

Exhibit 2013  
Zynga, Inc. v. Personalized Media Communications, LLC  
Case IPR2013-00171 (SCM)

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZYNGA, INC.,

Petitioner,

vs.

No. IPR2013-00171

IPR2013-00156

PERSONALIZED MEDIA

COMMUNICATIONS, LLC,

The Patent Owner.

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Deposition of CHARLES J. NEWHAUSER, PH.D., VOLUME 3,  
taken at the offices of Goodwin Procter LLP, 135  
Commonwealth Drive, Menlo Park, California,  
commencing at 9:23 A.M., on Tuesday, October 8,  
2013, before Leslie Rockwood, RPR, CSR No. 3462.

Job No. 1740614

Pages 1 - 162

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I N D E X

TUESDAY, OCTOBER 8, 2013

WITNESS

EXAMINATION

CHARLES J. NEWHAUSER, PH.D., VOLUME 3

BY MR. SCHREINER

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QUESTIONS WITNESS INSTRUCTED NOT TO ANSWER:

(NONE)

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DEPOSITION EXHIBITS

CHARLES J. NEWHAUSER, PH.D., VOLUME 3

ZYNGA EXHIBITS

NUMBER	DESCRIPTION	IDENTIFIED
Exhibit 1001C	US Patent No. US 7,734,251 B1, 6/8/10	6
Exhibit 1009A	US Patent No. US 4,204,206 5/20/80	6
Exhibit 1007C	US Patent No. US 4,339,798 7/13/82	6
Exhibit 1008C	US Patent No. US 3,668,312 6/6/72	6
Exhibit 1009C	US Patent No. US 4,107,735 8/15/78	6
Exhibit 1011C	USPTO Declaration of Charles J. Neuhauser, Ph.D., 2/27/13	6
Exhibit 1005C	USPTO Harvey Application No. 08,470,571, 6/6/95	7
Exhibit 1006C	USPTO Harvey Application No. 08,470,571, 6/6/95, Discussion	7

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PMC EXHIBITS

NUMBER	DESCRIPTION	IDENTIFIED
Exhibit 2001C	Overview of Patent Owner Response to Petition and Decision for Inter Partes Review of US Patent No. 7,734,251 (DATA-87) (IPR2013-00171)	6
Exhibit 2002C	Petition for Inter Partes Review of US Patent No. 7,734,251	105
Exhibit 2003C	Preliminary Patent Owner Response to Petition for Inter Partes Review, IPR2013-00171, US Patent No. 7,734,251	105
Exhibit 2004C	Decision, IPR2013-00171, Patent 7,734,251 B1, 7/25/13	105
Exhibit 2005C	Diagram	73
Exhibit 2006C	Diagram	94
Exhibit 2007C	Diagram	129

1 Tuesday, October 8, 2013; Menlo Park, California

2 9:23 A.M.

3 --oOo--

4 (Zynga Exhibit 1001C, US Patent No. US 7,734,251  
5 B1, 6/8/10, marked for identification.)

6 (PMC Exhibit 2001C, Overview of Patent Owner  
7 Response to Petition and Decision for Inter  
8 Partes Review of US Patent No. 7,734,251

9 (DATA-87)(IPR2013-00171), marked for  
10 identification.)

11 (Zynga Exhibit 1009A, US Patent No. US 4,204,206  
12 5/20/80, marked for identification.)

13 (Zynga Exhibit 1007C, US Patent No. US 4,339,798  
14 7/13/82, marked for identification.)

15 (Zynga Exhibit 1008C, US Patent No. US 3,668,312  
16 6/6/72, marked for identification.)

17 (Zynga Exhibit 1009C, US Patent No. US 4,107,735  
18 8/15/78, marked for identification.)

19 (PMC Exhibit 2002C, Petition for Inter Partes  
20 Review of US Patent No. 7,734,251, marked for  
21 identification.)

22 (Zynga Exhibit 1011C, USPTO Declaration of  
23 Charles J. Neuhauser, Ph.D., 2/27/13, marked for  
24 identification.)

25 (PMC Exhibit 2003C, Preliminary Patent Owner

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1 Response to Petition for Inter Partes Review,  
2 IPR2013-00171, US Patent No. 7,734,251, marked  
3 for identification.)  
4 (PMC Exhibit 2004C, Decision, IPR2013-00171,  
5 Patent 7,734,251 B1, 7/25/13, marked for  
6 identification.)  
7 (Zynga Exhibit 1005C, USPTO Harvey Application  
8 No. 08,470,571, 6/6/95, marked for  
9 identification.)  
10 (Zynga Exhibit 1006C, USPTO Harvey Application  
11 No. 08,470,571, 6/6/95, Discussion, marked for  
12 identification.)

13

14

CHARLES J. NEUHAUSER, PH.D.,

15

having been first duly sworn, was examined

16

and testified as follows:

17

18

CROSS-EXAMINATION

19

BY MR. SCHREINER:

20

Q. Good morning, Dr. Neuhauser.

09:23:21

21

A. Good morning.

22

Q. It's nice to see you again.

23

A. Yes, yes. Small break in the proceedings.

24

Q. Please state your full name for the record.

25

A. My name is Charles Joseph Neuhauser, and my home

09:23:36

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1 address is 1018 Celilo, which is spelled C-E-L-I-L-O,  
2 Drive in Sunnyvale, California 94087.

3 Q. And on the logistics of the deposition, please  
4 give verbal answers to my questions. "Yes"?

5 A. Okay. 09:24:01

6 Q. If you don't understand a question, please let  
7 me know, and we'll try to rephrase it, if appropriate.

8 A. I will.

9 Q. And we'll take, you know, breaks roughly on the  
10 hour, you know, consistent with completing a line of 09:24:21  
11 questioning.

12 A. Sure.

13 Q. If you find yourself at a point where you really  
14 need a break, let me know.

15 A. I will. 09:24:34

16 Q. Okay. The prior testimony you've -- strike  
17 that.

18 You sat for deposition last week in some related  
19 patents, the '638 patent and the '717 patent, that have  
20 been challenged by Zynga in these proceedings; is that 09:24:52  
21 correct?

22 A. That's correct.

23 Q. And that deposition took place on October 1st  
24 and 2nd; is that correct?

25 A. That's correct. 09:25:06

1 Q. I'm going to be referring to some of your prior  
2 testimony to see if we can move this along rather than  
3 having to elicit the same information.

4 Do you understand that?

5 A. Okay. 09:25:24

6 Q. So your prior testimony regarding your work  
7 history, is that the same?

8 A. It hasn't changed.

9 Q. Okay. Prior testimony regarding your education  
10 and background, is that the same? 09:25:37

11 A. Yes, it is.

12 Q. So we've introduced as Zynga Exhibit 1001C the  
13 '251 patent, the full patent being 7,734,251. And we'll  
14 be referring to that as the '251 patent.

15 Is that okay? 09:26:14

16 A. That's fine.

17 Q. We've also introduced the Bakula patent. That's  
18 B-A-K-U-L-A. And that was previously marked as Zynga  
19 Exhibit 1009A, and that is Patent Number 4,204,206. So  
20 we'll be referring to that as the Bakula patent. 09:26:52

21 Is that okay?

22 A. That's fine.

23 Q. Just wait for me to finish my question.

24 A. Sorry.

25 Q. I know. 09:27:00

1           And we've marked your declaration submitted in  
2           connection with the '251 patent as Zynga Exhibit 1011C.  
3           And that is your declaration submitted in connection with  
4           the proceeding against the '251 patent.

5           Is that correct, Dr. Neuhauser? 09:27:39

6           A. Yes, it is.

7           Q. Last week we talked about the process of your  
8           preparation of your declarations in connection with the  
9           '638 and '717 patents.

10          Do you recall that testimony? 09:28:05

11          A. I do.

12          Q. Did you prepare your declaration for the '251  
13          patent in the same manner as the other two patents?

14          A. Yes, I did.

15          Q. Was there any difference in the process for the 09:28:26  
16          '251 patent compared to the other two patents?

17          A. Not that I can recall.

18          Q. How many drafts did you prepare of your  
19          declaration for the '251 patent?

20          A. I think -- it was what I suggested before, that 09:28:48  
21          I basically wrote -- wrote the document, and then there  
22          was some point where there was sort of going over it for  
23          typographical errors. So there was basically one draft  
24          that at the end there was sort of a back and forth about  
25          little -- little tiny things. 09:29:08

1 Q. Can you describe for me the back and forth about  
2 little tiny things?

3 A. Well, I think that there were some -- so I would  
4 send a draft to the attorneys that, you know, when I got  
5 to the final stage, and they'd -- this was like within 09:29:27  
6 like a day or so of signing the declaration. And they  
7 would sometimes send back a redline saying, you know, you  
8 missed something here or you misspelled a word here or we  
9 don't understand what you're saying here, something like  
10 that. And then I would correct it and send it back to 09:29:48  
11 them.

12 Q. By "attorneys," you're referring to the Jones  
13 Day attorneys representing Zynga in this matter?

14 A. That's correct.

15 Q. Did they request any substantive changes to the 09:30:01  
16 declaration?

17 A. Not -- not that I can remember.

18 Q. Did they request that you delete any subject  
19 matter from your draft declaration?

20 A. I don't believe so. 09:30:23

21 Q. Zynga submitted a petition which has been marked  
22 as PMC Exhibit 2002C in connection with the challenge to  
23 the '251 patent; is that correct?

24 A. Yes, that's correct.

25 Q. The petition was submitted on February 27, 2013. 09:30:57

1 Your declaration was signed on the same day, February 27,  
2 2013.

3 Is that correct?

4 A. That's correct.

5 Q. Did you review or study the petition that had 09:31:19  
6 been prepared before signing your declaration?

7 A. No, I don't think I saw it.

8 Q. Prior to the petition being filed, did you study  
9 or review it in any way to ensure that its statements  
10 were consistent with the statements in your declaration? 09:31:51

11 A. I don't believe I saw it before it was filed.  
12 So the answer is no, I did not.

13 Q. Part of the analysis set forth in your  
14 declaration on the '251 patent deals with references  
15 anticipating the '251 patent; is that correct? 09:32:29

16 A. Yes, sir.

17 Q. What is the standard that is applied for  
18 reference to anticipate a claim?

19 A. Well, I think I have at paragraph 18, I said it  
20 is my understanding that a claim is anticipated under 09:33:26  
21 35 USC Section 102 if each and every element and  
22 limitation of the claim is found either expressly or  
23 inherently in a single prior art reference. So that's  
24 the basis of my understanding.

25 Q. And explain for me how you as an expert apply 09:33:52

1 that standard to determine if a claim element is found in  
2 a reference.

3 A. Well, typically it's -- I look at the patent,  
4 first read the patent, try to understand the contents of  
5 the patent, and then you're talking about a single claim 09:34:20  
6 element. I would look at the claim element, look at the  
7 prior art and make some judgment about whether that prior  
8 art is teaching that particular element. That's  
9 generally how I go about it. I just go back and forth  
10 between the patent and the claim and the prior art and 09:34:43  
11 see, you know, what -- you spoke about one element. You  
12 know, I look at that element. I obviously have to look  
13 at the whole claim to understand how an element fits with  
14 other elements, but that's the general process that I  
15 use. 09:34:58

16 Q. You indicated that you look to see whether the  
17 reference is teaching that element; is that correct?

18 A. That's correct.

19 Q. Can you explain what you mean by whether a  
20 reference is teaching an element? 09:35:21

21 A. Well, you know, I'm an engineer. So basically  
22 if I read the reference, when I finish reading the  
23 reference I'll have some picture in my head of what the  
24 reference is telling someone of ordinary skill in the  
25 art, and then I'll go back and I'll look at the claim and 09:35:42

1 I'll -- the claim generally, you get a kind of picture in  
2 your head of what the claim is, and I will compare that  
3 back against the reference itself. That's sort of how I  
4 go about it.

5 But then in the end, you have to -- you know, 09:35:59  
6 you generally have to find some citation in the -- in  
7 the -- at least that's the idea behind like a claim chart  
8 or whatever, you know, like a declaration like I've done.

9 So you would try to find the citations and see  
10 if those citations support the notion that this 09:36:18  
11 particular reference has everything that a particular  
12 element has.

13 Q. So I'm going to paraphrase your testimony, and I  
14 want you --

15 A. Okay. 09:36:55

16 Q. -- to tell me --

17 A. Sure.

18 Q. -- if I have it right or not.

19 You read the reference, you get a picture in  
20 your head about what the reference is telling, and 09:37:05  
21 finally you look for citations to support the notion that  
22 the reference has everything that the element has.

23 A. Is that the end of your question?

24 Q. Yes, sir.

25 A. Oh. Yes, I think the only part you left out is 09:37:42

1 when you read the element of the -- let's just say the  
2 whole claim, you get some sort of picture that -- of what  
3 that claim is saying in a general sense. And so, you  
4 know, you're kind of comparing these two things against  
5 each other. Ultimately, you have to point to something 09:38:01  
6 specific in the -- in the reference and match that up  
7 with the elements of the claim, but that's generally how  
8 I go about it.

9 Q. I might have misunderstood your prior testimony.  
10 Did you say that you get a picture in your head about 09:38:22  
11 what the reference is telling after you read the  
12 reference?

13 A. Typically. I mean, that's the way I work. I  
14 can't say how other people work.

15 Q. Can you explain for me what you mean by getting 09:38:41  
16 a picture in your head about what the reference is  
17 telling?

18 A. Well, the reference has, of course, visual  
19 material in it. That's kind of the basis. But as you  
20 read a reference, you know, at least I do as an engineer, 09:38:59  
21 you get some understanding of what the reference is  
22 trying to say to people, what it's trying to teach you.  
23 You have preferred embodiments, of course, but then you  
24 also have, you know, description -- descriptive material  
25 in the reference typically that broadens it out. I mean, 09:39:16

1 when I say "reference," we're talking here about patents.  
2 So, you know, they have preferred embodiments. They have  
3 a summary of invention. You get some ideas from this,  
4 and then you look at how the thing was implemented, and  
5 then you say, okay, now I think I understand what it is, 09:39:35  
6 what this particular reference is trying to teach me and  
7 what the preferred embodiments are.

8 That's what I'm getting at. To me, it's sort of  
9 a visual process, but...

10 Q. Can you explain what you mean when you say you 09:40:02  
11 try to discern what the reference is telling?

12 A. Well, generally, you know, the patents are  
13 supposed -- I'm just talking about patent references now,  
14 since those are the only ones we have in front of us, at  
15 least in this section of the deposition. 09:40:29

16 Reference -- a patent tries to teach you  
17 something. It's supposed to. And I just try to learn  
18 from the patent as much as I can. Patents aren't  
19 terribly different from technical manuals for products  
20 and, you know, technical manuals sometimes tell you what 09:40:49  
21 the product is and how it's put together. Patent  
22 specifications are like that.

23 So by reading them, you, you know, I learn  
24 something, and that gives me a general understanding of  
25 what the device is and sometimes a specific understanding 09:41:04

1 of how it's put together.

2 Q. So you understand -- strike that.

3 So is it correct that you study the patent and  
4 try to understand what the patent is trying to teach; is  
5 that correct?

6 A. I think you've been -- here you're asking the  
7 patent, you're referring to as maybe one of the  
8 references.

9 Q. Yes, sir.

10 A. Right, right. Okay. Because we have the 09:41:49  
11 patent, your patent, and we have these -- they just  
12 happen to be patent references.

13 That's generally how I go about it. I study the  
14 reference, in this case, patents, and try to form a  
15 general idea of what it's -- what it's teaching. 09:42:02

16 Q. Before you said trying to teach, and you just  
17 said now try to form an idea of what it is teaching. Is  
18 there a difference in your analysis for anticipation?

19 A. Well, I think the important issue is what does  
20 it actually teach. And that, you know, I'm just speaking 09:42:41  
21 in some sense informally when I say something like  
22 "trying to teach." Sometimes patents are a little  
23 unclear, but, you know, generally you can figure out what  
24 the teaching is, whether you could go out and build  
25 something like that. 09:43:04

1 Q. And how do you decide what the patent reference  
2 actually teaches?

3 A. Well, I'm not sure I quite know how to answer  
4 that. I mean, I think about it. I try to get a picture  
5 of what's in the -- in the patent. Sometimes you have to 09:43:30  
6 go a little beyond the patent because it might  
7 reference -- you know, it might reference a particular  
8 device. It might say in the patent this is an XYZ chip  
9 or a such-and-such computer. And so then if I don't  
10 remember that particular system, I might go off and try 09:43:52  
11 to understand what that is, try to use that to enhance  
12 what I'm learning in the patent.

13 But then that's just generally an intellectual  
14 process of reading and thinking about what's in the -- in  
15 the patent itself, in the reference itself. 09:44:14

16 Q. So let's set aside scenarios where a patent  
17 reference is referring to some component --

18 A. Okay.

19 Q. -- that you have to research. In your answer  
20 that you just gave -- strike that. New question. 09:44:34

21 In the -- in your answers in the last couple of  
22 questions, you've referred to what the reference actually  
23 teaches and what's in the reference.

24 Is there a difference between those two things?

25 A. Well, I think a reference has content to it, and 09:45:10

1 then when you read it, I mean you're putting it together  
2 with your knowledge of engineering in general. You know,  
3 I'm not sure I'm -- I'm starting to get a little lost in  
4 your question, but -- you know, you look at it, you see  
5 something like a register or a buffer, and you think to 09:45:35  
6 yourself, okay, so what kind of register do they have  
7 here? What's its function? What are they doing? You  
8 know, is it like all the other registers I've seen or is  
9 it different? You know, I kind of go about it that way.

10 Am I answering your question or? 09:45:57

11 Q. So you referred to determining what's in the  
12 reference.

13 A. Uh-huh.

14 Q. Correct?

15 A. Okay. 09:46:17

16 Q. How do you determine whether element X is,  
17 quote, in the reference, unquote?

18 A. Ah. Okay. Speaking about an element from the  
19 patent that you're comparing the reference to.

20 Q. Yes, sir. 09:46:46

21 A. I think it's -- like I said before, I typically  
22 get a picture in my head of the different preferred  
23 embodiments and the general teaching of the reference,  
24 and I've got some picture in my head of the claim and the  
25 individual elements, and I try to see whether those -- 09:47:04

1 those match up in some way. And then when you finish,  
2 you know, with -- so you might get an idea that a  
3 register mentioned in -- I'm going to make up a  
4 hypothetical here to give it some concreteness.

5 You might see a word "register," for example, in 09:47:23  
6 the claim. And you might see a number of registers in  
7 the preferred embodiment on some that claim the register  
8 does something, perhaps.

9 So typically I start by -- I usually have a  
10 pretty good idea. I'll say, well, this register of the 09:47:43  
11 claim, that might be something like this register in the  
12 reference. And then I look at that and then I try to see  
13 if that's reasonable, like trying to fit that in with  
14 everything else I understand about the reference and the  
15 claim. And then I'll say, okay, well, that will work. 09:47:59  
16 And then I move on to the next part of it and see if that  
17 works, kind of piece it together that way.

18 Sometimes it doesn't work. Sometimes what you  
19 think about in a reference doesn't really match what's in  
20 a claim. Maybe there's another way to look at it and 09:48:16  
21 maybe the reference isn't any good and you just throw it  
22 away.

23 Q. So the hypothetical you just gave, the claim  
24 element X was a register and the reference actually  
25 describes a register; is that correct? 09:48:38

1 A. That's correct.

2 Q. So let's say we have a claim element. It's  
3 register X doing action Y.

4 A. Okay.

5 Q. How do you determine if register X doing action 09:49:01  
6 Y is found in the prior art reference?

7 A. Well, I would go back to the prior art reference  
8 and try to see if there was a structure in there  
9 that's -- that is suggested or taught by the reference  
10 that is a register, and then I would try to see whether 09:49:27  
11 that register performed this action Y, and that would be  
12 at least part of the analysis.

13 Obviously, things work together in a claim so  
14 you have to really think, do they do the same -- do they  
15 work together the same way in the reference. But that's 09:49:49  
16 generally what I do.

17 Q. Does the reference have to have -- strike that.

18 Does the reference have to actually disclose a  
19 corresponding register X performing action Y?

20 A. Well, I think generally that's -- in the kinds 09:50:13  
21 of things we're talking about, generally that would be  
22 the case. There is a case -- inherency issue that it may  
23 not be mentioned in the -- the -- the document, or it may  
24 not be implied, for example. But it might be this  
25 inherency issue comes up where it may be the only way 09:50:42

1 that something could be done, for example.

