

# EXHIBIT DD

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

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MATTHEW CAMPBELL, MICHAEL )  
HURLEY, and DAVID SHADPOUR, on )  
behalf of themselves and all )  
others similarly situated, )  
Plaintiffs, )  
vs. ) Case No.  
FACEBOOK, INC., ) C 13-05996 PJH  
Defendant. ) Volume I  
\_\_\_\_\_)

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

Videotaped Deposition of FERNANDO TORRES,  
taken on behalf of Defendant, at the offices of  
Lieff, Cabraser, Heimann & Bernstein, 275 Battery  
Street, San Francisco, California, beginning at  
8:10 a.m. and ending at 4:42 p.m., on Friday,  
December 18, 2015, before Chris Te Selle, CSR  
No. 10836.

Job No. 2194240  
PAGES 1 - 307

1 economic methods are able to be applied to determine 08:36:01  
2 the benefit that Facebook has derived, and, from the  
3 alleged actions; and, and that would be, basically,  
4 it.

5 Q. And you said, damages can be measured. 08:36:22

6 Have you measured damages in this case?

7 A. I haven't applied the methodology to the  
8 ideal information, because it has not been produced.

9 Q. What do you mean by, the ideal  
10 information? 08:36:46

11 A. Well, the data from Facebook.

12 Q. Is there specific --

13 A. That --

14 Q. I'm sorry. Go ahead.

15 A. That relates exactly to the alleged 08:36:56  
16 actions.

17 Q. And what are the alleged actions, as you  
18 understand them?

19 A. Well, I would summarize it in the  
20 interception of private messages, and the data that 08:37:07  
21 I would need is mainly the number of those messages  
22 that were intercepted that contained URLs, and the  
23 total number of messages for the same time periods  
24 to assess the relative importance of those numbers.

25 Q. When you say, the total number of messages 08:37:40

1 that contained URLs, and the total number of 08:37:42  
2 messages for the same periods, same time periods,  
3 can you explain the comparison. I'm not sure I  
4 understand the two variables there.

5 A. Well, one of the measures that I would be 08:37:53  
6 looking for would be the percentage of messages that  
7 contain those URLs and that were intercepted during  
8 the class period.

9 Q. And what is your understanding of the  
10 proposed class in this case? 08:38:17

11 A. Of the definition of the class?

12 Q. Yes, sir.

13 MR. DIAMAND: Calls for a legal conclusion.  
14 You can answer, if you can.

15 THE WITNESS: Well, again, that would be in, 08:38:29  
16 the actual definition of the class is either on the  
17 motions or on my report. From memory, I can tell  
18 you that it would be those members of Facebook that  
19 sent private messages and had their private messages  
20 intercepted and included URLs during the class 08:38:53  
21 period.

22 BY MR. CHORBA:

23 Q. Do you know what a URL attachment is?

24 A. A URL attachment?

25 Q. Yes. 08:39:08

1           A.    I'm not sure I understand the use of that           08:39:15  
2           particular combination of terms.

3           Q.    Earlier, you mentioned data from Facebook,  
4           and you said that the ideal information would be the  
5           number of messages containing URLs; is that correct?       08:39:30

6           A.    Not exactly.  The ideal information  
7           includes that information that you mentioned.

8           Q.    What else?

9           A.    There's -- well, for example, exactly the  
10          advertising revenue from U.S.-based members, because       08:39:54  
11          the only publicly-available information refers to  
12          U.S. and Canada.

13          Q.    And would that be advertising revenue  
14          attributed to the alleged intercepted messages that  
15          contained URLs?   08:40:14

16          A.    No.  It's advertising revenue in general.

17          Q.    Were you asked to develop a methodology to  
18          identify putative class members in this case?

19          MR. DIAMAND:  Objection.  To the extent that  
20          this addresses communications between your counsel       08:40:46  
21          and you, caution you not to answer.  If you can do  
22          that without doing that, go ahead.

23          THE WITNESS:  So, as, as an economic expert, I,  
24          that falls outside of my scope.

25          BY MR. CHORBA:   08:41:04

1 opinion in those terms. I can't, as an economist, I 08:43:04  
2 can't say if it should.

3 BY MR. CHORBA:

4 Q. So you are not offering an opinion on as  
5 to whether or not a class should be certified. 08:43:15

6 A. The matter of should is a legal question.  
7 What I'm doing in the report is, assuming it is  
8 certified, then it makes sense to analyze damages.

9 Q. Okay. So, your report is triggered and  
10 your opinion is triggered only if a class is 08:43:32  
11 certified.

12 MR. DIAMAND: Objection.

13 THE WITNESS: Again, that would be a legal  
14 opinion.

15 BY MR. CHORBA: 08:43:44

16 Q. All right. We will do this the longer  
17 way.

18 Are you offering an opinion on any of the  
19 Rule 23 elements, yes or no?

20 A. I don't even know what the Rule 23 is. 08:43:52

21 Q. All right, let's go through them.

22 Are you offering an opinion on  
23 commonality?

24 A. I'm not a legal expert; I'm an economics  
25 expert. That's not part of my scope. 08:44:00

1 A. No. 08:44:41

2 Q. Ascertainability?

3 A. No.

4 Q. Superiority?

5 A. No. 08:44:45

6 Q. Manageability?

7 A. No.

8 Q. If no class is certified, will you have  
9 any expert opinions in this case?

10 MR. DIAMAND: Objection. Calls for a legal 08:44:54  
11 conclusion.

12 THE WITNESS: I can have the opinions. I don't  
13 know if they'll be useful.

14 BY MR. CHORBA:

15 Q. Have you been asked to give opinions if no 08:45:01  
16 class is certified in this case? Yes or no.

17 MR. DIAMAND: Objection. To the extent that  
18 this, again, goes into what I didn't, or with  
19 counsel, didn't ask you to do, I'd caution you not  
20 to answer. 08:45:13

21 THE WITNESS: Right. So, I can't tell you if,  
22 if I was asked or not.

23 BY MR. CHORBA:

24 Q. Do you know the answer whether or not your  
25 opinions will be used if a class is certified? 08:45:27

1 way in which there would not have been a benefit to 08:57:38  
2 Facebook.

3 Q. And what, based on your understanding of  
4 the allegations in the complaint, and your  
5 assumption that those allegations are true, what was 08:57:48  
6 the benefit to Facebook, as you understand it?

7 A. Well, the accumulation of the information  
8 gleaned from the messages, basically, the edges  
9 between members and the marketers and entities  
10 identified by the URLs, is accessible through, as 08:58:12  
11 part of the social graph, it's accessible to  
12 Facebook in developing the targeted advertising  
13 services that, that generate this revenue.

14 Q. Thank you. That's helpful.  
15 Let's assume that the information is 08:58:35  
16 accessible to Facebook, as the provider of the  
17 service, so, information from messages is  
18 accessible.

19 A. Uh-huh.

20 Q. I'm asking you this as a hypothetical. 08:58:44  
21 It's available, but it's not used for targeted  
22 advertising.

23 Would that impact your opinions at all?

24 MR. DIAMAND: Objection. Hypothetical.

25 THE WITNESS: That would be a technical 08:58:58



1 Q. Does your opinion that there were, that 09:01:27  
2 there's a methodology to determine damages hinge on  
3 whether or not the information resulted in a revenue  
4 generating activity for Facebook?

5 MR. DIAMAND: Objection. 09:01:37

6 THE WITNESS: So, my methodology determines the  
7 benefit to Facebook from a specific action, and  
8 that's, that's what it refers to, the alleged  
9 action.

10 BY MR. CHORBA: 09:02:00

11 Q. Why doesn't it examine, your methodology  
12 examine, instead of examining benefit to Facebook,  
13 why doesn't it examine detriment to the putative  
14 class?

15 MR. DIAMAND: Objection. Calls for a legal 09:02:12  
16 conclusion.

17 THE WITNESS: So, my report and methodology  
18 that I developed was asked to analyze the benefits  
19 to Facebook, so that's, so, it doesn't calculate the  
20 detriment to the class members, or the potential 09:02:31  
21 class members, because it wasn't meant to.

