01:49  3 were construed by the court in connection with this 01:49  4 case; but in order to form an opinion of 01:49  5 infringement, you formed an understanding of what 01:49  6 the claims actually require, correct? 01:49  7 A. I understood the claims and what they 01:49  8 meant to me. 01:49  9 Q. Okay. So -- so in your own words, can you 01:49  10 describe for me what the word "tag sources" means in 01:49  11 the context of the '173 patent? 01:49  12 MR. SCHMIDT: Objection to the extent it 01:49  13 calls for a legal conclusion. 01:49  14 THE WITNESS: I simply adopted the 01:49  15 understanding that -- well, just the plain meaning. 01:49  16 And I think plain meaning is something that in this 01:49  17 case, and not only a person of ordinary skill but 01:50  18 any person would understand, and this is just a 01:50  19 tag is a -- it's just a source of tags. 01:50  20 BY MR. WEINSTEIN: 01:50  21 Q. Okay. And then a search string, what is 01:50  22 your understanding, as a person of skill in the art,  23 of what a search string is when you were looking for  24 infringement of the '173 patent?  25 MR. SCHMIDT: Objection to the extent it 01:50  Page 110</p>	<p>1 and the patent specification gives some examples. 01:53  2 Once again, if you look at paragraph 82 of my 01:53  3 declaration, I cite to the patent -- for example, to 01:53  4 column 6, lines 5 through 9 -- where the patent 01:53  5 talks about a user's Facebook friends. Facebook 01:53  6 friends is one example, and I also cite to column 5, 01:53  7 line 43 through 47. And I think generally the 01:53  8 patent specification talks about other examples of 01:53  9 sources such as locations. 01:53  10 Claim 18, for example, talks about a tag 01:53  11 source as having one or more of an online network 01:53  12 profile, an address book, browser bookmarks, 01:54  13 landmark tears -- tags, sorry, and free form text. 01:54  14 And so it gives a whole array of examples both in 01:54  15 the claims as well as the specification, and it's 01:54  16 scattered throughout. 01:54  17 BY MR. WEINSTEIN: 01:54  18 Q. But a tag source identifies where tags 01:54  19 come from, correct? 01:54  20 MR. SCHMIDT: Objection to the extent it 01:54  21 calls for a legal conclusion. 01:54  22 THE WITNESS: I don't necessarily view it 01:54  23 as -- as limited to -- to determining where it comes 01:54  24 from; but it does provide a distinction between -- 01:54  25 between -- between the different objects or the 01:54  Page 112</p>
<p>1 calls for a legal conclusion. 01:50  2 THE WITNESS: So I think the easiest for 01:51  3 me -- easiest way for me to convey my understanding 01:51  4 of a search string would be just by example. 01:51  5 If you look at Figures 4B, 4C, 4D, 4E, and 01:51  6 4F, those would be an example consistent with a 01:51  7 search string means to anyone. 01:51  8 BY MR. WEINSTEIN: 01:51  9 Q. Understood. 01:51  10 A. Again, it's not the term that you need the 01:51  11 knowledge of a person of ordinary skill because 01:51  12 everybody browses the web. 01:51  13 Q. Knows what a search string is, right? 01:51  14 (Reporter clarification.) 01:51  15 Q. Knows what a search string is, right? 01:51  16 Everyone knows what a search string is, right? 01:51  17 A. I believe so. 01:51  18 Q. Okay. Now, you mentioned earlier that a 01:51  19 tag source is simply -- withdrawn.  20 You said earlier that a tag source is a 01:52  21 source of tags. What is a source? 01:52  22 MR. SCHMIDT: Objection to the extent it 01:52  23 calls for a legal conclusion. 01:52  24 THE WITNESS: So, again, this is a term 01:52  25 that I applied the plain and ordinary meaning to, 01:52  Page 111</p>	<p>1 different tags, I should say. 01:54  2 BY MR. WEINSTEIN: 01:54  3 Q. Looking at paragraph 79 of your 01:55  4 declaration, it looks like you have identified five 01:55  5 different alleged tag sources for the Facebook 01:55  6 website, correct? 01:55  7 A. That is correct. 01:55  8 Q. And I'll just read them into the record. 01:55  9 Those are Facebook friends, friends of Facebook 01:55  10 friends, general Facebook pages, pages associated  11 with locations, and verified Facebook profiles.  12 Do you see that? 01:56  13 A. I do. 01:56  14 Q. Okay. Let go to page 13 of your report, 01:56  15 and if you see, there's a -- it appears to be a 01:56  16 screenshot of the photo-tagging interface for the 01:56  17 Facebook.com website. 01:56  18 Do you see that? 01:56  19 A. I do. 01:56  20 Q. And it looks like -- did you create that 01:56  21 using a fictitious account? 01:56  22 A. It was a fictitious account, yes. 01:56  23 Q. Okay. And in this example, there's a tag 01:56  24 list there -- correct -- that's shown? 01:56  25 A. There is a... 01:57  Page 113</p>

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