2 Q. So is it correct that you -- strike that.

3 Is it correct that you moved to inherency  
4 analysis when the element is not taught or implied by the  
5 reference? 09:51:17

6 A. I think that's correct. Sometimes a reference  
7 just doesn't mention a particular thing. I don't know  
8 whether a register would be a good example, but you know,  
9 a bus might be an example of that. It might not mention  
10 a bus, but you know two things communicate. So they must 09:51:33  
11 communicate in some way.

12 So that might be an example of something that  
13 you would say, well, there must be a bus here because  
14 they communicate.

15 Q. And it's at that point that you conduct an 09:51:49  
16 inherency analysis; is that correct?

17 A. If that's necessary.

18 Q. That won't be necessary if the claim element is  
19 taught or implied by the prior art reference; is that  
20 correct?

21 A. If you can see the element, the particular  
22 structure, let's say, if you can see that clearly in the  
23 in the reference, then I don't think there would be any  
24 necessity to make an appeal to an inherency.

25 Q. I'm trying to stick with your language. 09:52:49

1 A. Okay.

2 Q. Is it correct that you moved to the inherency  
3 analysis if the element at issue is not taught or implied  
4 by the reference?

5 A. I don't know that you do it every time, but that 09:53:13  
6 would be the kind of thing that I might do in some cases.

7 Q. Would it be your typical approach to look for  
8 inherency of the element if the claim element is not  
9 taught or implied by the reference?

10 A. Well, I think I would normally do that, yes. 09:53:55

11 Q. What does it mean -- strike that.

12 What's your -- what does it mean to say that a  
13 reference teaches an element?

14 A. To me, I mean we're getting -- now we're getting  
15 towards -- what -- the terms of art from your profession. 09:54:29

16 I think teaching an element means that when you read the  
17 reference, you see that element in the -- in the

18 reference either as an example or as -- as, you know, in  
19 a preferred embodiment, for example, or in what that

20 reference is trying to tell you about the preferred 09:54:56  
21 embodiment.

22 I should add to that and say that references --

23 I mean, they have preferred embodiments because it makes  
24 things concrete, but they teach things outside of the

25 preferred embodiment, too. It's not just what you see in 09:55:21

1 the preferred embodiment. I mean, the whole reference  
2 together will teach you something. I think that's the  
3 purpose, tell you about it, tell you enough so that maybe  
4 you can build it or you have a concept of what this  
5 patent is.

09:55:38

6 Q. So a reference teaches an element when you see  
7 that element in the reference; is that correct? Is that  
8 your testimony?

9 A. Yeah, I think that's reasonably correct.

10 Q. What's your understanding of what it means for a  
11 reference to imply a claim element?

09:56:40

12 A. I don't know. I mean, I think sometimes  
13 references give you -- so references have preferred  
14 embodiments, but they also have other information in  
15 them, and I think sometimes you can see in a reference an  
16 implication about another type of system that you might  
17 build from the reference just from what you're reading.  
18 That might be an example of imply.

09:57:13

19 Q. Focusing on a claim element X, how do you decide  
20 if claim element X is implied by the prior art reference?

09:57:54

21 A. Well, it's probably -- if when you read it you  
22 get a picture of a system and it has something like, say,  
23 a register, if that's this claim element X, it has that  
24 in there. You get a picture in your head from the  
25 reference that that's -- that that claim element X is in

09:58:30

Page 24

1 there.

2 Q. I'm trying to find -- you talked about a  
3 reference --

4 A. Uh-huh.

5 Q. -- teaching or implying a claim element. 09:58:54

6 A. Uh-huh.

7 Q. And I'm trying to understand what you mean by a  
8 reference implying a claim element.

9 MR. TOUTON: I'm not sure that's exactly what he  
10 testified to about teaching or implying, but... 09:59:08

11 MR. SCHREINER: Objection. Speaking --

12 MR. TOUTON: Yeah, okay, I'm sorry. I was just  
13 trying to help you.

14 MR. SCHREINER: We're not supposed to make  
15 speaking objections. 09:59:21

16 THE WITNESS: Say your question again.

17 Q. BY MR. SCHREINER: You previously referred to a  
18 claim element being taught or implied by reference. Do  
19 you recall that testimony this morning?

20 A. I think so. I'm not sure I remember it exactly,  
21 but... 09:59:44

22 Q. What does it mean-- strike that.

23 What do you mean by the reference implying a  
24 claim element X?

25 A. I'll turn the buzzer off on that thing. 10:00:12

1 (Interruption in proceedings.)

2 THE WITNESS: Just -- yeah, say it again.

3 Q. BY MR. SCHREINER: Please explain what you mean  
4 by a reference implying a claim element X.

5 A. Well, I think -- maybe I can give an example. 10:00:43  
6 I'm not sure I'm going to be able to articulate some  
7 bright line here, but --

8 Q. Can you do it without giving an example? Just  
9 explain --

10 A. Yeah, I think so. 10:00:56

11 Q. Okay.

12 A. I mean, a reference says that it has something.  
13 It includes a particular structure of some sort. Certain  
14 structures we know what they do because that's their  
15 purpose. Okay? And if you want, I'll give you an 10:01:13  
16 example. But you see something in a reference so if that  
17 -- if you see a particular structure as an engineer, you  
18 know that that structure does something. And even though  
19 the reference doesn't say that it does that particular --  
20 performs that particular action or function, you know 10:01:35  
21 that from looking at that structure that's in the  
22 reference. It's a box that has a name. It's a common  
23 engineering device. And so from that you can understand  
24 what functions that particular thing might perform, in  
25 fact, does perform in a sense. And I think that's what I 10:02:01

1 had -- when I said implies, that's the notion I have in  
2 mind.

3 Q. Is that the same or different from conducting an  
4 inherency analysis?

5 A. I think that's different. 10:03:01

6 Q. You used the term -- strike that.

7 You referred previously to a reference  
8 suggesting something. Do you recall that?

9 A. I do.

10 Q. What do you mean by a reference suggesting an 10:03:29  
11 element?

12 A. I think it's the same thing that I had under the  
13 notion of imply.

14 Q. So when you talk about a reference suggesting or  
15 implying element X, "suggesting" or "implying" -- 10:03:47

16 A. Uh-huh.

17 Q. -- to you means the same thing?

18 A. I think so.

19 Q. What's your understanding of what is required to  
20 show that an element is inherent in a prior art 10:04:27  
21 reference?

22 A. Well, my notion is that if something's inherent  
23 that -- if you have to appeal to that, that there  
24 wouldn't be another way to perform that function or it  
25 wouldn't necessarily be a function, but there wouldn't be 10:04:57

1 another structure, for example. If you looked at a box  
2 and said it has a certain structure inside, there would  
3 be no other way that it wouldn't have that structure.

4 Q. I'm going to try to paraphrase you and see if I  
5 understand you. 10:05:26

6 A. Uh-huh.

7 Q. Let me ask you another question.

8 A. Uh-huh.

9 Q. You said you look at a box and you say that it  
10 has a certain structure inside because there would be no 10:05:58  
11 other way that it wouldn't have that structure. Can you  
12 explain that or elaborate on that?

13 A. Well, I think that generally when I have to  
14 think about things in that manner, I think to myself,  
15 well, I say that it has such-and-such a structure, 10:06:24  
16 structure X. Okay? Because there's a box, say, in a  
17 figure. And then I think to myself is there another way,  
18 I mean another sensible way, to do it? Not just that you  
19 could imagine any, you know, way that wouldn't even make  
20 sense, perhaps. 10:06:57

21 But is there any other way to do it, could there  
22 be any other type of structure in that box other than  
23 this particular structure that I'm saying is inherent.  
24 And if the answer is yes, there's some other structure  
25 that could be in there in place of that structure, then 10:07:17

1 I'd say that is an inherent sort of process of  
2 elimination, I think.

3 Q. Does that mean that -- strike that.

4 Let's say the prior art reference discloses a  
5 system. 10:07:43

6 A. Okay.

7 Q. And the question is: Does the system have  
8 element X? Do you follow me so far?

9 A. Uh-huh, yeah.

10 Q. Is the analysis for inherency whether there's a 10:08:07  
11 different element Y that could be used and the system  
12 would still operate?

13 A. Provided -- I think that's correct. I mean,  
14 provided it operated in obviously the same way, not  
15 that -- you know, without being concrete, it's pretty 10:08:46  
16 hard to answer the question. But that's the notion;  
17 right? It would have to operate the same way. It would  
18 have to be the same thing, basically.

19 You're -- you don't know what's inside of this  
20 box, perhaps, but you say, well, it must be this, it must 10:09:01  
21 have this structure, it must operate in this precise way  
22 because there's no other way that it could operate or no  
23 other structure that it could have and be the same thing.

24 Q. And by being the same thing, you mean the system  
25 performing its intended function; is that correct? 10:09:22

1 A. We're talking about the reference now.

2 Q. Yes, sir.

3 A. Well, it's at least that, but it might be more  
4 stringent than that.

5 Q. If you have a system -- strike that. 10:09:48

6 So the scenario is we're analyzing a reference  
7 that describes a system.

8 A. Okay.

9 Q. And the question is: Does the reference  
10 disclose element X? Do you understand that scenario? 10:10:04

11 A. To the extent that I can understand -- yeah, I  
12 mean, it's pretty abstract, but yeah, I understand it.

13 Q. I'm trying to understand your methodology.

14 A. Uh-huh.

15 Q. And a reference doesn't explicitly disclose 10:10:19  
16 element X. That's our scenario. Do you follow me?

17 A. I do.

18 Q. And one way for the system to operate as  
19 intended is to use element X in the system. Do you  
20 follow me? 10:11:12

21 A. I do.

22 Q. If a person could identify a different element Y  
23 in the system to operate as intended, what does that mean  
24 in terms of inherency?

25 A. Well, generally that's along the lines of what I 10:11:45

1 have in mind. Generally that would mean that, you know,  
2 it wasn't inherent because there was another way of  
3 structuring that -- you know, if you use Y, I think we're  
4 talking about a structure here. You've used the Y  
5 structure instead of the X structure. But, you know, you 10:12:07  
6 have to be careful because you say it performs the same  
7 function. You'd have to make sure that that didn't  
8 change or that the function that it was performing was  
9 something that you could -- I mean, again, it's a  
10 hypothetical so you'd have to really look carefully at 10:12:22  
11 that part and understand whether the functions were the  
12 same functions or whether they were generally the same,  
13 in which case there might be a different way just because  
14 the function has changed.

15 So, you know, you said performed for its 10:12:36  
16 intended purpose. That's what I'm getting at. I mean,  
17 there might be --

18 Q. Okay.

19 A. In the hypothetical, you're comparing two  
20 things. You'd have to make sure that everything was 10:12:46  
21 identical.

22 Q. Okay. I'll keep -- I'll go with your language.  
23 So let's refer to the disclosed system performing the  
24 same function. You're comfortable with that language?

25 A. Yes. Yeah, I think so. 10:13:03

1 Q. Okay. If a reference discloses a system that  
2 performs a function, and either element Y or element X  
3 could be used by the system to perform the same  
4 function --

5 A. Okay. 10:14:19

6 Q. I didn't finish my question. If you get back to  
7 the question. I wasn't finished with my question so  
8 where I say --

9 MR. SCHREINER: Let's go off the record.

10 (Discussion off the record.) 10:14:46

11 Q. BY MR. SCHREINER: If a reference discloses a  
12 system and either element X or element Y could be used in  
13 the system to perform the same function, is it correct  
14 that element X is not inherent?

15 A. I think that's generally correct. I mean, 10:16:08

16 within the limits -- because it's a hypothetical, it's  
17 not concrete, I don't know that you can apply that  
18 reasoning to just any situation, but when you get a  
19 concrete situation, it -- I mean, it's generally the way  
20 I think about things. 10:16:24

21 Q. Your analysis is guided by things that are  
22 not -- strike that.

23 Your analysis is governed by things that are not  
24 concrete. I mean, there's the -- there's the legal stand  
25 for anticipation. 10:16:38

1 A. Uh-huh.

2 Q. There's terms like "disclosed" or "expressly" or  
3 "inherently."

4 A. Uh-huh.

5 Q. Those are all abstractions. But you understand 10:16:51  
6 that they govern your anticipation analysis; correct?

7 A. That's correct.

8 Q. In your analysis of the '251 patent, did you  
9 rely on inherency to show that the reference disclosed  
10 any claim elements? 10:17:19

11 A. Not that I remember. I think if I were relying  
12 on inherency, I probably would have said so explicitly.

13 Q. Is it fair to say you would have said something  
14 along the lines that though the element is not expressly  
15 disclosed, it's inherent, and then you'd set forth the 10:17:49  
16 reason why it's inherent?

17 A. That's what I would do in that circumstance.

18 Q. And would it be your practice to say something  
19 to the effect of: The element at issue is inherent  
20 because there's no way to accomplish the function? 10:18:19

21 A. If it was some functional thing, I probably  
22 would say something like that, or I would say an engineer  
23 would understand that this was the only way to perform  
24 function X.

25 Q. And would you normally explain why there's no 10:18:43

1 alternative way to perform the function?

2 A. I might or I might not.

3 Q. Okay. But it is your practice, when you're

4 relying on inherency, to state that in your expert

5 reports or your declarations and explain the reasoning? 10:19:11

6 A. I think if there was an issue like that, I'm

7 pretty sure I would say it. I tend to be pretty explicit

8 about what I think things are, and if I'm relying on that

9 kind of argument, I would probably state it.

10 Q. So my question is: Is it your practice that, if 10:19:32

11 you're going to rely on inherency, you will state that

12 and explain why the element's inherent?

13 A. When you say it's my practice, I think yes, it

14 is my practice. It doesn't come up that often.

15 Q. Okay. I reviewed your -- strike that. 10:19:51

16 We talked about the '251 patent declaration.

17 Let's just cover the others.

18 A. Okay.

19 Q. For the '131 patent declaration that you

20 submitted, did you rely on inherency as disclosing any of 10:20:21

21 the claim limitations?

22 A. I don't think so. I don't remember doing that.

23 The which patent?

24 Q. The '131 patent. It's the one we're going to

25 discuss later today. 10:20:47

1 A. I don't believe so.

2 Q. Let me just clean the record. Is it correct  
3 that you don't believe that you relied on inherency to  
4 show any of the elements in your analysis of the '131  
5 patent? 10:21:10

6 A. That's correct.

7 Q. And last week we talked about the '638 patent  
8 and the '717 patent. Do you recall that?

9 A. I do.

10 Q. Did you rely on inherency to show any of the 10:21:28  
11 claim elements in your analysis of the '638 patent?

12 MR. TOUTON: Object. Beyond the scope.

13 THE WITNESS: I don't believe so.

14 Q. BY MR. SCHREINER: Did you rely on inherency to  
15 show any of the claim elements in your analysis of the 10:21:47  
16 '717 patent?

17 MR. TOUTON: Same objection.

18 THE WITNESS: I don't believe so.

19 MR. TOUTON: We've been going about an hour so  
20 when you come to a break. 10:22:14

21 MR. SCHREINER: Yeah, I'm pretty close here.

22 Q. Earlier on this morning, when we just started  
23 this series of questions about anticipation analysis, you  
24 referred to reading a reference, and then you said  
25 something about putting that together with your 10:22:44

1 knowledge.

2 Do you recall that statement generally?

3 A. I do.

4 Q. Can you explain for me what you meant by that?

5 A. Sure. Here's my general understanding: I think 10:22:54  
6 this is going to cover that.

7 So to do this comparison to build what might be  
8 termed a claim chart, which is kind of what the report is  
9 doing, I have to do it from the standpoint of one of  
10 ordinary skill in the art at some particular point in 10:23:20  
11 time. I think last week we agreed that that was sometime  
12 in 1987. It might be different this week.

13 So, you know, I use my -- of course, I'm using  
14 my knowledge to understand the reference, you know, my  
15 total knowledge that I have from my career in 10:23:44  
16 engineering. But when we make these comparisons, we have  
17 to go back and try to understand not what we know today  
18 but what we knew back in some point in time, like 19 --  
19 I'm just taking 1987 as an example.

20 So at some particular point in time. And then 10:24:09  
21 we have to also think what would one of ordinary skill in  
22 the art have understood at that time. And this area's a  
23 little difficult because it's not -- it's what that  
24 person's -- it's a bit about their analytic ability and  
25 what they would understand from a reference, but it 10:24:37

1 doesn't mean that they lack knowledge or that their  
2 knowledge is particularized in some way other than what  
3 we know about them as a person of ordinary skill in the  
4 art with certain educational background and a certain  
5 skill set.

10:24:54

6 The only reason I say that is, just to give an  
7 example, there might be a reference to a particular piece  
8 of machinery in the -- in a particular processor, let's  
9 say, in a prior art reference, and that person would  
10 presumably, you know, have knowledge of that

10:25:12

11 particular -- the capabilities of that particular  
12 processor that was mentioned, or they could go out and  
13 learn about it, for example. That would be part of their  
14 knowledge base, even. They might not know that

15 particular processor, you know, the average person might  
16 not, but it's mentioned so they would go out and, you  
17 know, try to understand what it was.

10:25:26

18 So we have to cast ourselves back into that time  
19 in the framework of a person of that knowledge. And  
20 that's my general understanding.

10:25:44

21 Q. The test that you set forth for anticipation in  
22 paragraph 18 of your declaration --

23 A. Uh-huh.

24 Q. -- states: "If each and every element and  
25 limitation of the claim is found either expressly or

10:26:15

1 inherently in a single prior art reference."

2 What's your understanding of what it means for a  
3 limitation to be found in a prior art reference?

4 A. I think that when you read it, you see that  
5 limitation or that -- in the reference in some way. Not 10:26:39  
6 necessarily in a particular preferred embodiment, but in  
7 what's being taught to you in the reference.

8 Q. I'm trying to understand, when you say -- when  
9 you read the reference, you see that limitation. Can you  
10 explain what you mean by that? 10:27:27

11 A. You'd have the limitation in mind. You would  
12 read the reference, and you would say yes, what I'm  
13 reading here brings to mind that limitation. I think  
14 it's obviously not enough just to say that something is  
15 there. You have to, you know, do more than that in a 10:27:50  
16 report. You have to say why you think it's there. But  
17 that's part of this notion of is it found. Do you see it  
18 there and can you, you know, tell someone else about it.

19 Q. As I think we've discovered today, there's  
20 different ways of articulating these standards for 10:28:46  
21 anticipation.

22 Would you say that's a fair statement?

23 A. I'm totally lost. You mean to express them?

24 Q. I'll restate the question.

25 A. Okay. 10:29:02

1 Q. Are there different ways of expressing the  
2 standards or requirements to show anticipation?

3 A. Okay. What's in paragraph 18 of my report was  
4 provided to me. Okay? Obviously, because I'm not a  
5 lawyer, and has on your side, in your profession, you 10:29:22  
6 know, they make statements about something, and then  
7 there's, you know, all kinds of examples and cases that  
8 have been worked back and forth to determine what those  
9 things mean. That's not part of what I consider. I'm  
10 just on the other side. I look at that and I say, okay, 10:29:43  
11 I think I understand what that means.

12 And what we've talked about this morning is  
13 there's different ways of reexpressing that to give you  
14 an idea of my thought process. I'm not trying to change  
15 what it says; I'm just trying to tell you what I think 10:29:56  
16 about it.

17 Q. And I understand that you're an expert applying  
18 the law as it's given to you, and I'm trying to  
19 understand what you understand the law to be and how you  
20 apply it. 10:30:22

21 Do you generally -- do you follow what I just  
22 said?

23 A. Sure, sure.

24 Q. In your analysis does anticipation require that  
25 there's no difference between the claimed invention and 10:30:40

1 the reference disclosure from the standpoint of a person  
2 of ordinary skill in the art?

3 A. Well, it's along those lines but, of course,  
4 the -- if the -- you say there's no difference. I mean,  
5 that can't be the case. The thing is, is that the prior 10:31:07  
6 art teaches something. Okay? But it has preferred  
7 embodiments that are usually almost always going to be  
8 different from the particular art. So it's not a  
9 question of saying, oh, I've read this someplace before.

10 You know, maybe I'm missing what you're asking 10:31:31  
11 here, but you know, the teaching has to teach you those  
12 limitations. You need to see those limitations in  
13 reference. But again, it doesn't have to be. If it were  
14 exact, it would be the same thing; right? If it had no  
15 difference, it would be the same thing. It would be the 10:31:52  
16 same patent, the same words; right? It's not like that.  
17 The reference is about something that is obviously  
18 different because it's a different set of words and a  
19 different set of pictures, but when it comes up to the  
20 level of the claim, what you see in the reference would 10:32:08  
21 be the same as what you see in the claim.