22 BY MR. CHORBA:

23 Q. So, you have not developed a methodology  
24 to calculate damages to putative class members.

25 MR. DIAMAND: Objection. 09:02:49

1 THE WITNESS: That, that was not my task, no. 09:02:50

2 BY MR. CHORBA:

3 Q. If you can turn to paragraph 7, I'm going  
4 to bounce back a little bit, and I'll show you other  
5 documents today, but let's keep this one handy. 09:03:04

6 This is Exhibit 1 for a reason. And, if you look at  
7 paragraph 7, Mr. Torres, and it carries over from  
8 pages 2 to 3, you state there in your introduction  
9 assignment and summary of conclusions, under that  
10 heading, you say, the plaintiffs' consolidated 09:03:23  
11 amended class action complaint, the CAC, alleges  
12 that Facebook utilizes information surreptitiously  
13 gathered from purportedly private correspondence  
14 sent between Facebook users and uses that  
15 information in a number of ways, including, and then 09:03:40  
16 it goes on, A, B, C.

17 Did I read that correctly?

18 A. Yes.

19 Q. And you assumed, again, this is a place  
20 where you assume the specific allegations in the 09:03:50  
21 consolidated amended complaint were true; is that  
22 correct?

23 A. Yes.

24 Q. If we go to A, so, if we flip to page 3,  
25 and, again, this is one of the uses in the complaint 09:04:06

1 report. If in the future no class is certified, I 09:52:15  
2 don't know what happens. The future is unknown to  
3 me.

4 BY MR. CHORBA:

5 Q. You'd have to conduct a fresh analysis at 09:52:23  
6 that point, is that what I'm hearing?

7 A. I don't know.

8 MR. DIAMAND: Objection.

9 THE WITNESS: I don't know what I would do.

10 BY MR. CHORBA: 09:52:51

11 Q. Have you ever used Facebook?

12 A. Yes.

13 Q. Are you currently a member of Facebook?

14 A. Yes.

15 Q. How long have you had a Facebook account? 09:53:03

16 A. I opened my account around 2009.

17 Q. And has it been active since then?

18 A. Well, I checked yesterday, it was still  
19 active, so it hadn't been cut off.

20 Q. You never, you never intentionally closed 09:53:25  
21 your account?

22 A. No.

23 Q. That was good.

24 Have you ever sent a Facebook message?

25 A. I think I have. 09:53:46

1 Q. Do you recall whether or not you ever sent 09:53:48  
2 a Facebook message with a URL in it?

3 A. No, I don't think so.

4 Q. So I assume, then, you never sent a  
5 message with a URL attachment? 09:54:01

6 MR. DIAMAND: Objection.

7 THE WITNESS: No. So, one precludes the other.

8 BY MR. CHORBA:

9 Q. Do you remember if you sent more than one  
10 Facebook message containing a URL? 09:54:15

11 A. As I said, I haven't sent a message  
12 containing a URL.

13 Q. Oh, I'm sorry. I misunderstood you.  
14 Is it possible you did, and you just  
15 forgot, or are you pretty confident you didn't? 09:54:27

16 A. I'm pretty confident I didn't.

17 Q. Approximately how many Facebook messages  
18 in total have you sent in your life?

19 A. I think it's in the order of two or three.

20 Q. Have you ever received a Facebook message? 09:54:45

21 A. Yes.

22 Q. Do you recall approximately how many  
23 you've received?

24 A. One.

25 Q. One. Did that Facebook message contain a 09:54:57

1 Which records are you referencing there? 10:24:47

2 A. So, I would expect class membership to be  
3 identifiable, based on Facebook's records as to what  
4 messages were sent, what messages could have been  
5 intercepted or not. That's where the class 10:25:03  
6 membership identification would belong.

7 Q. And are you offering an opinion in this  
8 case that class membership is identifiable and  
9 ascertainable based upon Facebook's records?

10 MR. DIAMAND: Objection. 10:25:19

11 THE WITNESS: To the extent that's a technical  
12 issue as to what records to look at to identify the  
13 membership in the class, that's not, that's outside  
14 of my scope.

15 BY MR. CHORBA: 10:25:33

16 Q. So, are you assuming that class membership  
17 is identifiable and ascertainable based upon  
18 Facebook records, or are you opining that?

19 A. I'm considering that that is something  
20 that will happen when the class is certified, if it 10:25:46  
21 is.

22 Q. And so it would occur after certification?

23 MR. DIAMAND: Objection.

24 THE WITNESS: I would expect that formal class  
25 membership would be determined once the definition 10:26:00

1 advertising services to marketers. 10:31:52

2 Q. What do you mean by, marketers?

3 A. In this report, I mean by marketers the  
4 same thing that Facebook defines as marketers, which  
5 are their clients, the people responsible for 10:32:10  
6 advertising, companies, entities, organizations, and  
7 whether they are direct entities or agencies in the  
8 advertising market.

9 Q. Do you have any specific examples that you  
10 can give? 10:32:31

11 A. Well, other than an ad agency or a  
12 specific company, like Coca Cola.

13 Q. And why did you use this term, this  
14 defined term, Marketers, with a capital M?

15 A. Because it's not any marketer. It's 10:32:53  
16 advertisers in Facebook, so it's a shorthand  
17 notation for that.

18 Q. Would you include, it says here, third  
19 party websites, parentheses, marketers.

20 Is there, are there other, I guess, 10:33:10  
21 entities or individuals that fall under the term  
22 marketers that aren't third party websites?

23 A. The limitation is the other way around.  
24 There are other third party websites that are not  
25 marketers in the sense of Facebook. 10:33:26

1 private messages. 10:43:45

2 Q. And do you lay out these calculations  
3 anywhere in your report?

4 A. Well, in the body of the report, in  
5 section 4, I lay out the methodology and the 10:43:57  
6 beginnings of the calculations that can be done with  
7 publicly-available information. I haven't finalized  
8 the calculations, because I haven't received the  
9 precise data from Facebook.

10 Q. And you said, in section 4 of your report. 10:44:23  
11 Would that be both sections A and B, or is  
12 it one specific section?

13 A. I would say it's probably both.

14 Q. And you said you haven't finalized the  
15 calculations. 10:44:36

16 What do you mean? You haven't actually  
17 calculated the amount in the aggregate, or for a  
18 specific person?

19 MR. DIAMAND: Objection. Vague.

20 THE WITNESS: Right. So, I have not calculated 10:44:47  
21 a final number, and definitely not a final number  
22 per person. The information has not been provided,  
23 and I haven't made any estimates or assumptions, in  
24 addition, to try to simulate or substitute for that  
25 information. 10:45:12

1 BY MR. CHORBA: 10:45:19

2 Q. Does your methodology account for  
3 potential benefits to class members from the  
4 challenged practices?

5 A. No. I mean, in calculating the benefits 10:45:36  
6 to Facebook, I don't consider benefits to somebody  
7 else.

8 Q. And both methodologies in section 4 A and  
9 4 B measure benefit to Facebook?

10 A. Correct. 10:45:49

11 Q. So at no point, well, let me ask you, have  
12 you attempted to calculate detriment to the putative  
13 class?

14 MR. DIAMAND: Objection.

15 THE WITNESS: As I said, that, that's not part 10:46:09  
16 of my scope. My scope is to analyze the benefits to  
17 Facebook.

18 BY MR. CHORBA:

19 Q. Have you been asked to prepare a rebuttal  
20 opinion to any report prepared by Facebook? 10:46:29

21 A. No.

22 Q. Circling back, just in front of you,  
23 paragraph 11 B, is your definition of marketers  
24 limited to third party websites that have a like  
25 button social plugin installed? 10:46:50



1 in the disclosures. 10:59:54

2 Yahoo does a bad job about it, because  
3 they really don't have enough information about the  
4 person, so it's not well-targeted. I don't know  
5 that there is litigation involving any of those two. 11:00:11

6 Q. And -- okay. If Twitter were to engage  
7 practices, in practices similar to those alleged in  
8 this case, would you change your practices with  
9 using Twitter?

10 A. My personal view is that you do have to 11:00:35  
11 read what the privacy policy is, and you have to  
12 know to expect that if you are not paying for a  
13 product, you are the product.

14 Q. If we look, I'm going to flip back to the  
15 report, paragraph 18. It's a lengthy paragraph, but 11:01:13  
16 I'd like to focus on the last two sentences, so it  
17 carries over from pages 7 to 8. Let me know when  
18 you are there. I will just read it, to focus you.  
19 It's on line 18, on page 7. Facebook's competitive  
20 advantage stems from the power of leveraging the 11:01:36  
21 deep targeted knowledge available from its unique  
22 access to an increasingly complete and computerized  
23 social network, including by tracking users beyond  
24 the Facebook.com website. Consequently, the two  
25 activities providing online social networking 11:01:54

1 Q. But if the claims are not correct, would 11:36:47  
2 you have any basis for stating that either Exhibit 4  
3 or Exhibit 3 have any information gleaned from  
4 messages on Facebook?

5 MR. DIAMAND: Objection. 11:37:01

6 THE WITNESS: Again, these documents are  
7 marketing documents from Facebook. This is designed  
8 to sell the product and to actually develop the  
9 product. This is designed to market Facebook  
10 advertising as a medium to other marketers who are 11:37:16  
11 looking into online advertising.

12 What you are asking is about the technical  
13 information that would allow somebody to make a  
14 technical determination of whether that specific  
15 information that is gleaned from the private 11:37:32  
16 messages eventually makes its way to one or more  
17 advertising campaigns.

18 BY MR. CHORBA:

19 Q. And what kind of technical information  
20 would you need to make that determination? 11:37:42

21 MR. DIAMAND: Objection.

22 THE WITNESS: I'm not looking for technical  
23 data to do a technical analysis. What I would need  
24 is a technical expert to determine that, in fact, at  
25 least in some way, the information gleaned from the 11:37:57

1 messages is usable to Facebook. 11:38:02

2 BY MR. CHORBA:

3 Q. You stated earlier that the technical  
4 information has not been produced.

5 A. To my knowledge. 11:38:10

6 Q. Do you know whether it's been produced,  
7 and you just haven't seen it, or it's your  
8 understanding it hasn't been produced at all?

9 MR. DIAMAND: Objection.

10 THE WITNESS: My understanding is, it hasn't 11:38:19  
11 been produced beyond maybe what pertains to the  
12 named plaintiffs, but, information about the class,  
13 I don't think it has been produced.

14 BY MR. CHORBA:

15 Q. What about source code? Are you aware if 11:38:33  
16 source code has been produced in this case --

17 A. I'm not aware.

18 Q. -- more than 10 million lines of source  
19 code?

20 A. I'm not aware of that, because it's not my 11:38:40  
21 task to analyze the source code.

22 Q. So, do you have any factual basis to state  
23 that either, that any of the targeted options in  
24 Exhibit 3 or Exhibit 4 contain information gleaned  
25 from Facebook messages? 11:38:58

1 basis to state that objects and associations are 12:53:33  
2 created from Facebook messages.

3 A. Again, the factual basis would be  
4 technical data, technical information that is not in  
5 my scope to analyze. From an economic perspective, 12:53:45  
6 if it's information that is made part of Facebook's  
7 resources, it's information that is available to  
8 use.

9 Q. And if Facebook does not create objects  
10 and associations based on URLs in Facebook messages, 12:54:04  
11 would that impact your damages methodology?

12 A. Well, to the extent that that hypothetical  
13 situation would indicate that there is no, or that a  
14 particular course of action or cause of a litigation  
15 might not be sustained, my report would not be 12:54:30  
16 relevant to that particular hypothetical.

17 Q. Particular hypothetical, again, if it were  
18 not true, you are saying your report wouldn't come  
19 in in that instance?

20 MR. DIAMAND: Objection. Calls for a legal 12:54:50  
21 conclusion.

22 THE WITNESS: Right. So, in, under those  
23 circumstances that are in your hypothetical, I don't  
24 know, I can't know if my report would be either  
25 appropriate, or used, or anything else. 12:55:04

1 is, Facebook in integration is more effective than 01:06:17  
2 it really is.

3 Q. Why does it make it appear that the  
4 integration is more effective than it is?

5 A. Because the like count is increasing, 01:06:31  
6 despite the fact that the person is not clicking on  
7 the like button on the third party website.

8 Q. And does that opinion depend on how much  
9 the like counter is increasing, based on messages?

10 MR. DIAMAND: Objection. 01:06:46

11 THE WITNESS: Not necessarily.

12 BY MR. CHORBA:

13 Q. Why not?

14 A. Because it depends, it would depend on  
15 exactly what the proportion of the enhancement is. 01:06:55  
16 During some, at some point, according to some of the  
17 experiments reported on The Wall Street Journal, the  
18 like count was increasing twice, or, or, in a  
19 two-to-one ratio, to including the URLs in the  
20 messages. 01:07:20

21 So, if that happens to a website, a third  
22 party website that has like counts organic like  
23 counts of, in the order of one or two, then it's a  
24 100 percent increase.

25 If it happens to Coca Cola, and they 01:07:34

1 already have 500,000 likes on their third party 01:07:36  
2 website, that is a miniscule less than a 1 percent,  
3 so, they won't be as influenced or as impressed by  
4 the increase.

5 Q. And if you look -- thank you. 01:07:54

6 If you look at 34 B, it states, benefits  
7 from artificially increasing the like count on third  
8 party websites using Facebook's social plugins.

9 What did you mean by, artificially  
10 increasing the like count on third party websites? 01:08:10

11 A. Well, because the idea that the, or the  
12 description of the counter next to the like button  
13 on the third party website is that it represents the  
14 number of times people have clicked on that button.

15 And it was being increased not because 01:08:23  
16 people were doing that action of clicking there,  
17 they were referencing the URL in a private message.

18 Q. What if someone sent a URL in a Facebook  
19 message, knowing and intending that the like count  
20 would be increased? Would you consider that to be 01:08:43  
21 an artificial increase of the like count?

22 A. Well, that could stand as a description of  
23 what the experiments reported in The Wall Street  
24 Journal article were, that they were noticing that,  
25 and the artificial nature of it is that you are 01:09:02

1 the like count. 01:16:16

2 A. Uh-huh.

3 Q. If somebody is paid to click on the like  
4 button on a third party website, would you consider  
5 that to be an artificial increase of the like count? 01:16:23

6 A. In that situation, an artificial increase  
7 is something that is not a click by somebody who's  
8 interested in the brand.

9 Q. How about if someone, think of another  
10 example, someone is interested in clicking on that 01:16:40

11 brand, but not maybe in the way of developing an  
12 affinity or support of that brand. So, let's use an  
13 example of a contest. A local hairdresser offers a  
14 contest. If you like my page, you get a free  
15 haircut this week, and 100 people enter, only one 01:16:57

16 person gets the, gets the, and they enter by  
17 clicking on the like button.

18 A. Uh-huh.

19 Q. Would those be artificial increases in the  
20 like count? 01:17:07

21 MR. DIAMAND: Objection. Hypothetical.

22 THE WITNESS: In that hypothetical situation, I  
23 think you would consider, or, economically, you are  
24 still considering that it's artificial, that it's a  
25 misuse of the original intent of the likes, of the 01:17:19

1 like count. 01:17:23

2 I think that's what's behind Facebook changes  
3 to just using like as the operating verb, and trying  
4 to make it more nuanced, going forward.

5 BY MR. CHORBA: 01:17:37

6 Q. What are you referring to there? I'm  
7 sorry, I lost you. When you said it's --

8 A. Well, lately, Facebook has hinted at  
9 introducing other alternatives for people to express  
10 their response or reaction to posts and things like 01:17:49  
11 that. I mean, it's always been a curious thing that  
12 if somebody posts a death or reports a death in the  
13 family, that the summary way to show your, your  
14 awareness of the message, or anything else, is to  
15 click on like. 01:18:14

16 Q. I follow you, but, for now, we're just  
17 dealing with this case, and it's the like, and I'm  
18 trying to understand.