22 MR. SCHREINER: Okay. We can take a break.

23 (Recess.)

24 Q. BY MR. SCHREINER: Dr. Neuhauser, did you talk  
25 with your counsel during the break? 10:45:09

1 A. I did.

2 Q. What did you talk about?

3 A. Different things.

4 Q. Give me some examples, please.

5 A. Well, we talked about the water fountain out 10:45:23

6 there. I think he also talked to me a little bit about a

7 subject that I've thought about many times is the line

8 between inherency and, you know, what one of ordinary

9 skill in the art would know and then those sorts of

10 things. And there was probably a couple other subjects 10:45:49

11 in there, too.

12 Q. What did your counsel tell you about the line

13 between inherency and these other things?

14 A. Oh, I'm going to have to think back about this.

15 Q. Just a few minutes ago; right? 10:46:09

16 A. Yeah, yeah.

17 We also talked about the weather, literally.

18 Well, I'm going to have to paraphrase what he

19 said. I think he was saying that, you know, a lot of

20 what you -- a lot of the time we use inherency when we 10:46:35

21 don't really think we're using it because we're using the

22 knowledge that one of ordinary -- I think this is what he

23 was saying to me, what one of ordinary skill in the art

24 would use, you know, some -- I talked about this earlier,

25 that a person would look at something and say, well, it 10:46:58

1 must be this way because that's its function or that's  
2 what it is.

3 And, you know, in a sense we use inherency in  
4 that sense, but -- so it may be that the patent doesn't  
5 say an X, Y, and Z performs exactly this function, but 10:47:17  
6 then one of ordinary skill in the art knows that it  
7 performs that function because that's the purpose of the  
8 device in that particular situation.

9 So I think that's the notion that we're using  
10 inherency is kind of built into this notion of what one 10:47:34  
11 of ordinary skill in the art knows.

12 I have maybe a little different view of it  
13 because I think of inherency as something that, you know,  
14 when you get beyond that, you might -- you might use, as  
15 I spoke about earlier, appealed inherency. So I think 10:47:50  
16 that's what the conversation was about.

17 Q. When you talk about -- I think this is what he  
18 was saying to me, one of ordinary skill in the art would  
19 use, you know, some -- I talked about this earlier, that  
20 a person would look at something and say, well, it must 10:48:21  
21 be this way based on its function or that that's what it  
22 is and, you know, in a sense we use inherency in that  
23 sense, but so it may be that a patent doesn't say X, Y  
24 and Z performs exactly this function, but one of ordinary  
25 skill in the art knows that it performs the function 10:48:41

1 because that's the purpose of the device in that  
2 particular situation.

3 Is that the substance of what your counsel  
4 discussed with you?

5 A. I think that was -- at least that's what I got 10:48:56  
6 out of it.

7 Q. Okay. That's how you understood it?

8 A. That's how I understood it. That's not very  
9 articulate now that you've read it back to me.

10 Q. Okay. Did your counsel say that -- this is just 10:49:10  
11 a yes-no question: Did your counsel say that any of the  
12 testimony you gave earlier today was incorrect or wrong?

13 A. No, it didn't come up.

14 The answer is no, if I understand your question.

15 Q. Did he say something to the effect of your 10:49:42  
16 testimony gave the wrong impression?

17 A. No.

18 Q. Okay. So let's take a look at Bakula, the  
19 Bakula reference --

20 A. Okay. 10:50:24

21 Q. -- which has been marked as Zynga Exhibit 1009A.

22 One more question: During your discussions  
23 during the break with counsel, did you discuss the terms  
24 "implying" or "implication"?

25 A. Not that I recall, but we certainly could have. 10:50:49

1 Q. What did counsel say to you about a reference  
2 implying something?

3 A. I don't think I talked about it in that -- I  
4 don't think we talked about that, but...

5 Q. Did counsel talk to you about a reference 10:51:13  
6 suggesting something or a suggestion of something in a  
7 reference?

8 A. I don't think so.

9 Q. Okay. So, let's see, in Bakula we were talking  
10 about your analysis of Claim 18 of the '251 patent. 10:51:41

11 A. Okay.

12 Q. And I think in your declaration that analysis  
13 starts on page 132, paragraph 186.

14 Do you see that?

15 A. Yes. 10:52:10

16 Q. And claim -- the claim refers to receiving an  
17 information transmission at a receiver station; correct?

18 A. That's one of the steps, yes, that's correct.

19 Q. And then there's another step. Why don't we go  
20 ahead and number the steps. So Step 1 will be receiving 10:52:49  
21 at least one information transmission. Step 2 will be  
22 detecting said first discrete signal and second discrete  
23 signal, et cetera. Step 3 will be organizing  
24 information.

25 A. Okay. 10:53:07

1 Q. Step 4 will be generating an image in response.  
2 Step 5 will be outputting said video presentation.

3 You've marked that on the exhibit.

4 A. I did.

5 Q. Okay. 10:53:24

6 A. And I drew some separation lines because it's  
7 all sort of run together. Huh-uh.

8 Q. Yes, sir.

9 A. Just give me one second here to check because  
10 for some reason it didn't match with what I had here. 10:53:48  
11 Let me just make sure that it -- because I labeled them  
12 first and second and third element.

13 Something's missing. Third element is missing.  
14 That's the problem.

15 MR. TOUTON: May I suggest that we skipped over 10:54:27  
16 it.

17 THE WITNESS: We skipped it.

18 MR. TOUTON: It was actually six elements, I  
19 think. Maybe we need to redo that.

20 MR. SCHREINER: Thank you, Mr. Touton. 10:54:35

21 Q. Okay. So Step 1 is receiving at least one  
22 information transmission. Step 2 is detecting said  
23 discrete signal and second discrete signal. And Step 3  
24 is passing said detected at least one first discrete  
25 signal. Step 4 is organizing information. Step 5 is 10:54:56

1 generating an image. Step 6 is outputting such video  
2 presentation.

3 Thank you, Mr. Touton.

4 MR. TOUTON: Well, he caught it; I didn't.

5 MR. SCHREINER: Thank him by proxy. 10:55:16

6 Q. So there's a second step of detecting said first  
7 discrete signal and said second discrete signal in the  
8 information transmission; is that correct?

9 A. That's correct.

10 Q. In your analysis of Bakula against Claim 18, 10:55:46  
11 what is the information transmission that's received at  
12 the receiver's station?

13 A. Could you just direct me once again to the where  
14 Bakula starts and --

15 Q. I'm sorry, your analysis of Bakula starts on 10:56:30  
16 page 132 of your declaration.

17 A. Okay.

18 Q. I think your analysis of the claim element  
19 starts on page 141, but I'll -- I'm sorry, 139, but you  
20 might correct me. 10:56:47

21 A. Okay. And then just repeat the question to me.

22 Q. In your analysis of Bakula against Claim 18,  
23 what is the information transmission that is received at  
24 the receiver's station?

25 A. Okay. So what I said here is that the 10:58:04

1 information trans -- and I said this at paragraph 197 on  
2 page 141, the information transmission consists of the  
3 data transmitted on the signal lines KB0 to KB8. I  
4 probably should say KB7.

5 Q. I was going to ask you about that. You 10:58:32  
6 reference a table which shows some -- appears to be  
7 some -- some sort of code. Can you show me in the  
8 diagrams where signal lines KB0 through KB7 are found?

9 A. If you look at Figure 5, you'll see them in the  
10 middle of Figure 5 right -- almost right smack in the 10:59:13  
11 middle of the Figure 5. So it says "from KB" on the left  
12 side and in the middle, it says KB0 to KB7.

13 Q. And "KB" stands for keyboard?

14 A. I assume so. I don't know. Oh, you mean KB in  
15 the signal name or KB in the from KB? 10:59:57

16 Q. KB on Figure 5, where it says "from KB"?

17 A. Oh. Well, that would be from keyboard.

18 Q. Does KB0 -- excuse me, does -- strike that.

19 Does KB0 through KB7 -- strike that.

20 What does KB0 through KB7 represent? 11:00:53

21 A. Well, according to the Table 2 at Column 11, we  
22 don't have the benefit of line numbers, but about a third  
23 of the way down, there's a notification KB star, which is  
24 the bit 0 through 7, and it says keyboard data bits. So  
25 they represent data bits from the keyboard. 11:01:33

1 Q. Is it correct that KB0 through KB7 represent a  
2 byte of information?

3 A. Here they're just signals.

4 Q. In your report, 141, you've got a portion of  
5 Bakula's table? 11:02:01

6 A. Uh-huh.

7 Q. And it says -- it refers to KB with the  
8 asterisk, like you said, and then the next line says  
9 "load vector byte." What is that referring to?  
10 Actually, strike that. 11:02:18

11 It says "load vector byte one." What is that  
12 referring to?

13 A. Let me help you out here. I don't know what it  
14 refers to, but I can figure it out. The only reason it's  
15 in this particular thing is because I didn't think it was 11:02:40  
16 appropriate to put a single line from a table. No one  
17 would be able to find the line in the table. So I  
18 included those things on both sides.

19 If you want to know what load vector byte is, I  
20 think I can figure it out. But -- 11:02:57

21 Q. Does it relate?

22 A. I don't --

23 Q. Does it relate to KB0 through KB7?

24 A. I don't know, but I don't think I was using it.  
25 We might find out that I was later, but I don't think 11:03:19

1 that it relates to it.

2 Q. Is it correct that KB0 through KB7 is data  
3 stored in a buffer?

4 A. I don't think that I know. I don't think I've  
5 thought about it that way. 11:04:08

6 Q. KB0 through KB7, they're not unrelated; correct?

7 A. No, that's correct, they're not unrelated.

8 Q. What do KB0 through KB7 represent?

9 A. Well, they represent the current key that's  
10 pressed. 11:04:29

11 Q. So in Bakula's keyboard, if you press A, there's  
12 going to be eight bits, KB0 through KB7, that correspond  
13 to A; is that correct?

14 A. That's my understanding.

15 Q. Is it your understanding in Bakula that there is 11:05:20  
16 a keyboard and then there's a keyboard data buffer that  
17 stores eight-bit bytes corresponding to characters input  
18 by the user?

19 A. I'm not sure what you're referring to.

20 Q. Okay. In paragraph 197 you say: "The 11:05:54  
21 information transmission consists of data transmitted on  
22 signal lines KB0 through KB7." Where are the data bits,  
23 KB0 through KB7, that you're referring to here retrieved  
24 from?

25 A. They come from the keyboard. They're -- I'm not 11:06:18

1 sure "retrieved" is the right word. They're provided by  
2 the keyboard.

3 Q. Let me -- what I'm trying to get at is sometimes  
4 you have a keyboard and you've got a keyboard data  
5 buffer, if you will, that stores characters pending their 11:06:44  
6 pickup by other devices such as a CPU.

7 A. Okay.

8 Q. Do you follow that general scenario?

9 A. Sure, sure.

10 Q. KB0 through KB7 that you refer to in 197, are 11:07:03  
11 they coming from a data buffer?

12 A. You mean on the left side of -- of Figure 5; is  
13 that -- oh, yeah, I -- most likely.

14 Q. So 197.

15 A. Uh-huh. 11:07:39

16 Q. Paragraph 197 of your report, you can explain it  
17 by reference to Figure 5 of the Bakula patent; correct?

18 A. I didn't follow your question. You said I can  
19 explain it or I am explaining it? I'm a little bit lost.

20 Q. Okay. Paragraph 197 refers to eight bits of 11:08:01  
21 data, KB0 through KB7?

22 A. Correct.

23 Q. And when I asked you about that, you referred me  
24 to Figure 5 of the Bakula patent; is that correct?

25 A. That's correct. 11:08:20

1 Q. And when I asked you where those eight bits, KB0  
2 through KB7, were coming from, you agreed that they were  
3 probably coming from a data buffer; is that correct?

4 A. That's -- that's right.

5 Q. And that would be a data buffer that receives 11:08:44  
6 data that's input by the keyboard and holds it for some  
7 period of time; is that correct?

8 A. It's certainly one possibility. There might be  
9 other ways it's done. I don't know that they necessarily  
10 tell us here. 11:09:06

11 Q. As a person of ordinary skill in the art looking  
12 at it from the time frame of the '80s, would it be your  
13 expectation that those eight bits would be coming from  
14 some sort of a data buffer for the keyboard?

15 A. Well, I think that given what Figure 5 shows, 11:09:28  
16 that there's static in time, or at least some of them are  
17 static in time, because it shows them being latched in  
18 94. So in order to be latched in 94, according to this  
19 diagram, they would have to be static and so they might  
20 come from -- one way to do it would be to buffer, have 11:09:57  
21 some sort of buffer.

22 Q. Okay. Is it correct that KB0 through KB7 would  
23 be transferred together as a byte of data into block 94  
24 of Figure 5 of Bakula?

25 Let me rephrase that question. 11:10:55

1 A. Okay.

2 Q. Is it correct that KB0 through KB7 would be  
3 transferred together as a byte of data that is ultimately  
4 stored in data buffer 96 of Figure 5 of Bakula?

5 A. I think that's true. 11:11:39

6 Q. In Bakula, what triggers the KB0 through KB7  
7 byte being transferred to the data buffer 96?

8 A. Show me where -- where the -- what you're  
9 concerned with.

10 Q. Okay. So (indicating). We have KB0 through KB7 11:12:15  
11 coming in here, and they go through to the data buffer.

12 A. Maybe we can -- I don't mean to tell you your  
13 business.

14 Q. That's okay.

15 A. We can do it either -- we can do it the way 11:12:32  
16 you're saying informally, if you point say "here," I'm  
17 not going to understand it won't look right on the  
18 record, so when I read it, it won't make any sense.

19 Q. Okay.

20 A. If you could just tell me which of these lines 11:12:45  
21 you're referring to for this transfer, it would make the  
22 question clearer to me.

23 Q. I'm definitely not an expert in the subject  
24 matter, and you are. So I'm asking you to -- I'm asking  
25 you my questions in perhaps an awkward fashion, and it's 11:12:58

1 my hope that as an expert, you can give me an answer that  
2 translates into something that I can understand.

3 A. Okay.

4 Q. On Figure 5 you agree that KB0 through KB7 is  
5 transferred into data buffer 96? 11:13:26

6 A. That's --

7 Q. On Figure 5?

8 A. That's correct.

9 Q. What triggers or causes KB0 through KB7 to be  
10 transferred into data buffer 96? 11:13:41

11 A. Okay. I'll do my best with this. So first it  
12 has to stop in latch 94.

13 Q. And what does that mean, it has to stop -- it is  
14 the data byte; is that correct?

15 A. I'm sorry. Okay. So KB0 to KB7, those signal 11:14:06

16 lines are captured by the latch 94, and that -- I think  
17 your question is how does it happen or what causes. So  
18 strobes 1 and 2, I could go back and dig it out of the  
19 specification, but basically the strobes control the

20 latch, and then the transfer down into data buffer 96 is 11:14:45

21 based on the operation of the -- of the processor that's  
22 connected on the -- the data address and control lines.

23 So they come out and address this I/O control, which then  
24 selects between the UR -- which doesn't have a number at  
25 the bottom of the page or at the bottom of the figure -- 11:15:14

1 and the latch 94, and then transfers that into the data  
2 buffer, and from there down to the data bus.

3 Q. So is it correct that I/O control on Figure 5  
4 controls which data is retrieved from and sent to various  
5 elements on Figure 5? 11:16:00

6 A. I think that's part of what I/O control does. I  
7 don't think that's all of what it does, and I don't think  
8 as a general statement it covers everything in Figure 5.

9 Q. Okay.

10 A. But just what you said, I mean, that does cover 11:16:28  
11 some of the aspects of what it does with respect to  
12 Figure 5.

13 Q. So I/O control does perform at least those  
14 functions that I referred to?

15 A. Uh-huh, yes. 11:16:40

16 Q. You see there's a little line between I/O  
17 control and data buffer 96 and a little line says RD for  
18 read?

19 A. I see that.

20 Q. Describe for me how I/O control causes the data 11:16:56  
21 buffer to receive K0 through K7 from the keyboard. And  
22 you don't have to explain this to me in terms of the  
23 nitty-gritty details of Bakula, but from the standpoint  
24 of a person of ordinary skill in the art understanding  
25 these, I think, fairly conventional operations, how you 11:17:59

1 would -- how you would understand that?

2 A. Well, the information on KB0 to KB7 is captured  
3 in KB latch and control 94. And so it sits there in that  
4 latch, and then at some point the system generates an  
5 interrupt saying that there's information present in that 11:19:08  
6 latch. And then the RD signal is what you asked me  
7 about, which is read. It then gates the contents of that  
8 latch onto the data bus, DB.

9 The actual way -- the specifics, I think there's  
10 actually specific hardware identified in the patent. 11:19:32  
11 You'd have to really go back and get that manual to  
12 understand more about that, but that's the basic notion.

13 Q. Okay. So is it correct that -- strike that.

14 So KB0 through KB7 are at latch 94; correct?

15 A. They're inputs to latch 94. 11:20:28

16 Q. What causes KB0 through KB7 to be transferred  
17 into latch 94?

18 A. I believe it's the -- the strobe lines, but I'm  
19 not a hundred percent clear on -- there is another way  
20 that that same configuration could be used. But it seems 11:22:47  
21 like from the description that it's the strobe lines, the  
22 presence of a strobe line.

23 Q. In your declaration, you refer to key codes  
24 received from keyboard and latched at the keyboard latch.  
25 This is on page 141, paragraph 197 of your declaration at 11:23:13

1 the bottom.

2 A. Say the question again just --

3 Q. I'm -- I'm referring you to page 141 of your  
4 declaration.

5 A. Uh-huh. 11:23:43

6 Q. Paragraph 197. And at the bottom of paragraph  
7 197, you've got a quote from the Bakula patent.

8 A. Oh, okay.

9 Q. It says: "In the interface circuitry of  
10 Figure 5, key codes are received from the keyboard and 11:24:00  
11 are latched at the keyboard latch and control circuit."

12 Do you see that passage?

13 A. I see that, yes.

14 Q. The key codes would be KB0 through KB7, as we've  
15 been discussing it? 11:24:18

16 A. That's correct, but presumably the strobe has to  
17 be latched, too, to differentiate the codes.

18 Q. In other words, not to mix up two character  
19 codes sent in succession; is that correct?

20 A. That wasn't what I had in mind. The strobes 11:24:46  
21 have to be captured because the strobes generate the  
22 interrupts eventually. That's all I'm saying.

23 Q. Are the key codes -- strike that.

24 Key codes is the same as character codes; is  
25 that fair? 11:25:16

1           A. They just say they're -- they're key codes. No,  
2 I don't know that that's strictly true.

3           Q. Okay. And you say that because the key codes  
4 could represent alphanumerics, but they could also  
5 represent other operations or commands from the keyboard;       11:25:38  
6 is that correct?

7           A. I think that's part of it. They're -- the --  
8 they're just arbitrary codes. They might not represent,  
9 say, an ASCII code, which is what I thought you were  
10 referring to as a character code.                               11:25:55

11          Q. Would it be your understanding of Bakula that  
12 for the 26 letters of the alphabet, there would be a  
13 different eight-bit key code for each of those 26  
14 letters?

15          A. I think that's fair.                               11:26:14

16          Q. Is it your understanding that the key codes, KB0  
17 through KB7, are loaded into the data buffer  
18 character-by-character?

19          A. Key-code-by-key-code?

20          Q. Yes, sir.   11:27:04

21          A. I'm not sure if I -- I'm not sure if I  
22 completely follow your question.

23          Q. When the key code is transferred on the -- what  
24 you call the signal lines, the value of the key code has  
25 already been defined; is that correct, in terms of the       11:28:41

1 arrangements of ones and zeros for the eight bits?

2 A. I think that it must be defined in some way  
3 because, as you pointed out in your last question, they  
4 have to be differentiated -- you have to be able to  
5 differentiate between the letters. 11:29:09

6 Q. And so when a key code, let's say for letter A,  
7 is read into data buffer 19 -- data buffer 96, the  
8 arrangement of those eight bits and their values has  
9 already been set; correct?