19 So, in that contest hypothetical, you  
20 would view that as an artificial like, correct, from 01:18:23  
21 an economics perspective?

22 A. Within the context of that hypothetical,  
23 yes.

24 Q. And, just to be clear, if the web page had  
25 a like button, but no counter next to it -- 01:18:37



1 Q. Mr. Torres, the reporter's just handed you 01:27:14  
2 a document that bears the title, we've marked it as  
3 Exhibit 5, it bears the title Facebook Q2 2015  
4 Results.

5 Can you please take a look at that. 01:27:23

6 A. Yes.

7 Q. And is this, have you seen this document  
8 before?

9 A. Yes.

10 Q. Is this the document upon which you relied 01:27:31  
11 for purposes of determining that \$1.593 billion  
12 figure?

13 A. Yes.

14 Q. Was there any other material you relied  
15 upon? 01:27:41

16 A. For that number, no.

17 Q. Precise. I appreciate it. And, more  
18 specifically, as stated in footnote 66, you took the  
19 numbers from slide 9 of this Exhibit 5 --

20 A. Uh-huh. 01:27:54

21 Q. -- is that right?

22 A. Yes.

23 Q. If you can turn to slide 9. Can you just  
24 briefly walk me through how you came up with that  
25 number. 01:28:03

1           A.    So, the four numbers in the dark portion           01:28:05  
2           of the columns of the bars, those are the revenue  
3           numbers for the U.S. and Canada region.

4           Q.    So that's for Q3 2014 through Q2 2015,  
5           those four columns; is that right?                           01:28:28

6           A.    Yes.

7           Q.    So, the numbers, let's just read them off,  
8           so we're clear: 1514, 1864, 1739, and 1967?

9           A.    Yes.

10          Q.    And, what, did you add those together?           01:28:41

11          A.    Yes, and then average them.

12          Q.    And how did you average them?

13          A.    Divide by four.

14          Q.    And that's how you came up with the  
15          \$1.593 billion figure?                                       01:28:53

16          A.    No. Like it says there, I did another  
17          adjustment to, in an attempt to exclude the data  
18          from Canada, so I applied 89.96 percent to take into  
19          account of the ratio of Canadian population to U.S.  
20          population.   01:29:12

21          Q.    Thank you. And what was the ratio that  
22          you used there, what was the data? It was Census  
23          data?

24          A.    Yes.

25          Q.    Is it commonly accepted economic practice       01:29:25

1 to rely on Census data to back out Canadian revenue 01:29:27  
2 versus U.S. revenue?

3 A. Well, in the absence of the right  
4 information, because Facebook is not reporting just  
5 the U.S. information, so, in the absence of that 01:29:40  
6 information, which I believe was asked for, one way  
7 to estimate it is to assume that the penetration  
8 rate is the same in the U.S. and Canada, and that  
9 also means that the ratio population is the same as  
10 the ratio of users. 01:30:03

11 Q. But you said that's one way.  
12 Is that the best way, in your experience,  
13 in lieu of the breakdown from --

14 A. That's a, that's a, I believe, a  
15 reasonable approximation, because one of the 01:30:21  
16 underlying reasons that companies oftentimes  
17 conflate the U.S. and Canada is that the populations  
18 are relatively similar for these purposes, so they  
19 have the same penetration, they have the same  
20 attitudes. For the most part, they share a 01:30:44  
21 language, and --

22 Q. Have you relied on -- sorry.

23 A. -- it's a small percentage.

24 Q. I didn't mean to interrupt you, sir.

25 Have you relied on Census data before to 01:30:55

1 make this type of breakdown in giving an expert 01:30:57  
2 opinion or making a valuation?

3 A. Yes.

4 Q. And then you deducted expenses of  
5 40.75 percent; is that correct? 01:31:08

6 A. Yes.

7 Q. Why did you deduct expenses of  
8 40.75 percent?

9 A. Because I want to determine profits, not  
10 total revenue. 01:31:18

11 Q. Do you know the actual expenses?

12 A. The actual expenses are not disclosed by  
13 user geography.

14 Q. Is it possible that this understates  
15 Facebook's expenses? 01:31:29

16 A. Because it's an average for the overall  
17 company, it's just as likely to understate it as to  
18 overstate it.

19 Q. But it's possible it understates the  
20 expenses, correct? 01:31:42

21 A. A lot is possible.

22 Q. But it is possible?

23 A. Well, strictly speaking, there are going  
24 to be expenses that cannot be allocated to either  
25 one of the geographies, so, in the end, even if we 01:31:58

1 had full access to the information, an apportionment 01:32:07  
2 was going to be necessary.

3 Q. And on slide 9, you understand that slide  
4 9 concerns revenue by user geography, as noted at  
5 the top of the page, correct? 01:32:25

6 A. Correct.

7 Q. And do you understand that the term,  
8 revenue, for purposes of slide 9, includes more than  
9 just revenue generated by advertising?

10 A. Yes. Did -- 01:32:43

11 Q. Look at slide 8.

12 A. Yeah, so I probably, so, there may have  
13 been a mistake in the, in the page number, because I  
14 used most of these slides, but the idea is  
15 advertising revenue, which is on slide 10. 01:33:09

16 Q. So, you intended to use the figures in  
17 slide 10, rather than the figures in slide 9?

18 A. I think I, that's what I used in the  
19 calculations. I would have to double-check.

20 Q. Well, I will represent to you, we did the 01:33:31  
21 math, and the figures are based on slide 9. If you  
22 want to take a break and do the calculations again,  
23 they are based on slide 9, as cited in footnote 66.

24 So, is this a mistake in your report?

25 MR. DIAMAND: Just a minute. 01:33:48

1 THE WITNESS: Well, it's an error in the 01:33:49  
2 approximation.

3 BY MR. CHORBA:

4 Q. And that would be an error in the  
5 approximation on page 18, table 1? 01:33:52

6 A. Yes. It might have adjusted a little bit,  
7 because advertising revenue is 90-some percent of  
8 the total revenue, so the error, if any, is less  
9 than 10 percent.

10 Q. What if I told you the error was 01:34:10  
11 \$1.2 billion?

12 Is that a little bit, in your opinion?

13 A. That would be incorrect.

14 Q. Why?

15 A. I don't think there's a way that ad 01:34:20  
16 revenue, which, for example, just to take the actual  
17 numbers, in the second quarter of '15, advertising  
18 revenue from the U.S. and Canada is 1826, and total  
19 revenue is 1967.

20 Q. Well, help me understand -- 01:34:38

21 A. That's a difference of 100 million.

22 Q. Look on table 1.

23 Which figure there is populated by your  
24 error in relying on slide 9 instead of slide 10?

25 Which number is that? 01:34:50



1 the same number, once corrected, for the whole 01:36:08  
2 column, correct?

3 A. Yes.

4 Q. Okay. And then you'd multiple it by the  
5 discount factor, and you'd get the discounted value. 01:36:15

6 A. Right.

7 Q. But, if the annual profit number comes  
8 down 10 percent each year, the discounted value  
9 column is going to come down, as well, correct?

10 A. Right. So, the ratio in which it would 01:36:27  
11 come down would be in the ratio of, roughly, the  
12 difference is 125 million here, so, 125 in 1800.

13 Q. In one quarter.

14 A. Yes, but the ratio is, is, happens in all  
15 four quarters. 01:36:47

16 Q. Mr. Torres, didn't you add up four  
17 quarters, then divide by four, then multiply by  
18 89 percent?

19 A. That's an average, so that ratio, the  
20 ratio is the same across the four quarters, 01:36:56  
21 approximately the same, so that ratio is the ratio I  
22 would expect the numbers to come down.

23 Q. But what would you expect the total value  
24 of \$15 billion in --

25 A. I would have to -- 01:37:14



1 (The following portion was read: 01:37:14  
2 Q. But what would you expect the total  
3 value of \$15 billion -- )  
4 Q. -- in table 1, what would you expect that  
5 to come down to? 01:37:17  
6 A. I would have to revise the calculations to  
7 make a determination.  
8 Q. And I've done that.  
9 And would it surprise you that it's  
10 \$1.27 billion off? 01:37:24  
11 MR. DIAMAND: Objection.  
12 THE WITNESS: But it's not, you are not talking  
13 about 1.27 in the quarterly number; it's 1.27 in  
14 the --  
15 BY MR. CHORBA: 01:37:33  
16 Q. That's what I said, sir.  
17 A. -- in the capital amount.  
18 Q. In the total discounted value, total value  
19 at the end, where it's 15 million, that's  
20 1.27 million overstated, correct? 01:37:41  
21 A. So, the ratio is the same, 1/16th,  
22 approximately.  
23 Q. Do you think a \$1.27 billion calculation  
24 error is insignificant?  
25 A. It depends on its relation to the total, 01:37:54

1 so that's why I'm saying it's a 1 in 16 error. 01:37:57

2 Q. But it's still an error.

3 A. It's an error in the calculation, if what  
4 you are saying is correct, because --

5 Q. Well, is what I'm saying incorrect? 01:38:11

6 What's incorrect about it? We just went through  
7 slide 9 versus 10.

8 A. I didn't say it was incorrect. I said, if  
9 it is correct.

10 Q. Well, okay, Mr. Torres, which number is 01:38:21

11 correct? Is it, should the figures be based on  
12 slide 9, or slide 10?

13 A. The calculations should have been based on  
14 slide 10. I thought I had done it on the basis of  
15 slide 10. 01:38:36

16 MR. CHORBA: Do you want to take a break and  
17 look at, do the quick calculation to test? We've  
18 done it, but I need his testimony on what's right,  
19 so we can, let's take a break. I'm not using my  
20 allotted time for him to recalculate his table. 01:38:48

21 Shall we go off the record?

22 MR. DIAMAND: Okay.

23 THE VIDEOGRAPHER: It is 1:38. We are going  
24 off the record.

25 (Recess: 1:38 p.m. to 1:49 p.m.) 01:38:57

1 THE VIDEOGRAPHER: We are back on the record. 01:49:35  
2 It is 1:49.  
3 BY MR. CHORBA:  
4 Q. Mr. Torres, when we broke, we were looking  
5 at table 1, and I think you'd left to just 01:49:41  
6 double-check the calculations.  
7 Do you have any corrections to make to  
8 that table?  
9 A. Well, like I, I confirmed that the  
10 adjustment that would need to be made to the number 01:49:54  
11 derived on line 18 of paragraph 39 is a reduction in  
12 the order of 9.17 percent that affects the total  
13 value determined in table 1.  
14 Q. So --  
15 A. So it's within the order of magnitude that 01:50:14  
16 I thought.  
17 Q. Let's put aside the order of magnitude of  
18 the error. What is the correct number? It says on  
19 line 18, 3,776,000,000 per year.  
20 What's the correct number? 01:50:26  
21 A. Well, I didn't make a note. It's  
22 9.17 percent less than this.  
23 Q. What's the correct number in paragraph 39  
24 in your report?  
25 A. It's slightly less than this by 01:50:41

1 9.17 percent. 01:50:43

2 Q. You are not going to tell me what the  
3 number is?

4 A. I don't have the number at hand.

5 Q. What did you calculate when we left? What 01:50:47  
6 did you do?

7 A. I used the spreadsheet to calculate the  
8 number. I did the sum of the numbers that I should  
9 have used.

10 Q. Can you bring that spreadsheet in so we 01:50:57  
11 can get the correct numbers.

12 MR. DIAMAND: Hold on. I don't think we  
13 realized that what you were expecting was the  
14 corrected number for line, or line 18 --

15 MR. CHORBA: It is. Let's break and get it. 01:51:11

16 MR. DIAMAND: We will provide that. That was  
17 not what our understanding was. I'm sorry.

18 MR. CHORBA: Okay. Fair enough. That's fine.  
19 Let's break. I should have been clear. We want the  
20 corrected figures in the report. 01:51:17

21 MR. DIAMAND: Okay.

22 THE VIDEOGRAPHER: Okay. It's 1:51. We're  
23 going off the record.

24 MR. DIAMAND: Hold on.

25 MR. BATES: Just so we don't go off the record 01:51:26

1 again, I just want to make sure we get exactly what 01:51:28  
2 you want, so --

3 MR. CHORBA: Yeah. Mr. Bates --

4 MR. BATES: We're trying to --

5 MR. CHORBA: I understand. 01:51:36

6 MR. BATES: -- provide you with what you  
7 wanted --

8 MR. CHORBA: I understand.

9 MR. BATES: -- the last time around.

10 MR. CHORBA: So, paragraph, in paragraph 39 and 01:51:36  
11 in table 1 on page 18, the corrected figures.

12 MR. BATES: For every single -- okay.

13 MR. CHORBA: Yeah. I mean, I want the right  
14 numbers so I can ask him questions today and not  
15 bring him back again. 01:51:50

16 MR. BATES: Do you want like all the way  
17 through?

18 MR. CHORBA: Yes.

19 MR. BATES: Okay.

20 THE VIDEOGRAPHER: It's 1:51. We're going off 01:51:56  
21 the record.

22 (Recess: 1:51 p.m. to 2:05 p.m.)

23 THE VIDEOGRAPHER: We're back on the record.  
24 It's 2:05.

25 BY MR. CHORBA: 02:05:57

1 Q. Mr. Torres, when we broke, you were going 02:05:57  
2 to take another look at the figures cited in  
3 paragraph 39, footnote 66, and table 1.

4 Do you have corrections for us?

5 A. Yes. 02:06:06

6 Q. Can you give those to me, please.

7 A. Okay. So, starting in paragraph 39, at  
8 the end of line 13, the advertising revenue is in  
9 the order of 1,459,000,000 per quarter. And in  
10 footnote 66, at the end of the second line, the four 02:06:31  
11 quarters would be the four quarters between  
12 July 2014 through June 2015. The correct number is  
13 1,622,000,000.

14 Q. That's in place of the 1771?

15 A. 1771. Yes. And then in line 18, at the 02:06:52  
16 beginning of the line, the profit is 3,459,000,000  
17 per year.

18 MR. DIAMAND: Would you permit me to make one  
19 additional point, which is that there's a reference  
20 to slide 9 in footnote 66. 02:07:11

21 MR. CHORBA: Thank you, Nick.

22 MR. DIAMAND: Which would be, I think, now,  
23 slide 10.

24 MR. CHORBA: Thank you.

25 MR. DIAMAND: I apologize for the objection. 02:07:18

1 BY MR. CHORBA: 02:07:23

2 Q. So, those three corrections on page 15, is  
3 that all, Mr. Torres?

4 A. Yes. And then that feeds into the table  
5 1, where the annual profit numbers would be 02:07:32  
6 3,459,000,000, and the discounted values in that  
7 line, for the whole line, for the full column, would  
8 be 2915, 2457, 2070, 1745, 1470, 1239, 1044, and  
9 880, for a total of 13,820,000,000.

10 Q. Thank you. Was that everything? 02:08:18

11 A. Yes.

12 Q. Thank you for doing that. I appreciate  
13 it.

14 Is, you referenced earlier a spreadsheet.

15 Do you have a working sheet that has the 02:08:27  
16 calculations for table 1 that you then used to  
17 generate table 1?