10 A. Possibly yes, possibly no. 11:30:04

11 Q. Give me the possibly "no" scenario.

12 A. Well, I think the straightforward notion would  
13 be that KB0 to KB7 would drop into the latch. So they're  
14 set in that sense. But between the latch and 96, they  
15 might be rearranged. For instance, they might be 11:30:38  
16 rearranged from zero to seven. They might turn them  
17 around and arrange them seven to zero. They might even  
18 swap the bytes. It's not an uncommon thing. It's  
19 possible.

20 Q. So if the order of the byte is K0, K1 on through 11:31:03  
21 to K6 and K7, would the -- would your normal expectation,  
22 reading this reference as a person of ordinary skill, be  
23 that K0 through K7 would be read into data buffer 96?

24 A. Well, I think that's what's happening. They're  
25 read in. I don't know whether the ordering is the same 11:31:37

1 or different, but they would be read into that latch. Or  
2 I'm sorry, 96 is a buffer. They would be read into that  
3 buffer, if you will.

4 Q. When they're read in, they are eight bits  
5 representing a character such as character A that we 11:32:14  
6 discussed earlier?

7 A. Representing a keyboard depression.

8 Q. Our scenario was the user enters the letter A?

9 A. Okay.

10 Q. Is it correct that that would result in an 11:32:37  
11 eight-bit word, K0 through K7, being stored in data  
12 buffer 96?

13 A. I think that's correct. I'm only going to make  
14 one small -- data buffer 96 is -- likely just passes the  
15 information through. So it stores it in the sense that 11:33:17  
16 it spends a certain amount of time there. But it's -- in  
17 this, at that time with this kind of setup with the -- I  
18 can't remember the exact processor, but it was common  
19 that that would just be a passthrough buffer, but the  
20 character code would -- or not character code, key code 11:33:40  
21 would -- representing the depression of the KA, would  
22 pass all the way down through this key latch through that  
23 data buffer.

24 Q. Okay. So just so we have a clean record --

25 A. Okay. 11:33:55

1 Q. -- the key code K0 through K7, corresponding to  
2 letter A, would be stored at least for some period of  
3 time in data buffer 96?

4 A. I think that's correct, that transient storage.

5 Q. And is it correct that that I/O control on 11:34:49  
6 Figure 5 issues a read instruction to cause that key code  
7 to be read into data buffer 96?

8 A. Wait a second. Just say it again.

9 Q. Is it correct that I/O control box on Figure 5  
10 issues a read instruction to cause the key code to be 11:35:29  
11 read into data buffer 96?

12 A. I'm not sure I understand your use of the word  
13 "read instruction" here.

14 Q. I thought we discussed earlier that I/O control  
15 has -- sends read instructions to data buffer 96. Do you 11:36:06  
16 see that RD?

17 A. I do.

18 Q. Okay. Why would I/O control send a read  
19 instruction to data buffer 96 in connection with keyboard  
20 data? 11:36:24

21 A. I just don't remember where we referred to it as  
22 a read instruction, but we may have. It's a signal line  
23 that is sent by the I/On controller to select one of  
24 those two inputs, which is then transferred to the  
25 output, which is called DB0 to DB7. 11:36:45

1 Q. The inputs being the buses?

2 A. The inputs are the -- so just looking at 94, the  
3 KB latch and controller, there's an arrow that goes  
4 into --

5 Q. I see, I see. Okay, I follow you. The inputs 11:37:13  
6 to the data buffer 96 is what you're talking about?

7 A. Right. And there's also an input from the UR --  
8 it can go both ways because there's an arrow on the UR  
9 line, at each end of the line, but at least it's an  
10 input. So when you do a read, you select one of those 11:37:32  
11 two and pass it to the bus.

12 Q. Is it correct that the I/O control has to issue  
13 a read instruction in order for a key code to be  
14 transferred into the data buffer from the bus?

15 A. I'm a little bit lost. The bus? Which bus? 11:38:10

16 Q. Data buffer doesn't just read in key codes by  
17 itself or just accept a series of key codes passively,  
18 does it?

19 A. No, I don't think that's -- I'm just confused  
20 about the word "bus" here and which bus you're referring 11:38:37  
21 to.

22 Q. I thought you had previously said that the key  
23 code that's been latched would be read off the data --  
24 one of the data buses into data buffer 1996 -- data  
25 buffer 96. 11:38:53

1 Is that correct?

2 A. And so when I was referring in that case to  
3 these lines -- like from KB 94, there's an arrow down.  
4 If I said "bus," that's what I was referring to, that  
5 little arrow between 94 and 96, for example. 11:39:09

6 Q. Oh, I see. I see.

7 A. Because there's buses at the top of the page.

8 Q. Okay. You weren't referring to the buses at the  
9 top of the page when you talked about transferring the  
10 key code from the latch into the data buffer; is that 11:39:23  
11 correct?

12 A. That's correct. They are implicated in this but  
13 in a different way.

14 Q. Is I/O control kind of the traffic cop for these  
15 various elements that are shown on Figure 5? 11:39:58

16 A. I don't know if I'd call it a traffic cop.  
17 It's -- it's more like a servant or something of that  
18 nature. Even that's kind of anthropomorphic language  
19 that's a little bit vague.

20 Q. What does I/O control have to do to cause a key 11:40:28  
21 code K0 to K7 to be read into data buffer 96?

22 A. The problem is now we're asking precise  
23 questions, but our language has kind of become unprecise.

24 Q. Okay.

25 A. I think the answer -- the strict technical 11:40:59

1 answer is -- is nothing. Okay? But that may not be what  
2 you're asking. And maybe we have to talk about it more  
3 precisely to make sure that we know how I/O control  
4 interacts with data buffer.

5 Q. So you said before that I/O control issues the 11:41:40  
6 read instruction to data buffer 96 to select between two  
7 inputs; is that correct?

8 A. I think I said -- also said it was a read  
9 signal, but that's what's happening here. It's selecting  
10 between the two inputs. So it's correct in that sense. 11:42:04

11 Q. Okay. So let's say I/O control sends a read  
12 signal that selects the input that is coming from the  
13 latch that has KB0 through K7.

14 A. Okay.

15 Q. Does that cause the KB0 through KB7 to be 11:42:38  
16 transferred in to data buffer 96?

17 A. Yes, I think. I think more correctly it causes  
18 it to transfer through the data buffer to the DB lines,  
19 DB0 to DB7.

20 Q. You said DB lines, you mean KB? 11:43:10

21 A. No, no. Coming out of 96.

22 Q. I see. But it's KB0 through KB7 -- strike that.

23 You said it causes the KB0 through KB7 to be  
24 transferred through the data buffer to the DB lines. Is  
25 it correct that KB0 through KB7 will be stored at least 11:43:45

1 temporarily in data buffer 96?

2 A. Well, I mean, as long as we understand this:

3 The data buffer -- what I understand from this diagram

4 and from the structure of these things would be a -- what

5 we would call a transceiver technically. And so it does 11:44:18

6 store it in the sense that it's there on a transient

7 basis because it has to be, to be applied to the bus for

8 a period of time, but I don't know if that's the kind of

9 storing you have in mind. You wouldn't use a device like

10 this generally to store information for long-term 11:44:39

11 purposes.

12 Q. Okay. Page 144 of your declaration --

13 A. Uh-huh.

14 Q. -- paragraph 202, you state: "The KB0 through

15 KB7 signals are passed from the keyboard interface to the 11:44:56

16 CPU via data bus, DB, see Figure 2. This is shown in

17 more detail in Figures 4 and 5. In particular, Figure 5

18 shows that the signals KB0 through KB7 are passed from

19 the KB latch and control 94 to data buffer 96."

20 All that is an accurate and correct description 11:45:33

21 of Bakula?

22 A. Yes, that's accurate.

23 Q. Okay. And when KB0 to KB7 get to the CPU, they

24 still represent a character A as in the scenario that

25 we've discussed; correct? 11:46:47

1           A. Or at least the pressing of the keyboard  
2 character A.

3           Q. When the key code -- when the key code KB0  
4 through KB7 gets to data buffer 96 and the CPU, that key  
5 code already exists as a byte of data with a value                   11:47:52  
6 representing whatever the character is?

7           A. I think that's correct. Just one small thing:  
8 You -- no, I think that's correct.

9           Q. So in the '251 patent, in your analysis of Claim  
10 18, the passing step is passing the key code to the CPU;           11:48:44  
11 is that correct?

12          A. Yes, that's correct.

13          Q. The claim talks about detecting a first discrete  
14 signal, a second discrete signal, and then organizing  
15 them into an organized signal.                                       11:49:41

16           Do you recall that?

17          A. Yes.

18          Q. And in your analysis, you say the first and  
19 second discrete signal can be any two bits in the key  
20 code representing a character; is that correct?                   11:49:58

21          A. Yes, that's correct, at paragraph 198.

22          Q. Where does the step of detecting any two bits in  
23 the key code occur in Bakula?

24          A. Well, what I say starting at paragraph 200 is  
25 that the detecting step is when an interrupt is                   11:50:59

1 generated.

2 Q. And the interrupt is generated so that the CPU  
3 can read that by KB0 through KB7?

4 A. It's generated to inform the CPU that  
5 information is available to be read, in this case, the 11:51:29  
6 KB0-7 information.

7 Q. The entire key code -- strike that.

8 At that point in the process, the entire key  
9 code has already been read into data buffer 96; is that  
10 correct? 11:52:24

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

12 Q. So where is the key code at that point in time  
13 when the -- when the interrupt signal is sent to the CPU?

14 A. It's in latch 94.

15 Q. Okay. So the point when the interrupt signal is 11:52:46  
16 sent to the CPU, the key code KB0 through KB7 is stored  
17 as a byte in latch 94; is that correct?

18 A. Yes, that's correct.

19 Q. At that point in the process, the key code is  
20 already organized into a byte of data; correct? 11:53:27

21 A. Okay. So organized, if you're using it in the  
22 same way as the claim, means to arrange in a desired  
23 pattern. So there -- it's arranged in a desired pattern  
24 at that point. So I would say that at that point, it's  
25 organized. 11:54:23

1 Q. And at that point in time, there would be no  
2 need to detect individual bits in that byte because it's  
3 already been arranged; is that correct?

4 A. I don't -- I don't agree with that.

5 Q. The claim talks about detecting a first discrete 11:54:51  
6 signal and detecting a second discrete signal and  
7 organizing them into an organized signal; is that  
8 correct?

9 A. That's correct.

10 Q. And in your declaration, you state that the 11:55:23  
11 organized signal is the byte K0 through K7 representing a  
12 key code; correct?

13 A. Okay. So just repeat the question.

14 Q. Sure. And in your declaration, you state that  
15 the organized signal is the byte K0 through K7 11:56:23  
16 representing a key code.

17 Is that correct?

18 A. I don't know that I said it that way. I just  
19 said it's the data that's stored in the register of the  
20 CPU, for instance, or in memory, to be complete about it, 11:57:27  
21 at paragraph 207.

22 Q. So in your analysis -- in your analysis, you  
23 start with -- you start with the data word made up of KB0  
24 to KB7. That's where we started. Now my question -- and  
25 that came from the keyboard input; is that correct? 11:58:04

1 A. That's correct.

2 Q. So you completed your analysis. Tell me now  
3 what the organized signal is relating it to what you said  
4 was the input.

5 A. Okay. It says organizing information in the 11:58:24  
6 fourth element, to provide an organized signal at the  
7 receiver station. So the organized signal is the -- when  
8 it's stored in the data buffer, it's organized.

9 Q. Okay. Data buffer 96?

10 A. I'm sorry. No. 11:58:47

11 Q. Latch, you meant latch 94?

12 A. Let me back up. I started to read from here and  
13 I got myself confused.

14 I said the data -- so as an example, I said the  
15 data read from the data buffer 96 is organized when it is 11:59:12  
16 stored in a register of the CPU or memory, RAM M. I'm  
17 saying that in 207.

18 Q. And where is that in your declaration?

19 A. I'm sorry, page 146, paragraph 207.

20 (Interruption in proceedings.) 11:59:51

21 THE WITNESS: And just give me another moment  
22 here. So that's one example of an organized signal, but  
23 stored in the register of the CPU.

24 Q. BY MR. SCHREINER: That's the example that you  
25 gave corresponding to the input that was from the 12:00:16

1 keyboard; correct?

2 A. I think that's correct.

3 Q. Okay. And that data byte that's read into the  
4 CPU register is the same data byte that was in latch 94  
5 that we talked about before; correct? 12:00:50

6 A. It's contains the same bits of information, but  
7 it might be different for a number of reasons from 94.

8 Q. But if we have K0 through -- KB0 through KB7  
9 representing the letter A in latch 94, that same set of  
10 bits would pass through the data buffer 96; is that 12:01:26  
11 correct?

12 A. That's correct.

13 Q. Okay. And when the CPU requests it, that same  
14 set of bits would be passed to the CPU register; is that  
15 correct?

16 A. I think that's correct. The same set of bits,  
17 the same pieces of information, yes.

18 Q. KB0 through KB7?

19 A. Right, those bits.

20 Q. On the -- is it correct that -- the claim talks 12:02:02  
21 about generating an image locally by processing prestored  
22 user-specific data in response to the organized signal.  
23 I'm paraphrasing, but is that your understanding of the  
24 claim?

25 A. May we take a little break here? 12:02:45

1 MR. SCHREINER: Sure, sure.

2 THE WITNESS: You're shifting to some --

3 Q. BY MR. SCHREINER: Yeah, we can answer --

4 A. Do you want me to answer that particular --

5 Q. No, that's fine. 12:03:03

6 (Recess.)

7 Q. BY MR. SCHREINER: Dr. Neuhauser, the fifth

8 element of the claim talks about generating an image

9 locally by processing user-specific data in response to

10 the organized signal. Is that your understanding of that 12:14:06

11 claim element?

12 A. That's correct. That's my understanding.

13 Q. In your application of Bakula to Claim 18, what

14 is the locally generated image created based on

15 processing prestored user-specific data? 12:14:35

16 A. Just give me a minute to read over the claim.

17 I just want to just ask you about the question.

18 You said locally generated image, and I just didn't see

19 that in the claim. That's why I was checking.

20 Q. Sure. 12:17:02

21 A. You know, some of these claims -- and it may be

22 even not in this one or in some other part -- have

23 locally generated image, and I just don't want it to be

24 confused.

25 Q. Sure. No worries. 12:17:14

1 A. So maybe ask the question again and --

2 Q. Sure. Do you understand the fifth element to be  
3 talking about generating an image at the receiver station  
4 by processing user-specific data in response to the  
5 organized signal? Is that your general understanding of 12:17:31  
6 that claim element?

7 A. Generally, yes, yes. It's kind of a  
8 condensation of the claim element.

9 Q. What is the image that is generated by  
10 processing user-specific data in response to the 12:17:53  
11 organized signal in your analysis?

12 A. Okay. So what I said in 213, with respect to  
13 the step of generating, I said the image that is  
14 generated is the presentation on the screen of the  
15 editing terminal CRT, see Figure 2. In particular, it is 12:18:40  
16 the image of a retrieved news story or article that is  
17 currently being modified by the user.

18 Q. So the claim refers to generating an image by  
19 processing user-specific data in response to the  
20 organized signal. What would be the image in Bakula 12:19:23  
21 created by processing user-specific data in response to  
22 the organized signal?

23 A. It would be a story that the person's currently  
24 editing, the editor, whoever is sitting at the terminal.

25 Q. And the organized signal would be -- is key code 12:19:52

1 inputs at the keyboard?

2 A. Well, the organized signal is further  
3 downstream. It would be what's stored in the register of  
4 the -- of the CPU. It comes from there, but the  
5 organized signal is what's in that register. 12:20:16

6 Q. But in your -- in your analysis, the organized  
7 signal is a signal that results from the editor editing  
8 the story using the keyboard; is that correct?

9 A. The organized signal?

10 Q. Yes, sir. 12:20:34

11 A. Yes, I think that's correct.

12 Q. And in your analysis, what is the user-specific  
13 data that's processed to generate the image? Let me  
14 short-circuit this.

15 A. Okay. 12:21:09

16 Q. Would the image be an updated news story that's  
17 been updated from an original news story that corresponds  
18 in your analysis to the user-specific data?

19 A. I think that's correct. That would be one  
20 example. 12:21:41

21 Q. Okay. So let's say I want to organize this  
22 discussion. So in Bakula, there's a dual display mode;  
23 correct?

24 A. Yes.

25 Q. Okay. And so we've got a left-hand side display 12:22:04

1 or a left-hand side window and a right-hand side display;  
2 correct?

3 A. That's correct.

4 Q. So I'm going to be referring to the left-hand  
5 side and the right-hand side. You understand that? 12:22:21

6 A. Okay.

7 Q. And in your analysis of Bakula against Claim 18,  
8 the outputted presentation involves some news story  
9 that's, let's say, on the left-hand side and then a news  
10 story on the right-hand side that's being actively 12:23:00  
11 edited; is that correct?

12 A. Yes, I think that's correct.

13 Q. So for our discussion, I'm going to talk about  
14 news story A, which if it's displayed, is on the  
15 left-hand side. 12:23:16

16 A. Okay.

17 Q. And news story B, which if it's displayed, is on  
18 the right-hand side.

19 A. Okay.

20 Q. Maybe we ought to do a very simple exhibit? 12:23:30

21 MR. SCHREINER: Let's mark this as PMC  
22 Exhibit 2005C.

23 (PMC Exhibit 2005C, Diagram, marked for  
24 identification.)

25 Q. BY MR. SCHREINER: So I've prepared an exhibit, 12:25:04

1 hand-drawn exhibit to illustrate the Bakula output at  
2 Bakula's dual display corresponding to Dr. Neuhauser's  
3 analysis. It's been marked as PMC Exhibit 2005C, and I'm  
4 going to hand it to Dr. Neuhauser.

5 A. Okay. 12:25:29

6 Q. So we have there an illustration of the Bakula's  
7 dual-mode display with the left-hand side and a  
8 right-hand side, and we've actually got three successive  
9 displays that are shown, time one, time two, time three.

10 A. Okay. 12:25:57

11 Q. Does the demonstrative that I prepared make  
12 sense to you at this point?

13 A. At this point, yes.

14 MR. TOUTON: Just so I'm clear one, two and  
15 three are times in that order? 12:26:14

16 MR. SCHREINER: I think so.

17 MR. TOUTON: Okay. Trying to avoid confusion.

18 MR. SCHREINER: The word "ad hoc" does not apply  
19 here.

20 Q. So in your analysis -- and we just discussed 12:26:32  
21 that we've got two news stories. We've got news story A  
22 and news story B.

23 A. Okay.

24 Q. News story A is the one that you refer to as  
25 being the -- the image that's ultimately displayed in the 12:26:49

1 coordinated display.

2 A. Okay.

3 Q. So it's a story that's been retrieved, but it's  
4 not being edited. Does that make sense?

5 A. Okay, that's A? 12:27:07

6 Q. That's A.

7 A. Okay.

8 Q. And then news story B is the one that is being  
9 edited.

10 And yeah, you can go ahead and write that on 12:27:15  
11 there.

12 A. (Indicating) okay.

13 Q. And I'd like to refer to the edited version of B  
14 as B-plus.

15 A. Okay. May I ask a question? 12:28:07

16 Q. Certainly.

17 A. So I wrote down B as being edited. In this  
18 hypothetical B is something that has been edited before  
19 or has never been edited or --

20 Q. You know, I think you describe in your 12:28:28  
21 declaration that B is a story that's been pulled down,  
22 and it could be the story that, you know, was just pulled  
23 down, and now it's going to be edited. But really it  
24 could be B at any point in time.

25 Do you follow me? 12:28:46

1 A. Okay. I think I follow it.

2 Q. Okay. Let's say it's B when it's first pulled  
3 down from the host by the editor.

4 A. Okay. Okay. I think I've got it.

5 Q. Okay. So in your analysis, the locally 12:29:16  
6 generated image -- excuse me.

7 In your analysis, the image that's generated by  
8 processing the user-specific data, that is going to be  
9 the updated story on the right-hand side B-plus; is that  
10 correct?

11 A. I believe that's correct. You're talking about  
12 B-plus now?

13 Q. Yes.

14 A. That would be a story after some editing has  
15 occurred to it, and I would call that the -- I'm 12:30:29  
16 referring to that as the generated image or the claim  
17 refers to it as the generated image.

18 Q. Right.

19 A. At paragraph 213.

20 Q. So I'm trying to understand the analysis that 12:30:57  
21 you carried out. Is it correct that in the first  
22 display, you would have -- and don't write anything yet  
23 until you tell me this is what it was -- that you have A  
24 on the left-hand side and B on the right-hand side?