18 A. Yes. I have a model set up in my  
19 software.

20 \*RQ MR. CHORBA: Would it be possible for us to get 02:08:46  
21 a copy of that, electronic copy of that model? And  
22 maybe I should direct this to you, Mr. Diamand, but  
23 we have, I'm slightly off, and I think it may be  
24 just rounding errors on our part. I'd like to just  
25 consult that with our expert, and look at the actual 02:09:00

1 formulas, just to make sure. 02:09:03

2 MR. DIAMAND: Okay, we can address that.

3 MR. CHORBA: Thank you.

4 BY MR. CHORBA:

5 Q. So, setting aside the mathematical error 02:09:16  
6 that we discussed, Mr. Torres, do you have any other  
7 concerns about the accuracy of the information  
8 provided in paragraph 39 on page 15?

9 A. Not concerns. These, because these are  
10 estimates, we're still waiting for the information 02:09:34  
11 that corresponds to U.S. advertising revenue. These  
12 are just my estimates of that number.

13 So, when we get it, we'll substitute it,  
14 and there won't be any question of these  
15 calculations. 02:09:49

16 Q. You said there's U.S. advertising revenue.  
17 What information are you waiting for?

18 A. The advertising revenue that reflects only  
19 the U.S.

20 Q. And it's your understanding that's been 02:10:03  
21 requested?

22 A. Yes.

23 Q. Are you assuming that all advertising  
24 revenue to Facebook is attributable to the social  
25 graph? 02:10:14



1 that determination, that determination would 02:13:08  
2 constitute a quantification of the potential overlap  
3 of the calculations, so, if there is information to  
4 determine that, by somebody else, I could make a  
5 count of that potential overlap. 02:13:24

6 BY MR. CHORBA:

7 Q. But in your report, as stated, you haven't  
8 developed a methodology to account for that overlap?

9 A. As the methodology states, I don't have  
10 that information available. 02:13:39

11 Q. What if an individual, the same individual  
12 sent the same URL in multiple Facebook messages?

13 Would each message be accounted for  
14 separately, under your damages methodology?

15 MR. DIAMAND: Objection. 02:13:58

16 THE WITNESS: The methodology depends, is  
17 structured in two stages. One is to determine  
18 eventually the value per link, and then I would  
19 incorporate the number of links captured that fall  
20 under the definition of a class. 02:14:20

21 So, it's a technical determination. I would  
22 take that number from the technical analysis.

23 BY MR. CHORBA:

24 Q. Turning back to paragraph 39, how did you  
25 determine that the average cost of revenue, 02:14:34

1 have you excluded expenses for research and 02:17:20  
2 development?

3 A. Yes. In some valuations, yes.

4 Q. But not in all of them?

5 A. No. It depends on what is being measured. 02:17:30  
6 In some valuations, the research and development is  
7 the only aspect it would take. In some, it's one  
8 you would exclude, so, it depends.

9 Q. And in, staying on slide 13 of Exhibit 5,  
10 why did you pick these four quarters of Q3 2014 02:17:46  
11 through Q2 2015?

12 A. Both in the revenue and the expenses, I  
13 used the last four quarters, so, the trailing 12  
14 months as of the latest information that I had  
15 available by the time I did the report. 02:18:02

16 Q. Are you assuming that costs do not change  
17 over time, or will not change over time?

18 A. No. The implicit assumption is that I'm  
19 using the cost structure that was prevalent on  
20 average in the last, in the trailing 12 months. 02:18:15

21 Q. If you were tasked with valuing the social  
22 graph of Myspace in 2007, would you have used a  
23 similar methodology as one that you've used here?

24 MR. DIAMAND: Objection.

25 THE WITNESS: Well, in that hypothetical 02:18:45

1 situation, I would have to, to perform a series of 02:18:46  
2 due diligence and preliminary analyses. I'm not  
3 sure that Myspace had the same revenue model, so I  
4 would have to reconsider the revenue model then,  
5 and, to see if that is sufficient. 02:19:06

6 BY MR. CHORBA:

7 Q. What about the discount factor? Would you  
8 have used the same methodology to come up with a  
9 discount factor?

10 A. Yes. The general methodology that I use 02:19:16  
11 for the discount factor is the same everywhere.  
12 This is the generally accepted way of determining  
13 that discount rate.

14 Q. In table 1 on page 18, are you assuming  
15 the social graph will generate the same annual 02:19:29  
16 profit every year?

17 A. Approximately, yes. The underlying  
18 assumption is that in valuing the asset, I'm not  
19 considering further growth of the asset. This is  
20 just the asset as it was in, at the end of the 02:19:52  
21 second quarter of 2015.

22 That asset doesn't go away. It's an  
23 asset, so it continues to generate revenue for, on  
24 average, an eight year remaining useful economic  
25 life. 02:20:12

1 Q. So at the end of paragraph 44, you say, 02:25:24  
2 therefore, the impact of additional information  
3 intercepted from private messages on Facebook's  
4 revenue flows directly to the bottom line,  
5 parentheses, profits. 02:25:34

6 What's the basis for that statement?

7 A. The definition of profits. Profits is,  
8 or, the incremental profits are the incremental  
9 revenue minus incremental costs. If incremental  
10 cost is zero, incremental profit is incremental 02:25:50  
11 revenue.

12 Q. And if incremental profits isn't zero,  
13 then there would be a change, correct?

14 A. Yes. If incremental costs are greater  
15 than zero, then the profits would be a little lower 02:26:01  
16 than revenue.

17 Q. Thank you. I will read paragraph 45.  
18 Again, I'll read it: With the relevant quantitative  
19 information, I would estimate the value of the  
20 enhancement to the social graph as commensurate with 02:26:16  
21 the ratio of, one, intercepted URLs in private  
22 messages during the class period, to two, number  
23 two, the total number of links on the social graph.

24 What is the relevant quantitative  
25 information that you require? 02:26:31



1 member sends the same number of messages on average 02:37:53  
2 per month, for purposes of this analysis?

3 A. No.

4 Q. Why not?

5 A. I didn't have to, because I didn't 02:38:01  
6 consider those, that's not part of the, the analysis  
7 in the report.

8 Q. Why not?

9 A. Because I don't have the information about  
10 what, how many messages each user sent, et cetera, 02:38:14  
11 how many fall into the definition of the class, and  
12 I'm going to wait to get that in order to, to use  
13 any information in that realm.

14 Q. Did you undertake any analysis of the  
15 number of messages that the named plaintiffs in this 02:38:32  
16 case have sent?

17 A. No.

18 Q. Have you ever seen those figures?

19 A. No.

20 MR. CHORBA: Let's mark the next one Exhibit 6. 02:38:43

21 (Exhibit 6 was marked for identification  
22 by the court reporter and is attached hereto.)

23 MR. CHORBA: And let's do 7, while we're at it.

24 (Exhibit 7 was marked for identification  
25 by the court reporter and is attached hereto.) 02:39:09

1 organizations that contemplated hundreds and, if not 03:32:04  
2 thousands, of advertising.

3 BY MR. CHORBA:

4 Q. Which ones?

5 A. So, for example, the Comdesk, Nielsen, and 03:32:11  
6 the study, in particular, that's behind table,  
7 table, table, table 3, from social code, that  
8 analysis considered 5 million ads placed over, by 50  
9 companies.

10 So I, I reference those kinds of studies 03:32:38  
11 that cover a broad spectrum of advertisers, not any  
12 one advertiser in particular.

13 Q. And, again, that's just one survey, but  
14 you didn't familiarize yourself with the practices  
15 of every marketer that advertises on Facebook. 03:32:57

16 MR. DIAMAND: Objection.

17 THE WITNESS: I would think that it's virtually  
18 impossible to familiarize yourself with the  
19 practices of every advertisers on Facebook.

20 BY MR. CHORBA: 03:33:09

21 Q. Agreed. Turning back to paragraph 62 in  
22 your report, we'll save some time if you just keep  
23 it open, because we're going to concentrate on that  
24 section.

25 And, again, you didn't perform any actual 03:33:26

1 THE WITNESS: Yes. 03:34:25

2 BY MR. CHORBA:

3 Q. Which case?

4 A. In the Fraley v. Facebook case.

5 Q. Did that report ultimately provide an 03:34:31  
6 estimated amount of damages to the putative class?

7 A. If I recall correctly, I may have an  
8 estimate, but I don't think I, I gave a definite  
9 number, because the -- I have an estimate based on  
10 broad averages based on one study that was done by 03:35:00  
11 Facebook.

12 Q. And do you have a broad estimate based on  
13 averages for damages in this case?

14 A. In this section of the methodology, no;  
15 that's why I'm using the literals Y and Z. 03:35:14

16 Q. And how about for your other portions of  
17 your methodology? Do you have a rough estimate of  
18 damages?

19 A. No. I have a rough estimate of part of  
20 the components of the methodology. I'm waiting for 03:35:28  
21 the full information about the messages that are  
22 subject to the class.

23 Q. And what is your rough estimate of the  
24 amount that you were able to calculate?

25 MR. DIAMAND: Objection. 03:35:43



1 THE WITNESS: So, I only calculated the, as an 03:35:45  
2 estimate, the value of the social graph as of the  
3 second quarter of 2015.

4 BY MR. CHORBA:

5 Q. And what is that value? 03:35:56

6 A. That's the value from table 2. Table 1.

7 Q. That's the one that we corrected earlier?

8 A. Yes.

9 Q. So, \$13 billion?

10 A. 13.8 billion, yes. 03:36:12

11 Q. And have you opined on how, if that's a  
12 component of the damages, how those will be  
13 allocated, apportioned to putative class members?

14 MR. DIAMAND: Objection.

15 THE WITNESS: Yes. I believe that is in the, 03:36:26  
16 in the report.

17 BY MR. CHORBA:

18 Q. Where are you pointing, sir?

19 A. To paragraph 60, on page 22, where it says  
20 that it's, it is my opinion that a proper 03:36:42  
21 attribution of damages among plaintiff class  
22 members, calculated as benefits derived by the  
23 defendant, should be based on the number of links,  
24 URLs intercepted.

25 Q. So, how would you apportion that, pursuant 03:36:55

1 to that statement, how would you apportion the 03:36:57  
2 \$15 billion, or I think it's now \$13 billion?

3 MR. DIAMAND: Objection.

4 THE WITNESS: Well, first, the 13 billion is  
5 not the amount of damages. That's the value of the 03:37:07  
6 social graph.

7 BY MR. CHORBA:

8 Q. What's the amount of damages, then?

9 MR. DIAMAND: Objection.

10 THE WITNESS: I didn't calculate it. 03:37:15

11 BY MR. CHORBA:

12 Q. How are you going to calculate it?

13 MR. DIAMAND: Objection. Asked and answered.

14 BY MR. CHORBA:

15 Q. How are you going to calculate it? 03:37:20

16 MR. DIAMAND: Also, objection.

17 THE WITNESS: Applying the methodologies set  
18 out in section 4 A.

19 BY MR. CHORBA:

20 Q. Are certain class members under your 03:37:33  
21 methodology going to get more than other putative  
22 class members?

23 A. I don't know for a fact. It is possible.

24 Q. Will certain class members get zero  
25 dollars, under your methodology? 03:37:48

1 THE WITNESS: Correct, so I don't have in front 03:40:46  
2 of me the information that I would need to make that  
3 determination. So, assuming complete information,  
4 that's my answer.

5 BY MR. CHORBA: 03:40:59

6 Q. So, again, I'm asking you to assume that  
7 there was no social plugin on this Craigslist  
8 website on July 11, 2012. If that's true, then  
9 there wouldn't be damages under section 4 B for that  
10 particular message, correct? There might be under 4 03:41:11  
11 A, but not under 4 B.

12 MR. DIAMAND: Objection.

13 THE WITNESS: So, in that hypothetical  
14 situation, if the information that has not been yet  
15 provided fits that construct, probably not. 03:41:25

16 BY MR. CHORBA:

17 Q. And the information that has not been  
18 provided would be whether or not that Craigslist  
19 website had a social plugin at the time of that  
20 message. 03:41:42

21 A. For this aspect, yes, that's what we would  
22 like to know.

23 Q. Thank you. Let's turn back, and, again,  
24 I'm in your report, I think we're on paragraph 62,  
25 where you have the X, excuse me, the Y and the Z 03:41:52

1 A. Yes. 03:45:57

2 Q. And what is that market?

3 A. I believe there are reports that marketers  
4 are able to acquire likes, or increases to their  
5 counts, for a fee. I see that advertised on 03:46:11  
6 Twitter, et cetera.

7 Q. And does, to the extent there is such a  
8 market, does the market value all likes the same  
9 way?

10 MR. DIAMAND: Objection. 03:46:28

11 THE WITNESS: The concept of the market value  
12 refers to everything in the market, depending on the  
13 definition of the market. So, in that sense, it's  
14 the same, but not all likes have the same value,  
15 depending on their use. 03:46:54

16 BY MR. CHORBA:

17 Q. And would the likes differ based on the  
18 third party website, for example, Coca Cola versus a  
19 personal blog?

20 MR. DIAMAND: Objection. 03:47:05

21 THE WITNESS: Yes. In principle, each like can  
22 be leveraged in different ways so it's valued  
23 differently. The point is, the benefit is to  
24 Facebook, ultimately.

25 BY MR. CHORBA: 03:47:21

1 Q. And it's your opinion that that benefit to 03:47:21  
2 Facebook is the same?

3 MR. DIAMAND: Objection.

4 THE WITNESS: No, that's not my opinion.

5 BY MR. CHORBA: 03:47:29

6 Q. What is your opinion?

7 A. That Facebook benefits from the aggregate.

8 Q. So the aggregate, even though if  
9 individual increased likes are valued differently,  
10 in the aggregate, it's benefiting from the 03:47:42  
11 collective total of all of those.

12 MR. DIAMAND: Objection.

13 THE WITNESS: Yes. That's, that's the type of  
14 economy that Facebook works in.

15 BY MR. CHORBA: 03:48:00

16 Q. If you look at paragraph 64 on the next  
17 page, in the middle of the page, or middle of that  
18 paragraph, and you can review the whole paragraph,  
19 but I want to direct your attention to like 11,  
20 where it states, while the cost is relatively 03:48:24

21 straightforward to ascertain, in the digital  
22 advertising environment, gains from advertising are  
23 susceptible to estimation in a variety of ways, such  
24 as by the number of visitors to a web page, the  
25 number of incoming links, the activity on social 03:48:39

1 overcompensated in that hypothetical? 03:57:18

2 MR. DIAMAND: Objection. Misstates prior  
3 testimony.

4 THE WITNESS: In that hypothetical situation,  
5 you are also assuming that the URLs were intercepted 03:57:28  
6 by Facebook during the time when they were

7 incrementing the likes, and the methodology is  
8 attributing, is not measuring the effect, the  
9 detriment, for example, to the class member, so it's  
10 allocating to class members as a whole the benefits 03:57:57  
11 to Facebook as a whole.

12 BY MR. CHORBA:

13 Q. I understand. But, once it's allocated --  
14 that's how you are measuring it -- but, then, once  
15 you get to the stage when you are allocating it to 03:58:08  
16 individual class members, if it is allocated to a  
17 class member who sent a message containing a URL,  
18 but there was no incrementation of the like count,  
19 would you agree that that would overcompensate that  
20 specific class member? 03:58:21

21 MR. DIAMAND: Objection.

22 BY MR. CHORBA:

23 Q. Yes or no?

24 A. No, it wouldn't, because it would be,  
25 actually, it would be exact, because Facebook had to 03:58:26

1 inflated like count; do you know that? 04:04:52

2 A. I don't understand the question.

3 Q. What is the value?

4 MR. DIAMAND: Objection.

5 THE WITNESS: The numeric value? 04:05:00

6 BY MR. CHORBA:

7 Q. Yeah, let's start there.

8 A. I don't know what the number is.

9 Q. What would you need to know that?

10 A. So, the information that I list here is 04:05:07

11 the, how many URLs were intercepted that had, that

12 eventually led to like counts being increased, and

13 the ratio of those increases to the total like

14 counters, and that applied to the value of the

15 advertising revenue perceived by Facebook. That's a 04:05:37

16 small portion.