25 A. Did I have that or is that what you're 12:31:21

1 proposing?

2 Q. I'm asking you did you have that.

3 A. Oh.

4 Q. What I'm trying to get you to do is walk me  
5 through the sequence of your analysis. A news story 12:31:33  
6 and -- on the left-hand side and on the right-hand side,  
7 a story that's being edited.

8 A. The only reason I was kind of -- I didn't say  
9 left or right, I don't think, in the --

10 Q. No, that's correct. 12:31:47

11 A. Okay. I always thought that the one being --  
12 I'm sorry to say this, but I always thought that the one  
13 on the left was the one being edited and the one on the  
14 right was something that hadn't been edited, perhaps.  
15 But if you want to switch them, that's fine, as long as 12:31:59  
16 we're clear.

17 Q. Yep.

18 A. That's just the way I thought about it.

19 Q. Okay. So in your analysis, before the image is  
20 generated -- 12:32:25

21 A. Okay.

22 Q. -- what is shown on the display?

23 A. Before said generated image --

24 Q. Yes, sir.

25 A. -- is generated? 12:32:39

1 Q. Yes, sir.

2 A. Okay. It could be a news story that had been  
3 retrieved that was about to be edited. And there may or  
4 may not be a news story on the right side, but I think in  
5 general, I thought that there was one on the right side. 12:32:58

6 Q. Bear with my orientation on this. So the  
7 editing is being done on the right-hand side and the --

8 A. Oh.

9 Q. -- basically the static story is on the  
10 left-hand side? 12:33:17

11 A. Okay. Going with your -- yes, yes. So the  
12 generated image would be on the right-hand side.

13 Q. Right.

14 A. Okay.

15 Q. So your terminology from last time, I think you 12:33:28  
16 said there's a hot side and a cold side of the dual  
17 display; is that correct?

18 A. Yes, but it's not fixed. It switches.

19 Q. Right. So the side that's being edited is the  
20 hot side? 12:33:45

21 A. That's correct right.

22 Q. So we're saying the hot side is the right-hand  
23 side.

24 A. Okay.

25 Q. All right. So going back to the original 12:33:52

1 question, in your analysis, before the claimed image is  
2 generated, what is shown on the display?

3 A. The whole display?

4 Q. Yes, sir.

5 A. Okay. Well, on the right side would be the -- a 12:34:08  
6 story that perhaps has not been edited or one that's been  
7 edited to a certain point.

8 Q. So that would be our starting point. That would  
9 be B; correct?

10 A. In this, yes, that would be B. 12:34:28

11 Q. Okay. So can you write B in the right-hand side  
12 of the top one?

13 A. Okay (Indicating).

14 Q. And what would be on the left-hand side of the  
15 display? 12:34:48

16 A. Okay. Okay. So the -- in this case, left-hand  
17 side could be A. Okay? Because it's the -- I said here  
18 219. Okay, in this example, the terminal will be used in  
19 dual-screen mode which will allow the user to have two  
20 articles -- it's missing this -- two articles displayed 12:36:11  
21 side-by-side. The first article, which might be a news  
22 wire story or a previously written story will be the  
23 video image, and the generated image is the story that  
24 the user is currently modifying.

25 So A would be -- 12:36:37

1 Q. If I could trouble you, let's use a pen for this  
2 because it's going to be copied and --

3 A. Oh, sure (Indicating).

4 Q. So on the left-hand side is A. Okay?

5 A. (Indicating) okay. 12:37:05

6 Q. Okay. Now is it correct that the next step in  
7 your analysis is that story -- edited story B-plus is  
8 created as the user makes edits?

9 A. That's correct.

10 Q. So in the next at time two, is it correct that 12:37:25  
11 there would be a B-plus in the right-hand side?

12 A. That's what I have in mind.

13 Q. Okay.

14 A. Do you want me to mark that?

15 Q. Please. 12:37:41

16 And on the left-hand side, is it correct that  
17 it's still A because in your analysis you're working on  
18 the right-hand side, the hot side; is that correct?

19 A. Yes.

20 Q. Okay. If you could write that in at time two. 12:38:06

21 A. (Indicating.)

22 Q. And you'd say that's generally consistent with  
23 the analysis that you set forth regarding the generated  
24 image and the received image that are output in this  
25 claim; is that correct? 12:38:45

1 A. Yes, I think that's correct.

2 Q. Okay. In the sixth step of the claim, it refers  
3 to outputting a sequential presentation of a video image,  
4 followed by a coordinated display of the generated image  
5 and that video image. 12:39:51

6 Is that your understanding of Step 6 of  
7 Claim 18?

8 A. Just say it one more time.

9 Q. Sure. In the sixth step of Claim 18, it refers  
10 to outputting ing a sequential presentation of first a 12:40:06  
11 video image, followed by a coordinated display of the  
12 generated image and the video image.

13 Is that your understanding of Step 6?

14 A. Well, I think there's some -- there's some  
15 dispute about firstly and secondly. 12:40:42

16 Q. Okay. Disregard the first -- do you --

17 A. Uh-huh. Because it's in your question,  
18 that's -- but go ahead. I haven't answered your  
19 question, obviously, so -- you may have another one or --

20 Q. No. Tell me what your understanding is of Step 12:41:01  
21 6 of Claim 18.

22 A. Okay. My understanding is that you have two  
23 things on the display. One is a video image and one is a  
24 generated image, and together they form a coordinated  
25 image. A coordinated display, rather. 12:41:42

1 Q. Okay. And that's the -- that's a passage that  
2 follows in the claim, "Secondly, a coordinated display  
3 using said generated image and said video image." Is  
4 that correct?

5 A. That's correct. 12:42:12

6 Q. And there's an earlier part of the claim where  
7 it says the video presentation has firstly a video image.

8 Do you see that?

9 A. Yes.

10 Q. What's your understanding of that part of the 12:42:28  
11 claim?

12 A. That the output has an image, a video image,  
13 includes a video image.

14 Q. And that's the same video image that is  
15 presented in the coordinated display; correct? 12:43:01

16 A. That's correct.

17 Q. And does this bring to mind the Wall Street week  
18 scenario discussed in the Harvey patents, where first  
19 there is a display of a graph received in the broadcast  
20 showing a performance of the Dow, and then second, that 12:43:40  
21 graph is combined with a graph showing the user's stock  
22 performance which has been locally generated?

23 A. I think there's a relationship because I use  
24 that example in the first part of my report to kind of  
25 give a sort of concreteness to the sort of the general 12:44:22

1 flavor of the claims.

2 Q. Okay. So in the diagram that you've marked up,  
3 which is PMC Exhibit 2005C, which of those displays  
4 corresponds to the first part of Step 6 of the claim?

5 A. Well, when I wrote this, I would say that the 12:45:13  
6 middle display was what I had in mind, but you said the  
7 first part?

8 Q. Yeah.

9 A. Maybe I'm misunderstanding what you're asking.

10 Q. Sure. So Claim 6 says: "Displaying firstly a 12:45:31  
11 video image, and secondly, a coordinated display."

12 A. Okay.

13 Q. So the first part of that claim element, what  
14 does that correspond to in exhibit -- PMC Exhibit 2005C?

15 A. You're asking what does the video image -- 12:46:00

16 Q. I'm trying to read the claim. We walked through  
17 your analysis.

18 A. Sure.

19 Q. And we've shown the dual display of Bakula and  
20 essentially how you analyzed Bakula against the claim. 12:46:16

21 A. Uh-huh.

22 Q. So now I've got the claim language --

23 A. Okay.

24 Q. -- and I'm trying to understand how the claim  
25 language actually relates to what you marked up. 12:46:26

1 A. Sure.

2 Q. So in the claim where it says: "The video  
3 presentation comprises firstly a video image."

4 Do you see that part?

5 A. I see that. 12:46:35

6 Q. Okay. Where is that on the Exhibit 2005C?

7 A. The video image is A.

8 Q. Which display is it, though?

9 A. Either display. It's A.

10 Q. So exhibit -- on the exhibit -- on the exhibit, 12:46:52  
11 is that first part was shown at time one on the exhibit?

12 A. No, that's not the way I -- you asked me what  
13 I -- what I was saying in my report. That's not what I'm  
14 saying. I'm saying A is the video image.

15 Q. Right. 12:47:32

16 A. The video presentation is, say, time two.  
17 That's a video presentation.

18 Q. Right. And Bakula bears the display is a dual  
19 display; right?

20 A. That's right. 12:47:47

21 Q. A left-hand side and a right-hand side?

22 A. That's correct.

23 Q. Okay. So what is Bakula displaying in your  
24 analysis for the firstly a video image?

25 A. It's displaying A. It's a part of the 12:48:08

1 presentation.

2 Q. So it's displaying A on Bakula's dual display;  
3 is that correct?

4 A. That's correct.

5 Q. And in our scenario, that's A on the left-hand 12:48:19  
6 side; right?

7 A. That's correct.

8 Q. Okay. What's -- at that point, what's on the  
9 right-hand side of Bakula's dual-mode display?

10 A. Well, with respect to the -- this sixth element 12:48:33  
11 of the claim, what's on the right-hand side is a story  
12 that has been edited at least once, let's say.

13 Q. You're sure? I think I might be -- we might be  
14 getting our wires crossed.

15 So the claim says -- let me back up. 12:49:01

16 So we talked about there being two stories. One  
17 story is story A. It's not being edited, and it's on the  
18 left-hand side. The other story is story B. That's the  
19 one that's being edited; correct?

20 A. That's correct. 12:49:22

21 Q. And it's on the right-hand side?

22 A. That's correct.

23 Q. And the claim, the second part of the claim says  
24 a coordinated display using the generated image and said  
25 video image. 12:49:38

1 Do you see that?

2 A. Yes.

3 Q. Okay. Said generated image in your analysis is  
4 the edited story, B-plus; correct?

5 A. That's correct. 12:49:49

6 Q. So in the second part of the claim, we've got  
7 B-plus on the right-hand side, and we've got A on the  
8 left-hand side of Bakula's display?

9 A. That's correct.

10 Q. So in the exhibit, the second part of Step 6 12:50:01  
11 corresponds to the display that's shown at time two;  
12 correct?

13 A. That's what I had in mind when I wrote this.

14 Q. Okay. So can you circle just an oval, circle --  
15 or draw -- if you could, draw an arrow to the right here 12:50:32  
16 of time two and write "coordinated display."

17 A. You want me to circle the coordinated display or  
18 do you want me to --

19 Q. Yeah. You can do that, yeah. Try to keep it  
20 neat. 12:50:54

21 And can you put just before it, it says language  
22 from the claim, you know, secondly, a coordinated  
23 display. So I think you wrote --

24 A. I'm a little lost about what you want me to do  
25 now. 12:51:32

1 Q. Yeah, sure. So the second part of the claim  
2 says: "Secondly, a coordinated display." And you wrote  
3 "coordinated display."

4 A. Right.

5 Q. So all I wanted to do was append that, add to 12:51:42  
6 the before it, "secondly, A" so it reads secondly A  
7 coordinated display, just like the claim.

8 A. I'm going to do this.

9 Q. Sure.

10 A. I'm just going to cross that out (indicating). 12:51:58

11 Q. Yeah, that's fine.

12 A. And then I'm going to write down "secondly."

13 Q. Okay. And put quotes around it, if you would.

14 A. I did that.

15 Q. Okay. Right. 12:52:28

16 Okay. So --

17 A. I didn't do that, of course, in my report.

18 Q. No, I understood.

19 A. Because in my report I refer to that as a  
20 coordinated display. There's two pieces to it, a first 12:52:37  
21 piece and a second piece. Okay? There's obviously a  
22 dispute here about whether it's a first piece and a  
23 second piece or a first displayed piece and a second  
24 displayed piece. And the board has looked into that and,  
25 you know, they think there's a dispute there. 12:52:57

1 Q. Let's just keep working with the way you  
2 analyzed Bakula as we've set it down on this exhibit.

3 A. And so all I would say is, is that the way I  
4 first drew it is the way I thought about it when I wrote  
5 this. 12:53:17

6 Q. Yep. That's fine.

7 A. As a coordinated display, and that's the  
8 coordinated display for the reasons I set down. I didn't  
9 take it to be a secondly coordinated display, as  
10 you're -- I wrote down here. So I didn't want there to 12:53:31  
11 be any confusion.

12 I'm only writing "secondly coordinated display"  
13 because you asked me to write that down, not because  
14 that's what I used in the report.

15 Q. Okay. So in your report, there is claim 12:53:46  
16 language that says: "And secondly, a coordinated display  
17 using the generated image and said video image."

18 Correct?

19 A. That's correct.

20 Q. And is it correct that the coordinated display 12:54:42  
21 using said generated image and said video image in your  
22 analysis corresponds to time two on Exhibit 2005C?

23 A. It corresponds to what's shown here as time two.  
24 I'm -- I don't know if that's what you're asking; right?  
25 It's what I said coordinated display is what's shown at 12:55:10

1 time two, irrespective of what time one and time three  
2 show.

3 Q. Yes.

4 A. That's what I'm -- is that your question?

5 Q. That's how I understand it, yeah. 12:55:23

6 A. Okay.

7 Q. So am I -- is it correct that the claim says in  
8 Step 6, "Outputting said video presentation, said video  
9 presentation comprising firstly a video image."

10 A. Okay. 12:55:49

11 Q. What does that correspond to Exhibit 2005C?

12 A. Well, the video image -- I mean, sorry, the  
13 video presentation includes a video image. That's A.

14 Q. So it's time one on the diagram?

15 A. No, it's just A on -- 12:56:12

16 Q. It's A at time one?

17 A. Ask it again. Maybe I'm missing something.

18 Q. Okay. The video image is the generated --  
19 excuse me.

20 The video image is A, story A; correct, in our 12:56:44  
21 discussion here?

22 A. That's correct.

23 Q. And the claim says there's a video presentation  
24 comprising firstly a video image.

25 A. Okay. 12:57:05

1 Q. So that means firstly, story A; is that correct?

2 A. It said includes a video image, yes. That video  
3 image is A.

4 Q. And this is a method claim reciting actions;  
5 correct? 12:57:28

6 A. That's correct.

7 Q. Okay. Show me on Exhibit 2005C where Bakula is  
8 presenting firstly a video image.

9 A. For example, the thing I've circled at time two,  
10 A, is the video image. It's being presented. 12:57:58

11 Q. Is that what you're describing there? Is  
12 that -- is that where your analysis took you? In other  
13 words, that the -- that a single display of a story A on  
14 one side and an updated story B-plus on the right-hand  
15 side, that that signal display meets the limitation of a 12:58:40  
16 video presentation comprising firstly a video image, and  
17 secondly, a coordinated display using said generated  
18 image and said video image?

19 A. That's correct. I mean, that's -- when I wrote  
20 this, it is a video presentation. Okay? In the broadest 12:59:01  
21 reasonable sense of the word. And it has two parts, and  
22 they form a coordinated image.

23 Q. So the answer to my question is "yes"?

24 A. I think that's correct, yes. There's another  
25 way of looking at it, of course, which is what the patent 12:59:23

1 office looked at. They thought --

2 Q. I'm focusing just on your report.

3 A. Okay, sure.

4 Q. Is the firstly and secondly, does that -- did

5 you understand that to be a time sequence? 12:59:57

6 A. When I wrote the report?

7 Q. Yes, sir.

8 A. No, because I was thinking in broader terms. I

9 was thinking in terms of a presentation being a static

10 presentation, for example. So in that case, firstly and 13:00:09

11 secondly wouldn't necessarily tell you that it was a time

12 sequence. They would just say it has a first part and a

13 second part.

14 Because a video presentation in its broadest

15 reasonable interpretation doesn't have to be like a film. 13:00:28

16 It can be like a presentation. It's just what you see on

17 the screen.

18 Q. Sure.

19 A. So that's the way I looked at it. I think

20 there's a narrower interpretation that might include time 13:00:45

21 sequence, and Bakula would fit that, too.

22 Q. So in your analysis, where firstly meant a first

23 part of a static image, and secondly, that would refer to

24 a second part of a static image; is that correct?

25 A. That's what I had in mind, yes. Not of a static 13:01:16

1 image, but of a video presentation. But it could be  
2 static. Is that -- yeah, I think that's correct.

3 Q. So in your analysis, where firstly and secondly  
4 means a first part and a second part of a display and --  
5 and the story A that's on the left-hand side --

13:01:47

6 A. Okay.

7 Q. -- at time two is the video image?

8 A. That's correct.

9 Q. And it's also at the same time part of the  
10 coordinated display; is that correct?

13:02:07

11 A. That's correct.

12 Q. So story A in Exhibit 2005C is both the video  
13 image and also the video image that's part of a  
14 coordinated display using the generated image with it?

15 A. Yes, that's correct.

13:02:43

16 Q. If we go to a -- isn't it correct in Bakula the  
17 left-hand side and the right-hand side of the displays  
18 are updated independent of one another by the Bakula  
19 terminal?

20 A. Updated, you mean by editing? Is that -- or --  
21 what part? What do you mean by "updating," I guess.

13:03:32

22 Q. Okay. Well, if the -- there's a hot side and a  
23 cold side --

24 A. Okay.

25 Q. -- in the Bakula display; correct?

13:03:51

1 A. That's correct.

2 Q. That's your terminology; correct?

3 A. He may use "hot side," but I don't think he used  
4 "cold side." So it's my terminology.

5 Q. The hot side is the side that's active, and if 13:04:02  
6 there's any updates to the display, it's going to be on  
7 the hot side?

8 A. I think that's correct.

9 Q. So if the editor is looking on the left-hand  
10 side, and that's the hot side, and it makes updates to 13:04:26  
11 the story, then that hot side is going to be updated, and  
12 the other side will remain the same; correct?

13 A. That's correct.

14 Q. And it goes the other way; right? If he's  
15 working on the right-hand side as the hot side and making 13:04:52  
16 changes, then that won't affect the display on the  
17 left-hand side, which is the cold side in that scenario?

18 A. That's correct.

19 Q. You referred to a claim construction issue with  
20 regards to Step 6 of Claim 18, and I think you were 13:05:14  
21 saying that another way of reading it, instead of firstly  
22 and secondly referring to a first portion and a second  
23 portion, the firstly and secondly could refer to a  
24 sequence of displays; is that correct?

25 A. That's -- yes, that is another reading of it, 13:05:34

1 which in my view is narrower, but that's another reading.

2 Q. Okay. Did you -- did you consider that as part  
3 of your report?

4 A. When I wrote the report, I did not consider it  
5 in that way. 13:05:54

6 Q. If -- if we -- what I'd like to do is ask you  
7 what the -- what the presentation would look like in the  
8 scenario where it's a sequence in Step 6.

9 A. Okay. Sure.

10 MR. SCHREINER: Okay. So do another diagram. 13:06:54  
11 This shouldn't take long. Okay. And this will be marked  
12 as PMC Exhibit 2006C.

13 (PMC Exhibit 2006C, Diagram, marked for  
14 identification.)

15 Q. BY MR. SCHREINER: So -- 13:07:54

16 A. Hang on one second here.

17 Q. Sure.

18 A. Let me just look through these exhibits. Let me  
19 ask a question.

20 Q. Sure. 13:08:09

21 A. What is Exhibit 2004C?

22 Q. That's the -- that's the board decision granting  
23 the IPR.

24 A. For which patent?

25 Q. The '251. This one. 13:08:23

1 A. (Indicating.)

2 Q. Uh-huh.

3 MR. TOUTON: Look at the label.

4 MR. SCHREINER: Oh. Okay. Let me -- I'll fix

5 that at the break. Thanks for catching that. 13:08:48

6 MR. TOUTON: Do you want the correct one?

7 THE WITNESS: May I have the correct one?

8 MR. SCHREINER: Let's go off the record for just

9 30 seconds here.

10 (Discussion off the record.) 13:09:22

11 Q. BY MR. SCHREINER: So back on the record.

12 So, Dr. Neuhauser, I was asking you about the

13 other interpretation of Step 6 of Claim 18 of the '251

14 patent where firstly and secondly referred to a sequence

15 of images that are presented. 13:10:49

16 A. Okay.

17 Q. In that scenario, the second part of Claim 6,

18 where it says: "Secondly a coordinated display using

19 said generated image and said video image."

20 A. Okay. 13:11:09

21 Q. Do you see that?

22 A. I see that.

23 Q. What would that refer to in Exhibit -- PMC

24 Exhibit 2005C, the one you already marked up?

25 A. This one. Well, I think the secondly step could 13:11:28

1 be time two.