17 That, divided by, so, that value divided

18 by the inflated like count, the total inflated like

19 count, gives the value of the average or the, of,

20 each, an average, in my sense there, is the same. 04:06:00

21 Q. How do you propose, or do you propose a

22 way to determine the number of URLs that you claim

23 were intercepted?

24 MR. DIAMAND: Objection.

25 THE WITNESS: No. That's a technical question 04:06:13

1 THE WITNESS: So, not here, but, typically, in 04:08:54  
2 statistical inference, a 5 percent error is  
3 customary and generally accepted.

4 BY MR. CHORBA:

5 Q. And if you are dealing with many billion 04:09:07  
6 number of messages, in the aggregate, not containing  
7 URLs that had like counts incremented, but I'm  
8 referring to table 2, what would a 5 percent error  
9 rate, in your estimation, translate into?

10 A. It wouldn't translate into a number that 04:09:25  
11 can be compared to the number of messages. The  
12 5 percent refers to something else, to the  
13 probability of making a mistake in the calculation  
14 of the average with respect to the population mean.

15 Q. So you said, a 5 percent error rate is 04:09:45  
16 customary and generally accepted.

17 Would the error rate be higher or lower  
18 when you are dealing with tens of billions of  
19 messages?

20 MR. DIAMAND: Objection. 04:09:56

21 THE WITNESS: Again, in a statistical analysis,  
22 the error rate refers to those two probabilities.  
23 It does not refer to multiplying it by the number of  
24 elements in the set.

25 BY MR. CHORBA: 04:10:08



1 Q. So, are you able to say the bare minimum? 04:10:08

2 Well, let me ask you, based on the  
3 messages that are contained in Exhibits 6 and 7, are  
4 you able to come up with an estimate?

5 MR. DIAMAND: Objection. 04:10:19

6 THE WITNESS: An estimate of what?

7 BY MR. CHORBA:

8 Q. An estimate of the number of intercepted  
9 URLs?

10 A. I don't understand the question. 04:10:26

11 Based on, based on what?

12 Q. Based on the messages that are summarized  
13 in Exhibits 6 and 7 in the chart.

14 MR. DIAMAND: Objection.

15 THE WITNESS: Well, I'm taking your 04:10:38

16 representation that this is about 800 and some, and  
17 this is, let's say, under --

18 BY MR. CHORBA:

19 Q. Seventeen.

20 A. -- under, it's under 20, so, about, let's 04:10:49

21 round it up, 900 instances, right?

22 The reference point I would take or the  
23 comparison that I would do is that a 5 percent error  
24 rate for a sampling of the U.S. population requires  
25 a sample size in the thousands of people. 04:11:15

1                   So, a poll, to be statistically                   04:11:18  
2                   significant to represent the views of 300 million  
3                   people, would need to take a look at 5 or 6,000. It  
4                   depends on the estimates of the variance that's  
5                   relevant for the variable being measured.                   04:11:35

6                   So, because Facebook is covering such a  
7                   large proportion of the population in the U.S., I  
8                   would expect that a proper determination of the  
9                   sampling techniques that would be applicable if  
10                  Facebook doesn't come up with the actual                   04:11:54  
11                  information, would be in the order of the thousands  
12                  of people, as, as a representative sample that would  
13                  give, its averages would give a statistically sound  
14                  representation of the population mean.

15                  Q.    And so it wouldn't be a number of                   04:12:14  
16                  messages; it would be a number of people who use  
17                  Facebook?

18                  MR. DIAMAND:  Objection.

19                  THE WITNESS:  Well, I would think that it would  
20                  depend more on the number of members, because the                   04:12:28  
21                  number of messages per member can vary, but it might  
22                  be necessary to consider the joint distribution of  
23                  messages and members, as well.

24                  BY MR. CHORBA:

25                  Q.    Turning to paragraph 73 --                   04:12:41

1 this benefit may have been converted to advertising 04:25:07  
2 revenue benefiting Facebook.

3 Do you know what the fraction of the  
4 benefit is?

5 A. Not as of this date, no. 04:25:18

6 Q. And does your report assume that  
7 advertisers would have passed 100 percent of their  
8 cost savings on to Facebook?

9 A. Is that my assumption, that they would --

10 Q. Yes. Is that your assumption? 04:25:37

11 A. No.

12 Q. What is your assumption, then?

13 A. That a fraction would have been converted.

14 Q. Which fraction?

15 MR. DIAMAND: Objection. 04:25:49

16 THE WITNESS: I don't have the information to  
17 determine that fraction.

18 BY MR. CHORBA:

19 Q. Can you tell me if it's more than  
20 50 percent? 04:25:55

21 A. I can't tell you, because I don't have the  
22 information to determine it.

23 Q. So you can't give me any estimate on the  
24 range of zero percent to 100 percent?

25 A. No. Without information, all I can tell 04:26:05

1 spending, because there is an overlap in the time 04:29:13  
2 periods, and that is basically what creates that  
3 overlap that has to be accounted for.

4 So, if it were to be the case that benefits  
5 from one perspective are the same as the benefits 04:29:28  
6 from the other perspective, then, yeah, the overlap  
7 with, would mean that you wouldn't add them  
8 together. You would just have one.

9 BY MR. CHORBA:

10 Q. And what if the benefits were greater than 04:29:42  
11 the calculated effect from the incremental  
12 advertising revenue? That would result in a  
13 negative number?

14 A. In, it would be a very strange  
15 hypothetical situation where that would even be the 04:30:06  
16 case, because of the length of the time period.

17 Q. But, if it were the case, it would be a  
18 negative number?

19 A. So, whatever the methodology determines  
20 for those two numbers would have to do the analysis 04:30:16  
21 of the overlap, and, if the overlap overwhelms the  
22 situation, then only one of them would be  
23 appropriate.

24 Q. So, you would never have a negative  
25 number; you'd just pick the higher one? 04:30:30

1 A. No. The net. I would always pick the net 04:30:32  
2 damages.

3 Q. But how would the net, if you are saying  
4 that you would deduct the amounts, the analysis in  
5 this section shall be deducted from the benefits 04:30:43  
6 calculated under the methods described in the  
7 previous section, okay, I'm saying, if the benefits  
8 were greater than the calculated --

9 A. Now, what this means is that --

10 MR. DIAMAND: Objection. 04:30:59

11 THE WITNESS: -- what this means is that the  
12 overlap has to be taken into account. That overlap  
13 can be calculated, when everything is said and done,  
14 and that overlap means that only one of the two  
15 calculations will prevail. 04:31:12

16 BY MR. CHORBA:

17 Q. One of the two, meaning A or B?

18 A. So, if you add A and B, you would then  
19 have to take away the overlap.

20 Q. I see. Okay. So, that calculation is 04:31:21  
21 just attempting to deduct that overlap for the time  
22 period.

23 A. Yes. It would avoid double-counting.

24 Q. Does your damages methodology account for  
25 the possibility that the benefit of the challenged 04:31:37

1 I, the undersigned, a Certified Shorthand  
2 Reporter of the State of California, do hereby  
3 certify:


4 That the foregoing proceedings were taken  
5 before me at the time and place herein set forth;  
6 that any witnesses in the foregoing proceedings,  
7 prior to testifying, were duly sworn; that a record  
8 of the proceedings was made by me using machine  
9 shorthand which was thereafter transcribed under my  
10 direction; that the foregoing transcript is a true  
11 record of the testimony given.

12 Further, that if the foregoing pertains to the  
13 original transcript of a deposition in a Federal  
14 Case, before completion of the proceedings, review  
15 of the transcript [X] was [ ] was not requested.

16 I further certify I am neither financially  
17 interested in the action nor a relative or employee  
18 of any attorney or party to this action.

19 IN WITNESS WHEREOF, I have this date subscribed  
20 my name.

21 Dated: 1/5/2016

22  
23 

24 CHRIS TE SELLE

25 CSR No. 10836