2 Q. Okay. So could you write that into the new  
3 exhibit. So that's A on the left-hand side and B-plus on  
4 the right-hand side.

5 A. In time two? 13:11:45

6 Q. Yes, sir.

7 A. And what -- I'm not going to rewrite the  
8 notation.

9 Q. No, no. That's all right.

10 A. We'll just remember that it's from the previous. 13:11:55

11 Q. Okay. If that would be your understanding of  
12 what the coordinated display would be in this reading,  
13 then yeah, I'd ask you to annotate it with "coordinated  
14 display."

15 A. Okay. 13:12:33

16 Q. Okay. So now the first part of the claim, the  
17 first part of the sequence --

18 A. Okay.

19 Q. -- in this analysis says "firstly a video  
20 image." 13:12:47

21 A. Okay.

22 Q. Can you tell me what that would be on  
23 Exhibit 2006C?

24 A. And this is in the context of a sequence in  
25 time? 13:13:02

1 Q. Yes, sir.

2 A. So the video image would be, for example, A.

3 Q. Okay.

4 A. Would be something like this.

5 Q. Just hold off one sec. So A would be in the 13:13:18  
6 left-hand side?

7 A. That's correct.

8 Q. A is just a story that was pulled down?

9 A. Okay. Yes.

10 Q. What's in the right-hand side? 13:13:31

11 A. It could be B, for example.

12 Q. What else could it be?

13 A. It's possible it's nothing, it's blank. That's  
14 another possibility.

15 Q. Okay. How about if we put "B/0" to represent -- 13:13:49  
16 well, no, before you write it down, I want to make sure  
17 you understand it.

18 A. Yeah. Go ahead.

19 Q. You're saying on the right-hand side, it could  
20 be at time one -- 13:14:04

21 A. I see.

22 Q. -- it could be B or it could be nothing. That's  
23 what you just testified; correct?

24 A. That's right. I see.

25 Q. So if that's correct, I would propose writing on 13:14:11

1 the right-hand side "B/0," meaning that it's either B or  
2 it's nothing.

3 A. It's nothing -- I see. I see.

4 Q. Okay.

5 A. It's good you stopped me. 13:14:25

6 Q. Do you understand?

7 A. I do, yeah.

8 Q. And that's consistent with what you just  
9 testified what could be on the right-hand side; correct?

10 A. That's correct. So something like this? 13:14:35

11 Q. Yes.

12 A. It's good you stopped me because I was going to  
13 write B with a slash through it and a zero underneath it.  
14 So -- okay. I've just written B/0 on the right-hand  
15 side. 13:15:00

16 Q. So -- so let's take the -- let's take the first  
17 branch, which is that at time one you've got A on the  
18 left-hand side and B on the right-hand side.

19 A. Okay.

20 Q. Does that meet the claim requirement for firstly 13:15:23  
21 a video image?

22 A. It does.

23 Q. And it does because? Explain for me, please.

24 A. It says the video presentation comprising  
25 firstly, it includes a video image, A. 13:15:47

1 Q. And you say it. "It" is what?

2 A. The video -- so I think what you have in mind  
3 here is a video presentation comprising. So it -- time  
4 one, it includes A.

5 Q. And what is -- what is the display that Bakula 13:16:06  
6 is presenting in time one? What's the whole display?  
7 What's Bakula showing?

8 A. Time one?

9 Q. Yes, sir.

10 A. One of two things: Either A with B or A with 13:16:18  
11 nothing.

12 Q. Okay. And we're focusing on the first scenario.  
13 So it's at time one, we've got A with B, A on the  
14 left-hand side and B on the right-hand side; correct?

15 A. Okay. 13:16:40

16 Q. Am I correct?

17 A. That's correct.

18 Q. And your position would be that that meets the  
19 limitation of a video presentation comprising firstly a  
20 video image, where the video image is A; is that correct? 13:16:58

21 A. That's correct.

22 Q. Even though the display is showing A and B?

23 A. Because it has "A" on it.

24 Q. Okay. Now let's take your second scenario,  
25 where we said that at time one, it could be A on the 13:17:21

1 left-hand side and nothing on the right-hand side.

2 A. Okay.

3 Q. That would certainly seem to meet the first step  
4 of firstly a video image; correct?

5 A. I think that's one scenario. 13:17:37

6 Q. I mean, would that be correct?

7 A. Yes. Yes, that would be correct.

8 Q. So at time one we've got A on the left-hand side  
9 and zero, meaning nothing, on the right-hand side;  
10 correct? 13:17:56

11 A. Correct. This is the second scenario.

12 Q. Yes, sir.

13 A. Okay.

14 Q. And our coordinated display at time two is A on  
15 the left-hand side with B-plus, the edited story, on the 13:18:10  
16 right-hand side; correct?

17 A. That's correct.

18 Q. Can you go directly from A and nothing to A,  
19 B-plus?

20 A. I think so. 13:18:46

21 Q. How would you do that?

22 A. Enter a character.

23 Q. Enter a character for what? Remember my  
24 question, I said directly. So I'm talking --

25 A. Then I'm lost. Okay, okay. 13:19:00

1 Q. We're talking about a sequence of displays in  
2 Bakula.

3 A. Okay.

4 Q. Right? And you know we've talked about this.  
5 We've got hot and cold sides. You make edits, these 13:19:12  
6 displays get updated; right?

7 A. Okay.

8 Q. Time one is one display showing the two sides.  
9 Time two is another display at a different time; right?  
10 Time three is another time. 13:19:28

11 A. Okay.

12 Q. Okay. And in this scenario we're talking about,  
13 they're sequential. You've got the display time one and  
14 then we've got the next display at time two.

15 A. Okay. 13:19:42

16 Q. Okay? And you said that time one, the other  
17 scenario was A on the left-hand side and zero, meaning  
18 nothing, on the right-hand side?

19 A. Okay.

20 Q. Is that correct? 13:19:55

21 A. That's correct.

22 Q. And you testified previously that the  
23 coordinated display, the second part of Step 6 --

24 A. Okay.

25 Q. -- is A on the left-hand side and B-plus on the 13:20:10

1 right-hand side; is that correct?

2 A. That's right.

3 Q. Could you go directly from nothing on the  
4 right-hand side to an edited B story on the right-hand  
5 side? 13:20:27

6 A. This is where we kind of lost -- I don't  
7 understand what you mean "directly." I said "yes"  
8 before, and I can explain why I said yes, but you didn't  
9 think that was what you had asked. So...

10 Q. Here's my question: Don't you have to -- isn't 13:20:44  
11 it true that you have to -- you would have to retrieve  
12 the B story first before you can get to B-plus?

13 A. If B is a story, a complete story, that is  
14 edited, you know, then modified -- a complete story that  
15 then is modified by, say, one character, that would be 13:21:14  
16 one way of doing it. I don't see any reason why you  
17 couldn't just start a story from nothing. That's why I  
18 said the right-hand side might be zero, might be blank.

19 Q. So you're saying -- so, okay, so now B-plus, the  
20 edited story, you're saying could actually be just 13:21:37  
21 pressing a single character, A, to start a new story?

22 A. That's how you -- that's how you edit things.  
23 You can start from nothing, if you wish or --

24 Q. I'm not asking you about what you could do.  
25 There's lots and lots of things you could do -- 13:22:03

1 A. Sure.

2 Q. -- in Bakula, as you know very well. What I'm  
3 asking you is what's your analysis, what's your expert  
4 opinion in this claim reading. Okay?

5 A. Uh-huh. 13:22:17

6 Q. So we go to first display that has A --

7 A. Okay.

8 Q. -- and then zero. We've got a second display,  
9 which is the next display, which is A and B-plus?

10 A. That's correct. 13:22:31

11 Q. Correct? How do you go from nothing to B-plus,  
12 B-plus meaning an edited story?

13 A. You would type a character or multiple  
14 characters, but you could type one character.

15 Q. So on the right-hand side of the screen, there's 13:22:51  
16 nothing showing, and if you type a single character, then  
17 that becomes an edited story?

18 A. Yes, that's correct.

19 Q. Okay.

20 MR. TOUTON: When you come to a stopping 13:23:24  
21 place --

22 MR. SCHREINER: Yeah, yeah, we're close.

23 THE WITNESS: It's lunchtime.

24 MR. SCHREINER: I'm trying to make it efficient,  
25 too. 13:24:08

1 Q. BY MR. SCHREINER: If you're -- sticking with  
2 this scenario we have from Exhibit 2005C --  
3 A. Okay.  
4 Q. -- in your coordinated display with story A on  
5 the left and edited story B -- B-plus on the right, the 13:24:18  
6 left-hand side, story A, is going to be unaffected by  
7 whatever the user does on the right-hand side with --  
8 with the B story; is that correct?  
9 A. You're -- I just wanted to check 2005C.  
10 Q. Yes, sir. 13:25:05  
11 A. Okay. Not 2006C, but...  
12 Q. 2005C. Yes, sir.  
13 A. In that scenario, that's correct.  
14 Q. So the presentation of A is not going to be  
15 affected by data that's entered for presentation B or 13:25:28  
16 story B on the right-hand side; correct?  
17 A. I'm just lost on presentation A.  
18 Q. Yeah, let me rephrase that.  
19 The display of story A on the left-hand side is  
20 not going to be affected by activity on the right-hand 13:25:53  
21 side by the user operating the keyboard; correct?  
22 A. Just read it back exactly like you asked it.  
23 Q. Sure. The display of story A on the left-hand  
24 side is not going to be affected by activity on the  
25 right-hand side by the user operating the keyboard; 13:26:20

1 correct?

2 A. Yes, I think that's correct.

3 MR. SCHREINER: Okay. We can take that break.

4 (Lunch recess.)

5 (PMC Exhibit 2002C, Exhibit PMC 2003C, 13:30:10

6 Exhibit PMC 2004C remarked.)

7 Q. BY MR. SCHREINER: Good afternoon,

8 Dr. Neuhauser.

9 A. Good afternoon.

10 Q. We're going to turn to the Hedges reference now, 14:15:01

11 which is Patent Number 4,339,798, previously marked as

12 Zynga Exhibit 1007C.

13 A. Okay.

14 Q. Your analysis starts on page 80 of your

15 declaration. 14:16:04

16 A. Okay. Thank you.

17 Q. Uh-huh. In your analysis of Hedges against

18 Claim 18 of the '251 patent, explain for me how Hedges

19 meets the step of organizing a first discrete signal with

20 a second discrete signal into an organized signal. 14:17:03

21 A. Just to make sure I heard you right. The patent

22 is Hedges? It sounded like you said "Hedger."

23 Q. Hedges.

24 A. Hedges. Okay.

25 And you asked me about the organizing step? 14:18:11

1 Q. Yes, sir.

2 A. Okay. So I said that the -- the organize  
3 signal, which is the resulting of organizing, is the  
4 game-specific command that results -- this is -- I'm  
5 reading from paragraph 137 at page 93. I said, "The 14:18:50  
6 organize signal is the game-specific command that results  
7 from the processor interpretation of column scan 77 and  
8 row scan 78 read from keyboard controller 73."

9 Q. And I'm sorry, which paragraph was that?

10 A. 137 on page 93. 14:19:13

11 Q. When you say the processor of -- strike that.

12 Can you walk me through the process from the  
13 keyboard -- excuse me.

14 Can you walk me through the process from the  
15 touchscreen 70 through the keyboard controller 73 and 14:19:57  
16 then onto CPU 41.

17 A. Okay.

18 Q. For when a consumer touches the screen.

19 A. Okay. Let's look at -- I think to answer your  
20 question what I'll do is I'll describe it in some kind of 14:21:55  
21 general way.

22 Q. Yeah.

23 A. And then maybe you'll have some specific  
24 questions rather than try to go through each piece of the  
25 claim. But I can tell you what the -- let's start with 14:22:05

1 Figure 3B.

2 And so when a player touches the touchscreen,  
3 it's called a capacititive matrix in the patent itself.  
4 So generally what happens in Figure 3B is the keyboard  
5 controller energizes the horizontal lines of the display 14:22:35  
6 sequentially, and then at a more rapid rate, it energizes  
7 the -- the scan line 78 that operates the analog  
8 multiplexor.

9 So if a player has pressed a cross-point, at  
10 some point a signal will be generated on line 55 that 14:22:59  
11 reflects the fact that -- at that -- at a certain point  
12 during the scan, there was a detected signal on 55, and  
13 that point in the scan is 78 and 77, whatever code is  
14 there or whatever number is there, that's then captured  
15 in the keyboard controller and register. So keyboard 14:23:23  
16 controller is not just any keyboard controller. It's  
17 actually a specific keyboard controller called an 8278.

18 And so that keyboard controller captures the  
19 scan point in a register, generates an interrupt, and  
20 that interrupt goes back to the processor. The processor 14:23:48  
21 then comes out and reads the keyboard controller. And we  
22 know that the processor is not just any processor, it's a  
23 particular processor. I can't remember whether it's an  
24 8088 or an 8085, but it's one of that family.

25 And so then that information is captured in the 14:24:06

1 processor A register. So that's the general description  
2 of what happens.

3 Q. Yeah. No, that's helpful.

4 So looking at Figure 3, keyboard controller, I  
5 believe is keyboard controller 73, is scanning the 14:24:48  
6 touchpad in order to detect when somebody has put  
7 pressure at a cross-point.

8 Is that a fair way to say it?

9 A. That's correct.

10 Q. And when keyboard controller 73 detects that 14:25:19  
11 situation, what is it going to receive from the scan  
12 lines 77 and 78 in Figure 3B?

13 A. So the scan lines are scanning in a sequential  
14 fashion. You can imagine they're just scanning the  
15 binary numbers from zero to 255 or something like that. 14:26:08

16 When a pulse is detected on line 55, the RL input, what  
17 happens is that the current scan of 78 and 77 is copied  
18 into a register at that point internal to the keyboard  
19 controller, and it's held there, and that then goes on  
20 and generates the interrupt. 14:26:36

21 Q. And what's copied to the register would be a  
22 byte representing the row and a byte representing the  
23 column?

24 A. I don't remember the specific details. I looked  
25 up the keyboard controller. I think it copies -- I think 14:26:59

1 it copies M0 to M6 into a single register, but I'd have  
2 to go back and look at the document for the 82 -- that's  
3 8278.

4 Q. What's copied into the keyboard controller is  
5 digital data; correct? 14:27:38

6 A. That's correct.

7 Q. Is it correct that it's two pieces of digital  
8 data, one piece representing the row and another piece  
9 representing the column?

10 A. Yes, that's correct. 14:27:58

11 Q. And the row and the column define the point on  
12 the display where the player has made a selection?

13 A. That's correct.

14 Q. So you've got the keyboard controller stores a  
15 digital code for the row and a digital code for the 14:29:32  
16 column; correct?

17 A. That's correct.

18 Q. And the keyboard controller sends some sort of  
19 an interrupt signal to the CPU 41; is that correct?

20 A. That's correct. That's what's shown on Figure 7 14:29:52  
21 at the very top of the page.

22 Q. And then the CPU will read the row code and  
23 column code out of the keyboard controller; is that  
24 correct?

25 A. That's correct. 14:30:33

1 Q. And the CPU reading the row code and column code  
2 could happen immediately or it could happen at -- after  
3 some period of time has elapsed depending on how busy the  
4 CPU is; is that correct?

5 A. It might depend on other things, but yes, that 14:31:16  
6 is correct, a period of time can elapse.

7 Q. In your analysis, what is the first and second  
8 discrete signals?

9 A. Okay. So what I said in paragraph 128, page 89,  
10 the first discrete signal -- I'm reading from the bottom 14:32:15  
11 of that page 89. "The first discrete signal is, for  
12 example, the signals on bus 77 corresponding to the  
13 column scan and the second discrete signal is for signals  
14 on 78 corresponding to the row scan."

15 Q. So the -- in your analysis, the first discrete 14:32:48  
16 signal and the second discrete signal would be the row  
17 code and column code; is that correct?

18 A. Yes, that's correct. Just give me one second  
19 here.

20 Q. Yeah, sure. 14:33:13

21 A. I think there might be a typo. I don't think  
22 it's going to make any difference, but I'll explain it to  
23 you.

24 Q. Uh-huh, sure.

25 A. I said the first discrete signal is the signals 14:33:31

1 on bus 77 corresponding to the column scan, but that's  
2 really the row scan on 77.

3 Q. Okay. So referring to Figure 3B in Hedges,  
4 you're saying that the first and second discrete signals  
5 would be -- 14:33:57

6 A. Oh -- give me a second here.

7 Q. Sure.

8 A. It's not going to make any difference, but...

9 I think we'll just have to leave it the way it  
10 is. It seems to be a -- maybe a mistake in Bakula, but 14:34:41  
11 Bakula says 77 is the column scan, and that's why I put  
12 it in there even though it looks like a row scan in the  
13 picture. But I don't think it makes any difference.

14 It's two discrete signals. One's related to one  
15 dimension with the display and one's -- or the 14:35:01  
16 touchscreen, and one's related to the other dimension.  
17 Let's just leave it.

18 Q. Yeah, I think that's fine. And when you said  
19 Bakula, you meant Hedges; right?

20 A. Hedges. Okay. 14:35:15

21 Q. So your analysis determined that the first and  
22 second discrete signals were a digital column code and a  
23 digital row code; correct?

24 A. That's correct.

25 Q. And you -- your conclusion is that those two 14:35:49

1 signals are organized when they are converted by the CPU  
2 into a command; is that correct?

3 A. That's correct.

4 Q. At the point that the CPU gets the digital code  
5 for the column, is that correct that that code is already 14:36:19  
6 organized?

7 A. Those bits just in the row signal is what you're  
8 referring to?

9 Q. In the digital row code, yes.

10 A. Yes, I believe they're organized according to 14:37:31  
11 the definition that the patent board set out, which I'm  
12 looking at page 92 and 93 of my report where I quoted it.

13 Q. Okay. And the digital code representing the  
14 column signal, that also is organized by the time it gets  
15 to the processor; correct? 14:38:14

16 A. That's correct.

17 Q. And the step in the patent claim that talks  
18 about receiving an information transmission with the  
19 first and second discrete signals, what did you identify  
20 there in Hedges? 14:39:32

21 A. Well, I said basically logic within keyboard  
22 controller 77 receive signals from column scan bus. Let  
23 me just read it. Paragraph 128: "Logic within keyboard  
24 controller 73 receives signals from column scan bus  
25 signals 77 and row multiplex bus signal 78. These 14:40:39

1 indicate the current capacitative cross point 70 that is  
2 currently being scanned."

3 Q. So tell me if I have this correct: The keyboard  
4 controller is going to be scanning these row and column  
5 lines, and if it detects an event, it will capture and 14:41:46  
6 store the codes representing row and column?

7 A. That's correct.

8 Q. And then the row code and column code will stay  
9 in keyboard controller until the CPU is able to read it  
10 out of the keyboard controller into its own memory; is 14:42:29  
11 that correct?

12 A. That's correct.

13 Q. When the CPU takes the row code and column code  
14 and converts it into a command, does it reorganize or  
15 change the pattern of bits in either of the row code or 14:43:25  
16 the column code?

17 A. Just read it one more time.

18 Q. When the CPU takes the row code and column code  
19 and converts it into a command, does it organize or  
20 change the pattern of bits in either the row code or the 14:44:59  
21 column code?

22 A. Well -- let me hear it one more time.

23 Q. When the CPU converts the row code and the  
24 column code into a command, does it also change the  
25 pattern of bits in either the row code or column code? 14:46:15

1           A. I don't think it changes the pattern of the  
2 signal as received in the register A of the CPU, but then  
3 it interprets it, and so that may, in fact, change it.

4           Q. Okay.

5           A. So... 14:46:41

6           Q. So it interprets it by converting the row code  
7 and the column code to a command; correct?

8           A. That's correct.

9           Q. But the CP didn't perform a separate operation  
10 of changing the pattern of bits in the row code and 14:46:57  
11 column code separate from the conversion?

12          A. No, I don't think it does.

13          Q. The process of the CPU converting a row and  
14 column code to a command that you referred to, is that  
15 essentially a lookup process where the CPU looks up a 14:47:45  
16 command corresponding to that row and column code for the  
17 particular game that's being played?

18          A. I don't know. That would be the most common  
19 way, but there are other ways.

20          Q. Reading the Hedges patent from the standpoint of 14:48:32  
21 a person of ordinary skill, can you describe for me how  
22 you believe the CPU undertakes the conversion of the  
23 touchpoint codes to a command?

24          A. I think a person of ordinary skill in the art  
25 would see that the -- that the CPU examines the code in 14:48:57

1 the A register -- maybe not immediately, but at some  
2 point -- and then uses that to determine what it will do  
3 next. And it has to do this because -- it's what I  
4 quoted here in page 93 starting -- it's from -- I'm not  
5 going to read it, but from Column 463 to Column 56, 14:49:33  
6 line 6 of the Hedges patent. It interprets the -- it  
7 says that it interprets the player's touch of a  
8 particular location differently for each keyboard  
9 display.

10 So to get the command for a particular game, it 14:49:55  
11 has to -- to interpret that based on what that particular  
12 game is. But the code would be the same in the A  
13 register, but the results of examining that would be  
14 different.

15 Q. Okay. 14:50:15

16 A. And a lookup table would be one common way.

17 Q. And that's the reason you used the word  
18 "interpret" here, but elsewhere you used the term  
19 "converts"; correct? Because the CPU is performing some  
20 sort of lookup function to convert the row and column 14:50:42  
21 codes to a command; is that correct?

22 A. Well, it's just a processor interpretation. A  
23 lookup of some sort would be appropriate there.

24 Q. Okay. And is it correct that for the same  
25 column row pair, that you would expect to see different 14:51:45

1 commands identified by the CPU for different games that  
2 are being played?

3 A. That certainly seems correct. Okay.

4 Q. What would be the form of the command that's  
5 identified by the CPU? 14:52:27

6 A. The form, whatever it requires to interpret that  
7 code.

8 Q. You say the CPU converts the touch data into a  
9 command; correct?

10 A. That's correct. But interprets it as a command. 14:52:54

11 Q. It interprets it as a command through some sort  
12 of lookup function; correct?

13 A. That's correct.

14 Q. What is the command? Is it a -- is it an  
15 instruction that's located at, you know, some part of 14:53:25  
16 memory or a series of instructions? Help me out. Help  
17 me understand what you mean.

18 A. Well, it starts as a -- as a code, and the CPU  
19 interprets that code and takes a different direction in  
20 each particular game depending on what the game is. 14:53:48

21 Obviously, roulette and keno are two different games. So  
22 punching in a play board in a certain place is going to  
23 result in a different action.

24 Q. Can you give me an example of a command?

25 A. Well, I think an example would be like in 14:54:26

1 roulette to -- you might touch the number zero to make a  
2 bet on zero.

3 Q. And so the command would be some sort of command  
4 by the CPU to cause a bet on zero to be stored and  
5 displayed? 14:54:54

6 A. Whatever the -- whatever the -- however the game  
7 is implemented, it would be to place a bet -- he does  
8 talk about when you punch a number, for example, your bet  
9 is acknowledged by blinking. So that would be one  
10 example of an action that would come from, let's say, 14:55:19  
11 touching zero.

12 Q. What I'm struggling with is we've got the row  
13 and column words, and we know that those are -- there's a  
14 digital word -- strike that.

15 We've got the row and column codes. We know the 14:55:42  
16 row code is some -- some digital bits representing the  
17 row, and we've got a column code with digital bits  
18 representing the column; correct?

19 A. That's correct.

20 Q. And then you say that that's converted into a 14:55:57  
21 command, and I'm trying to understand what is the command  
22 in terms of bits and signals?

23 A. Well, what I had in mind here was that the code  
24 performed a function. It's performing that function in  
25 response to depression of the key because it has gathered 14:56:38

1 the scan code into the A register because that's how you  
2 receive it. And then from there, it takes an action. So  
3 the command is really the resulting action that the  
4 processor takes because of that information in the A  
5 register. It's interpreted by the processor, and that 14:57:11  
6 can be a chain of activities, all of which are kind of  
7 signals in a sense, but it's that interpretation which is  
8 the command, what action you take. It might be a lookup  
9 table. It might be a junk table, other possibilities.

10 Q. So the command, as you've interpreted it, is an 14:57:50  
11 action, not a series of bits representing something?

12 A. Read it back and make sure I've got it.

13 Q. So the command, as you've interpreted it in  
14 Hedges, is an action, not a series of bits representing  
15 something? 15:00:17

16 A. I think it's an action representing that series  
17 of bits, but the bits are in the register before you  
18 start this, and you interpret them, and what you do after  
19 that, I said the organized signals, the game-specific  
20 command results, it's what you do based in what's in that 15:00:42  
21 register. You take an action.

22 So it's kind of those two things together:  
23 What's in the register and what you do with that.

24 Q. And when you're referring to what's in the  
25 register, you're talking about the row code and the 15:01:02

1 column code?

2 A. Right. They're both in that register at the  
3 same time.

4 Q. Is it correct that the command isn't made up of  
5 taking some data from the row byte and taking some data 15:01:16  
6 from the column byte and putting it together?

7 A. I think it's already put together when it gets  
8 to the A register. So that wouldn't be right. So that's  
9 interpreted, becomes the action so the --

10 Q. I'm trying to -- here -- we've got the discrete 15:01:47  
11 signals, and those are two digital codes.

12 A. Uh-huh.

13 Q. And then the claim says you're going to take  
14 some information from one signal and take some  
15 information from another signal -- the other signal and 15:02:06  
16 organize them into something.

17 A. Okay.

18 Q. Called an organized signal.

19 A. Right.

20 Q. And you say the organized signal is the command; 15:02:13  
21 correct?

22 A. Right.

23 Q. And I'm asking for you to explain for me how the  
24 organized -- excuse me, how the command or whether the  
25 command is made up of some information taken from the row 15:02:29

1 code and some information taken from the column code.

2 A. I think that what's in the A register is that at  
3 the start of this process, and that's interpreted into an  
4 action. So I think maybe the way I said it here wasn't  
5 clear. 15:03:09

6 The contents of the A register have those things  
7 in them at that point. They're organized. And we know  
8 they're organized there for a couple reasons, because  
9 it's a particular piece of machinery that's identified, a  
10 particular processor, a particular keyboard controller. 15:03:28

11 But we also know that because it interprets the  
12 contents of the A register differently for different  
13 games, that it must be looking at all of those bits or at  
14 least any two that you can select because they might mean  
15 two different things depending on which game it is. We 15:03:47  
16 know they're there in the A register.

17 Q. Okay. When you talk about the A register  
18 having -- that the contents of the A register are  
19 organized at that point, you're referring to the row code  
20 and the column code that are sitting in the CPU's memory; 15:04:06  
21 is that correct?

22 A. They're sitting in the A register which is a --

23 Q. Let me rephrase my question. Sorry.

24 When you refer to the things in the A register  
25 already being organized, you're referring to the row code 15:04:26

1 and the column code that are in the A register; is that  
2 correct?

3 A. That's correct.

4 Q. And at that point the system knows which code is  
5 for the row and which code is for the column; correct? 15:04:52

6 A. I think that's correct. In fact, I'd say yes.  
7 The answer is yes. The verb "knows," but, yes, I think I  
8 understand your question.

9 Q. I want -- I want to make sure I understand your  
10 opinion in the declaration. 15:05:38

11 The organized signal is definitely the command.

12 A. Yeah, I don't think it's clear. The organized  
13 signal is in the A register, and it's interpreted -- we  
14 know that it's an organized signal at that point because  
15 it's interpreted by the system depending on what game 15:05:56  
16 board is up. The system has to make that determination  
17 based on the row and the column, at least one bit from  
18 the row and one bit from the column, for example.

19 Q. So if I understood you, you're saying that the  
20 row and column signals in the A register, we know those 15:06:32  
21 are organized because they're going to be interpreted  
22 into a command?

23 A. Right. Because when you touch a particular  
24 place on the keyboard, all you know is the row and the  
25 column. But we know that when you touch that place, 15:06:56

1 something happens, depending on where you touch. And so,  
2 you know, you could take a particular point on the  
3 keyboard and you would have one bit from the row and one  
4 bit from the column. They would be organized, at least  
5 that organized.

15:07:16

6 Q. I'm trying to find out -- understand where in  
7 this time sequence that you believe the organized signal  
8 exists and where it is.

9 A. Uh-huh.

10 Q. So when the row and column codes are read into  
11 the register --

15:07:38

12 A. Yes.

13 Q. -- is that an organized signal pursuant to the  
14 claim at that point?

15 A. I think the reading into the register is  
16 organizing the signal.

15:07:54

17 Q. So before you actually perform a lookup  
18 function -- strike that.

19 So before the CPU performs some sort of a lookup  
20 function to determine the function that corresponds to  
21 that row and column code, the contents of the register  
22 are already organized.

15:08:11

23 A. I think that's correct. They're organized by  
24 being read into the register.

25 Q. And they're organization is there are some bits

15:08:42

1 that represent a row and there are some bits that  
2 represent a column?

3 A. That's correct.

4 Q. And that's -- and they have the same state of  
5 organization at that point as they did when they were 15:09:03  
6 stored in the keyboard controller 73; correct?

7 A. Without getting out the schematics, I can't say  
8 "yes" or "no." The ordering is the same, but the values  
9 may be different. They might be -- for example, they  
10 might be an inverse of -- you said when they were in the 15:09:33  
11 keyboard?

12 Q. Controller.

13 A. Keyboard controller? Probably the same, but I'd  
14 have to look at the documentation for the keyboard  
15 controller. 15:09:45

16 Q. Let's just take -- let's say that the code for  
17 the row and column, that the code for each is represented  
18 by an eight-bit byte.

19 A. Okay.

20 Q. And so let's say we've got R0 through R7 for the 15:10:01  
21 row and C0 through C7 for the column.

22 Does that make sense so far?

23 A. No, because it's going to be a single byte.  
24 There's only four row bits and four -- I thought you said  
25 C0 to 7 and R0 -- 15:10:22

1 Q. I did.

2 A. Yeah, there's only going to be like -- so in the  
3 keyboard controller they're called like M0 to M6, but  
4 they would be something like -- we don't -- we would have  
5 to make it hypothetical here because we don't exactly 15:10:35  
6 know.

7 Q. Okay. A couple bits -- okay. So you've got  
8 seven bits; right, M0 to M6?

9 A. Correct.

10 Q. And some of those bits represent the row and 15:10:45  
11 then some of those bits represent the column.

12 A. That's correct.

13 Q. And reading the patent as a person of ordinary  
14 skill in the art, and as you said, without getting --  
15 looking for schematics, would you expect that the -- that 15:11:14  
16 the value and the organization of that seven-bit code  
17 would be the same at the CPU register as it is at the  
18 keyboard controller 73?

19 A. I think that's one expectation, but it might be  
20 the case that the values are different, you know, the 15:11:46  
21 ordering is likely the same, but the values might be  
22 different.

23 Q. You don't recall anything specific in Hedges  
24 talking about changing the ordering of the M0 to M6 code  
25 as the code is passed from the keyboard controller to the 15:12:15

1 CPU register?

2 A. I think they're in the same like bit zero --  
3 quite frankly, we'd have to really look at the documents  
4 for the 82, whatever, 79, but as I remember these things,  
5 typically the way it is stored in the keyboard controller 15:12:36  
6 and a register it might be like M0 to M6. That would be  
7 passed along as D0 to D6 in the -- on the bus and would  
8 be that way in the register, but the value might change  
9 because there's a possibility of inversion in the bus.

10 Q. Inversion just meaning reordering the sequence 15:13:00  
11 of the bits?

12 A. No, inversion meaning -- well, that's one  
13 possibility, but typically it's the value of the bit is  
14 changed. So a one might be a zero.

15 Q. And I don't want to make this harder than it has 15:13:28  
16 to be. So when I asked you the question do you recall  
17 seeing anything in Bakula about this, that's exactly what  
18 I'm asking. You know, do you recall. I'm not asking you  
19 to -- you know, think back to your engineering working  
20 days or to perform an inherency analysis. So let me ask 15:13:47  
21 the question again.

22 Do you recall anything in Hedges saying that the  
23 seven-bit code representing the location is rearranged or  
24 changed as it is stored in the CPU register?

25 A. No. 15:14:43

1 MR. TOUTON: It's been an hour. Do you have a  
2 chance -- seems like you might be changing topics here.

3 MR. SCHREINER: Just do a quick break?

4 MR. TOUTON: Yeah.

5 (Recess.) 15:15:20

6 Q. BY MR. SCHREINER: In your analysis of the  
7 Hedges patent -- what is the -- what corresponds to  
8 Step 6 of Claim 18 outputting said video presentation to  
9 said user, said video presentation comprising firstly a  
10 video message and, secondly, a coordinated display using 15:27:46  
11 said generated image and said video image?

12 A. Okay. Okay. So in Hedges -- the video  
13 presentation -- the numbering here is a little confusing  
14 because in Hedges it's confusing.

15 Q. Can I -- I'm sorry to interrupt, but on that 15:29:13  
16 point, could we -- because Hedges is so all over the  
17 place, could we refer to the TV -- the TV monitor with  
18 the live feed, can we call that TV monitor 21?

19 A. Yes.

20 Q. And then the monitor showing the play board, 15:29:31  
21 we'll call that display monitor 60?

22 A. That seems good. Yeah, yeah.

23 Q. Okay.

24 A. So the video presentation is what you see in  
25 the -- on both of those monitors, 21 and 60. And so the 15:29:50

1 video image is the image that comes directly from the  
2 gaming table, and so that would be on monitor 21. And  
3 then the generated image is the -- okay. So what I said  
4 here at paragraph 143, so I say here: "Hedges discloses  
5 generating an image in response to the organized signal. 15:33:22  
6 Specifically the processor and the CRT controller 61  
7 generate an image of the new wage or amount in response  
8 to the player input at the touch-sensitive keypad."

9 So the generated image is at least the wager  
10 amount, for example. 15:33:46

11 Q. Okay. So let's say we've got -- how about if we  
12 call our original wager W1 and then our updated or new  
13 wager amount W2.

14 Does that seem reasonable?

15 A. Okay, okay. 15:34:12

16 Q. So you're saying that the generating an image  
17 step is essentially generating the updated wager in W2  
18 based on W1, which is the user-specific data. And that  
19 results in an updated wager that's displayed on the play  
20 board; is that correct? 15:34:55

21 A. Yes, I think that's what I had in mind.

22 Q. And so please explain what your opinion was in  
23 your declaration about the video presentation that's  
24 outputted in Step 6 of Claim 18.

25 A. So it's basically that there's a video 15:35:48

1 presentation, and it has two parts. It has a video  
2 image, which is this live image from the gaming table,  
3 and then it has a generated image, which is the wager  
4 amount, and those two appear on the two monitors. And  
5 they're coordinated because there's a relationship 15:36:16  
6 between the two.

7 Q. So on the live feed, how about if we call the  
8 video image at time one, let's call that L1 for live one.

9 A. Okay.

10 Q. And then at time two, we have L2. 15:36:36

11 A. Okay. We'll see how far we can get without  
12 having to make a drawing or something.

13 Q. Okay.

14 A. Why don't you give me a piece of paper. I don't  
15 know if I'm supposed to create an exhibit, but I just 15:36:57  
16 want to write it down so I can remember.

17 Q. Why don't we do this: If you want to take  
18 notes, you can go ahead and take notes, and we won't try  
19 and create an exhibit until we decide how to do it.

20 A. All right. 15:37:21

21 MR. SCHREINER: I'm not going to ask his notes  
22 be entered.

23 THE WITNESS: So L1 was?

24 Q. BY MR. SCHREINER: L1 was a display of video  
25 timed at T1. 15:37:28

1 A. Okay.

2 Q. L2 --

3 A. A frame of the live game video?

4 Q. Yes, sir. And L2 would be a frame of the live

5 feed on TV monitor 21 at time T2? 15:37:45

6 A. And T2 is sometime after T1; is that --

7 Q. Yeah, let's say -- yes, yes.

8 A. Okay.

9 MR. SCHREINER: I think we do need to create an

10 exhibit. Okay. So here's PMC 2007C. 15:38:31

11 (PMC Exhibit 2007C, Diagram, marked for

12 identification.)

13 Q. BY MR. SCHREINER: So you have got the live feed

14 on the TV monitor 21 on the left-hand side, display

15 monitor 60 with displaying the play board on the 15:39:51

16 right-hand side --

17 A. Okay.

18 Q. -- of Exhibit 2007C.

19 And how about we say that at time T1, we have

20 our original bet, which is W1. 15:40:08

21 A. I'm sorry, original bet. Okay.

22 Q. Yeah.

23 A. Okay.

24 Q. So I'd like you to put under play board at time

25 T1, put W1, or corresponding to the original debt. 15:40:23

1 A. (Indicating.)

2 Q. That's good. And then at that point in time,  
3 there would be some video being displayed at the live  
4 feed, of course; correct?

5 A. That's correct. 15:40:56

6 Q. Okay. So how about if we go ahead and mark  
7 under live feed at T1, we put L1 to represent the video  
8 frame from the live feed being shown at that time.

9 A. Okay. So L1.

10 Q. Okay. And so you indicated in your analysis 15:41:16  
11 that the generated image is the updated bet based on the  
12 user input, and we said that would be W2.

13 A. That's correct.

14 Q. Okay. So can we put W2 at the intersection of  
15 play board and T2. 15:41:35

16 A. Okay.

17 Q. And is it correct that at that point in time,  
18 the live feed would be presenting a different frame of  
19 video?

20 A. Well, it's certainly a new transmitted frame of 15:41:58  
21 video. Whether it's different from the previous one --  
22 whether L1 and L2 look the same, that's a possibility;  
23 right? So it might not be different in that way, but it  
24 would be different in that it's a new received signal  
25 or -- is that what you're getting at? 15:42:18

1 Q. Let me -- analog television 30 frames a second,  
2 something like that?

3 A. Uh-huh.

4 Q. Is that correct?

5 A. That's correct. 15:42:27

6 Q. So at a later time T2, there would be a  
7 different frame of video presented at the TV monitor;  
8 correct? Understanding that it might look similar.

9 A. Okay, yeah, sure, sure. Okay, I agree with  
10 that. 15:42:41

11 Q. Okay. So if you can put L2 to represent the --

12 A. Okay (Indicating).

13 Q. -- video image from the TV monitor.

14 So using this or not using this, whatever is  
15 easiest, explain to me your opinion on how Hedges meets 15:43:06  
16 Step 6 of Claim 18.

17 (Discussion off the record.)

18 Q. BY MR. SCHREINER: So using PMC Exhibit 2007C,  
19 please explain how Hedges meets Step 6 with outputting  
20 the presentation, including firstly a video image, and 15:46:24  
21 secondly, the coordinated presentation -- the coordinated  
22 display, pursuant to your analysis?

23 A. So I think what I would do on 2007C is say  
24 choose something like T2, and I would say that the video  
25 image is L2 and the generated image is W2, and the 15:47:32

1 coordinated display is the two of those taken together,  
2 which is the video presentation itself.

3 Q. So this is under your analysis where you're  
4 interpreting Step 6 as essentially saying there's a first  
5 portion of the presentation that has a video image and 15:48:21  
6 there's a second portion of the presentation that has the  
7 coordinated display; is that correct?

8 A. I think that's good. Just give me a second here  
9 to...

10 Right, right, that's correct. 15:48:49

11 Q. So in that case the first portion is L2 and the  
12 second portion is L2 plus W2; is that correct?

13 A. The first, I think that's correct. The first is  
14 the video image, and then you have a second part of that,  
15 which is the generated image, but the coordinate -- so 15:49:19  
16 when I thought about this, I thought about the  
17 coordinated display describes the video presentation.

18 So in my view, the coordinated display was --  
19 the video image and the generated image together formed a  
20 coordinated -- there has to be that relationship between 15:49:41  
21 them because it's coordinated by the content.

22 Q. But just focusing on the images.

23 A. Okay.

24 Q. So we've got four images that we've talked about  
25 here on Exhibit 2007C: L1 L2, W1, W2. 15:49:56

1 A. Correct.

2 Q. And you said under your analysis, Step 6 is met  
3 at time T2; correct?

4 A. That's correct.

5 Q. And that the video presentation in Step 6 is 15:50:23  
6 firstly a video image, which is L2, and secondly a  
7 coordinated display using the generated image, which is  
8 W2, and the video image which is L2; is that correct?

9 A. That's correct.

10 Q. So the first portion is L2, and then the second 15:50:59  
11 portion is W2 plus L2?

12 A. That's correct. It doesn't say portion there,  
13 but the first part and the second part -- but that's  
14 correct.

15 Q. So L2, the video image, is in both the firstly 15:51:22  
16 part of Step 6 and in the secondly part of Step 6 under  
17 your analysis?

18 A. That's correct.

19 Q. We talked earlier about an alternative  
20 interpretation of Step 6, and that's that firstly refers 15:51:55  
21 to an image at a first point in time, let's say T1, and  
22 then secondly refers to an image or a coordinated display  
23 at a second point in time, such as T2.

24 Do you recall that?

25 A. That's correct. 15:52:15

1 Q. Is it correct that we already established that  
2 at different points in time T1 and T2, the video frame  
3 that's displayed by the TV monitor is going to be  
4 different, and that's why we labeled it L1 and L2; is  
5 that correct?

6 A. That's correct.

7 Q. Okay. If you start with a first bet, W1 at time  
8 T1, and you modify that to a second wager, W2 at time T2.

9 Are you following me so far?

10 A. Yeah, I am. 15:53:11

11 Q. Is it correct that the video frame from the live  
12 feed must have changed, too -- must have changed as well?

13 A. Well, changed in the sense that we spoke about  
14 it earlier, that it might look precisely the same, but  
15 the signal might be precisely the same, but yes, I think 15:53:47  
16 that's correct.

17 Q. Let's say -- let's say the game being played is  
18 an action game. It's craps.

19 A. Okay.

20 Q. So the video frames are -- from the live feed 15:54:14  
21 are always going to be changing.

22 Do you follow that scenario?

23 A. No.

24 Q. Let's say the game is an action game where  
25 there's people making bets and the pit boss and all of 15:54:34

1 the activity that you associate with casino table games.

2 Do you follow me so far?

3 A. Okay, I do. Did you say that the video feed was  
4 that?

5 Q. Yeah. 15:54:51

6 A. Or the game was that?

7 Q. Let me rephrase it.

8 A. Do it again. Do it again.

9 Q. Sure. I'm trying to establish something I think  
10 that you'll readily agree with, but -- okay. So let's 15:54:59  
11 say the live feed on TV monitor 21 is a video TV feed of  
12 a table game such as craps.

13 A. Okay.

14 Q. Do you agree that the frames of video that are  
15 coming in and being displayed of that craps table in 15:55:28  
16 action, that those frames of video are going to change  
17 over time?

18 A. I think as a general matter, I would agree with  
19 that, but that doesn't mean that you're guaranteed that  
20 they're going to change over time. 15:55:52

21 Q. In other words, two frames could look similar  
22 because nothing's happened at the craps table?

23 A. Right. They might not -- for instance, just  
24 make sure we're on the same -- the -- it doesn't say that  
25 the video game shows necessarily the people playing the 15:56:07

1 game. It might just show the game board.

2 Q. Okay.

3 A. In my limited experience with craps is that  
4 there are times when nothing happens on the game board.

5 But I think as a general matter, if you watched the game 15:56:23  
6 board, the video would change at some point in time.

7 Q. But the live feed is made up of different  
8 snapshots of video taken as time passes; is that correct?

9 A. That's correct.

10 Q. And in Exhibit 2007C, would it be -- we've got 15:56:54  
11 time one and time two, and we've got L1 and W1, and then  
12 we've got L2 and W2 at time two.

13 Would it be possible for the video presentation  
14 at time T2 to be L1 W2?

15 A. To look like that? 15:57:34

16 Q. No, to be the exact, the very exact same frame  
17 of video.

18 A. I'm not sure I technically understand what you  
19 mean.

20 Q. Okay. 15:57:51

21 A. You may have something in mind that I'm not  
22 seeing. You know, I can tell you how video works or how  
23 it might work here.

24 Q. That's okay.

25 A. Okay. 15:58:01

1 Q. You also have a scenario where you talk about  
2 the locally generated image being a message presented on  
3 the play board saying 30 seconds left to place your bet,  
4 15 seconds left to place your bet.

5 Do you recall that? 15:58:51

6 A. Yes. I think the actual thing is 15 seconds  
7 left to place your bet. There's no 30 seconds left, but  
8 there's 15 seconds left, and then there's no time left.

9 Q. Is -- so in that scenario where the updated  
10 display is a message saying 15 seconds left to bet, does 15:59:23  
11 the computer in Hedges control the live feed based on  
12 that message?

13 A. Which computer in Hedges?

14 Q. Probably processor 41 in Figure 2, but, you  
15 know, any computer or processor in Hedges. 16:00:21

16 A. Okay. Yeah. Just read it back one more time.

17 Q. In the scenario where the updated display is a  
18 message on the play board saying 15 seconds left to bet,  
19 does the computer in Hedges control the live feed based  
20 on that message? 16:02:51

21 A. I don't think that it does, but without really  
22 digging into the specification a little bit more -- and  
23 I'll tell you why there's a little bit of a question  
24 here. Because part -- and I'm pretty sure this is in the  
25 specification. 16:03:39

1           So the scoring is controlled by this -- the  
2 computer that's an 8048 that's at the croupier station,  
3 it actually controls the display, and I believe that the  
4 display of at least the score is shown on the live  
5 display or could be because there's a security issue here       16:03:58  
6 in the -- in the terminal. But I don't think that the  
7 15 seconds remaining is actually shown on the -- the live  
8 display part.

9           But without really going into it, I don't think  
10 I can do any better than that. It doesn't -- it wouldn't       16:04:16  
11 do it by controlling -- at least as far as I can tell  
12 from Hedges, it wouldn't do it by controlling the live  
13 display directly in the sense that you may have in mind,  
14 but it might display it at the croupier station, and  
15 therefore, it would be seen by everybody. Because he       16:04:37  
16 talks a bit in one of the columns about security.

17       Q. Right.

18       A. And that's part of it.

19       Q. And just to declare, the croupier display you're  
20 referring to there is a different display than TV monitor       16:04:51  
21 that we've been talking about for that player playing  
22 at his game station; is that correct?

23       A. That's correct, it's at the croupier station and  
24 it's a numeric display like LEDs.

25       Q. So in your analysis you focused on the               16:05:13

1 coordinated presentation being the local TV monitor 21  
2 with a live feed and the display monitor 60 with a play  
3 board; is that correct?

4 A. That's correct.

5 Q. So is it correct to say that you don't recall 16:05:30  
6 seeing anything in Hedger that would -- Hedges that would  
7 indicate that a 15-second time-to-bet message would cause  
8 the computer to somehow change the live feed or change  
9 that display?

10 A. No, I don't recall anything like that. 16:06:08

11 Q. Do you recall whether -- do you recall -- strike  
12 that.

13 Does the computer at the user's gaming station  
14 control the live feed on TV monitor 21?

15 A. I believe the answer is yes. 16:06:50

16 Q. And how is that?

17 A. Well, you have the ability to select a game, not  
18 just a game like keno or roulette, but more than that, to  
19 select a particular table, for example.

20 Q. Remote control? 16:07:09

21 A. And the remote control, it goes to processor --  
22 from play board 40 to processor 41, and I believe that  
23 the line 53, which unfortunately is not labeled, is the  
24 line that controls the live game display because --

25 Q. In other words, you can use a remote control to 16:07:32

1 change the channels, if you will, on the TV monitor to  
2 show one game at a table being played and then another  
3 game at another table being played; is that correct?

4 A. That's correct.

5 Q. Once -- once the live feed is showing the live 16:07:51  
6 video for a particular game being played, does the  
7 computer control the presentation of the live video on TV  
8 monitor 21?

9 A. The computer being 41?

10 Q. Yes. 16:08:22

11 A. I don't believe it does.

12 Q. Does -- is it correct that regardless of what is  
13 displayed on the play board on monitor 60, the live feed  
14 on TV monitor 21 is going to operate in the same fashion?  
15 In other words, it's going to present video coming from 16:08:58  
16 that table?

17 A. What do you mean by "operate in the same  
18 fashion"? Is that what you meant by just showing the  
19 video from the table?

20 Q. Yeah. 16:09:20

21 A. I think disregarding the changing of the game,  
22 that that's a correct statement.

23 Q. Okay. I was going to move over to Yamamoto. So  
24 we can if you want to break, we can take a quick break or  
25 we can plow ahead. 16:10:00

1 A. I'll stand up just a minute.

2 MR. SCHREINER: Sure. Why don't we go off the  
3 record just a minute or two, please.

4 (Recess.)

5 Q. BY MR. SCHREINER: Dr. Neuhauser, we're now 16:17:28  
6 going to turn to Claim 17 of the '251 patent and the --  
7 your analysis based on Hedges plus Yamamoto.

8 Q. Okay. And I believe that analysis starts on  
9 page 21 of your declaration on the '251 patent.

10 A. That is correct. 16:17:55

11 Q. What is the locally generated image in Step 4,  
12 where is that in Hedges in your analysis?

13 A. Give me a minute. I'm going to have to read the  
14 claim over again.

15 Q. Sure. 16:19:02

16 A. Okay. And just read the question one more time  
17 to make sure I've got it. I think I have the answer for  
18 you.

19 Q. In your analysis, what is the locally generated  
20 image in Step 4 of Claim 17? 16:21:36

21 A. Okay. So at paragraph 49, page 27, I said the  
22 locally generated image is the image of the game, and the  
23 user's wager is displayed on play board 40 via monitor  
24 30.

25 Q. So is it correct that the locally generated 16:22:03

1 image would be the display board?

2 A. Here I said the play -- yes. I mean, the play  
3 board is what's shown on the monitor, if that's what  
4 you're referring to, not just the part that says  
5 roulette, but the whole thing is the play board. 16:22:22

6 Q. Right.

7 A. Okay, yes.

8 Q. So using our -- because of the numbering issues  
9 in Hedges, the locally generated image would be the play  
10 board that is displayed on monitor 60; is that correct? 16:22:34

11 A. That's correct.

12 Q. And --

13 A. Just to make sure we're on the same -- you mean  
14 everything displayed -- when you say "the play board,"  
15 you don't mean just the part that says roulette? 16:22:52

16 Q. No.

17 A. Just the image on monitor 60.

18 Q. Right.

19 A. Okay.

20 Q. Let's do make sure that we are on the same page. 16:23:07

21 Like the figure shown in the roulette table,  
22 like I think it was Figure 5 annotated --

23 A. Right.

24 Q. -- with ongoing information about the game,  
25 that's the image -- 16:23:23

1 A. Correct.

2 Q. -- of the play board that would be displayed on  
3 monitor 60?

4 A. Yes, that's correct.

5 Q. Okay.

6 A. Okay.

7 Q. And explain for me in your analysis of Hedges  
8 how the play board is generated by processing both  
9 remotely originated data and user-specific data.

10 A. Okay. Can you give me a scrap of paper? 16:24:02

11 Q. Yes. Sure.

12 A. Okay. I think I have the question in mind. You  
13 wanted to know how the user-specific data and the  
14 remotely originated data were processed to generate the  
15 locally generated image. 16:31:09

16 Q. Yes. Let me do this. Let me -- I'll ask the  
17 question again.

18 A. Just let me have one more second before we --

19 Q. Uh-huh.

20 A. Okay. Ask it again. 16:32:04

21 Q. Okay. So the question is: In your analysis of  
22 Hedges, how is the locally generated image created by  
23 processing remotely originated data and user-specific  
24 data?

25 A. Okay. So user-specific data could be the amount 16:32:33

1 and type of the wager. Then I'm just basically going  
2 back to paragraph 66 and 67. The remotely originated  
3 data is -- commands and data received from the credit  
4 station. The credit station kind of controls everything  
5 in here. 16:33:02

6 So the processor of so -- so -- whoops. The  
7 processor 41 of the -- of the remote gaming terminal  
8 takes that information and computes that information and  
9 generates the image on the play board. So that would be  
10 something like in -- what's shown in Figure 4. 16:33:44

11 Q. So you said -- this is for Step 4 of Claim 17,  
12 you said the user-specific data would be the amount and  
13 type of wager; is that correct?

14 A. That's correct.

15 Q. And then I was a little unclear. On the 16:34:02  
16 remotely originated data, exactly what would that be?

17 A. Well, let's see. At 66 I said it would be  
18 commands and data received from credit station 9, and  
19 then I said here "see claim third element." So maybe I  
20 should look at that for a second. 16:34:25

21 So it's commands and data received from credit  
22 station 9.

23 Q. And the -- so we -- get to the nut of it, which  
24 is exactly what is the data, remotely originated data,  
25 that we're talking about. The claim, in fact, provides 16:35:14

1 that the remotely originated data is data that is  
2 delivered after a user has contacted a remote data  
3 source; is that correct?

4 A. That's correct.

5 Q. So fitting your analysis into the framework of 16:35:40  
6 the claim, what is the data that is processed in order to  
7 create the locally generated image and that also was the  
8 result of a user request?

9 A. Well, I think an example would be, for example,  
10 the amount of cash available, for example, the amount 16:36:47  
11 that you have available to wager.

12 Q. And that is data that's transmitted from the  
13 credit station 9 in Hedges to the game terminal 20; is  
14 that correct?

15 A. That's correct. 16:37:30

16 Q. And that information basically tells you how  
17 much you -- how much money you have to play with so that  
18 you can decide, you know, what are the constraints on  
19 your next bet.

20 Is that roughly correct? 16:37:51

21 A. That's what I had in mind, yes.

22 Q. And how is that the result of a -- how is the  
23 amount of cash left to wager the result of a player  
24 contacting the credit station 9?

25 A. Well, I think it could be several things, but 16:38:40

1 the player contacts the station to log onto the game, for  
2 example. And then the player is -- before that, the  
3 player doesn't know -- if you just sat down at the  
4 terminal, you wouldn't know what the wager amount is. So  
5 presumably you -- what they talk about here is there's a 16:39:04  
6 sequence in the patent. You contact the station, you  
7 select the game, you -- well, first you identify  
8 yourself, you're authenticated, and then after that, you  
9 can -- you select the game. And so the credit terminal  
10 is in charge of putting those things up on the game board 16:39:26  
11 that only the credit terminal knows about.

12 Q. And so are you saying when the player first sits  
13 down to get authenticated and select a game, that the  
14 credit station would respond by sending data on the  
15 amount of cash available to wager? 16:40:02

16 A. That would be one situation.

17 Q. Okay. And then so we've got the -- the amount  
18 of cash to wager is the remotely originated data in the  
19 claim; correct?

20 A. Okay. 16:40:34

21 Q. Is that correct?

22 A. Yes, I'm just going to make a note of that.  
23 Amount that you have available, I think, is -- that's  
24 what you're saying; right?

25 Q. Yeah. In other words, it says I can gamble a 16:40:46

1 thousand dollars tonight.

2 A. That's correct.

3 Q. And you said the user-specific data in the claim  
4 would be the amount and type of wager that a player  
5 selects? 16:41:08

6 A. Correct.

7 Q. So \$50, number seven on the roulette wheel; is  
8 that --

9 A. That's the general idea.

10 Q. Well, the -- as you understand Hedges, will the 16:41:59  
11 play board ordinarily display the amount of cash  
12 available to wager a thousand dollars in our case?

13 A. That's my understanding.

14 Q. So let's take our scenario. The play board says  
15 you have a thousand dollars, you know, balance of cash to 16:43:01  
16 wager.

17 A. Okay.

18 Q. The player engages the play board to say that he  
19 wants to bet \$50 on the roulette wheel.

20 A. Okay. 16:43:17

21 Q. Is the play board immediately updated based on  
22 the user input of \$50?

23 A. Certainly, at least the part that says how much  
24 you wagered is updated.

25 Q. The claim requires that the user-specific data 16:44:15

1 was stored prior to the receipt of the remotely  
2 originated data; is that correct?

3 A. That's correct.

4 Q. So in the analysis that we've talked about, it  
5 doesn't meet that requirement; isn't that correct? 16:44:45

6 Because the user-specific input of \$50 is made after the  
7 amount of cash ceiling was set.

8 A. Let me think about it for a minute.

9 Q. Sure.

10 A. I'm not sure that that specific example will 16:58:00  
11 work, but I think it would. I just can't think it

12 through right now given the complexity of 17, but I think

13 I had something different in mind in the -- in the

14 report. If you want to hear about it, I'll tell you what

15 I remember from when I wrote it. And I did think this 16:58:29  
16 particular example out, and I just can't remember.

17 Q. Well, let's just finish up with the --

18 A. Sure.

19 Q. -- analysis that you provided here.

20 Is it correct to say that for the remotely 16:58:56  
21 originated data and user-specific data that you

22 identified this afternoon, that you cannot say how Hedges

23 discloses Steps 1 through 4 in a manner consistent with

24 the claim?

25 A. No, that's not what I'm saying. I'm saying I 16:59:28

1 just can't remember how to work the specific --  
2 user-specific amount and type of wager and the amount of  
3 cash available.

4 I thought this out, and I just can't remember.

5 But what I think I had in mind that I put in the report 16:59:44  
6 was different than that because I said the user-specific  
7 data was a lot of different things; right? Because user  
8 input from the keyboard is user-specific data.

9 Q. Right.

10 A. And so you contact the authorization -- you take 17:00:00  
11 user-specific data to -- you receive at the keyboard  
12 user-specific data. You use that when you contact the  
13 credit station to get authorization, and from that, you  
14 generate the start of a game, like a game board, with the  
15 credit amount on it and a particular game board that 17:00:23  
16 you've selected. Because before you do that, you have no  
17 game board.

18 Q. Right. You agree that when you -- when you  
19 apply the reference Hedges to the claim, that you have to  
20 be consistent in going from one claim limitation to 17:00:59  
21 another in terms of common claim terms?

22 A. Yes. Yes, that's generally what we understand.

23 Q. So in Claim 17, you would agree that whatever  
24 you identify as user-specific data in your analysis has  
25 to be the same user-specific data that's processed to 17:01:26

1 create the locally generated image in Step 4?

2 A. That's correct.

3 Q. And that the remotely originated data that you  
4 identify in Hedges for Step 3 has to be the same remotely  
5 originated data in Hedges that you identify for Step 4? 17:02:01

6 A. Right, because it says said remotely originated  
7 data.

8 Q. So this -- the analysis that we just discussed  
9 where the user-specific data is the amount and type of  
10 wager and the remotely originated data is the amount of 17:02:40  
11 cash left to wager, that was the analysis we just --

12 A. We talked about, that's correct.

13 Q. And you indeed identified those two things as  
14 corresponding to the remotely originated data and  
15 user-specific data in your report? 17:03:08

16 A. That's correct.

17 Q. But at the moment, because of the complexity of  
18 the issue, you're not in a position to explain how Hedges  
19 processes those things in a manner that meets the claim?

20 A. Let me just look at one thing here. 17:05:14

21 I think what I had in mind -- we'll see if I'm  
22 able to express this properly. So user-specific data  
23 is -- that was --

24 Q. A mountain?

25 A. -- a mountain type of wager receiving 17:13:01

1 user-specific data at the video apparatus. So you can  
2 change your wager, you can place your wager or you can  
3 modify it. But the amount of cash available would change  
4 depending on the wager that you have because you could  
5 make a wager that's too much, for example, and then the 17:13:30  
6 station would tell you you've exceeded the cash available  
7 as an example, so the amount of credit available would be  
8 zero.

9 So you receive this credit information from the  
10 user, user-specific data -- not credit information, 17:13:52  
11 amount and type of wager, particularly the amount of the  
12 wager. And you contact the credit station with that  
13 amount or type of wager.

14 And the credit station in return is going to do,  
15 you know, at least two things: It's going to tell you 17:14:13  
16 what amount you have left to wager or, more importantly,  
17 tell you that you've exceeded the amount available, which  
18 is pretty important to know.

19 And so that's all displayed on that screen. So  
20 you're changing the amount, but you're also sending that 17:14:36  
21 amount to the credit station after you change it because  
22 you might exceed that, the amount of credit.

23 Q. So you're saying that the user-specific data  
24 would be the amount for the wager that the player enters?

25 A. That's right. 17:15:26

1 Q. And that the remotely originated data would be  
2 one of two things, either a message saying that you  
3 exceeded your available funds or an updated cash balance;  
4 is that correct?

5 A. That's correct. Or both of those things. Well, 17:16:12  
6 I guess if it goes to zero.

7 Q. Right.

8 A. That's your cash balance.

9 Q. Let's take two scenarios.

10 A. Okay. 17:17:00

11 Q. So let's say our balance available to wager is a  
12 thousand dollars.

13 A. Okay.

14 Q. And the player tries to input a bet for \$1,500  
15 on the next -- for the next spin of the roulette wheel. 17:17:22

16 A. I'm sorry, \$1,500?

17 Q. Yes, sir.

18 A. Okay.

19 Q. What will the credit station send to the gaming  
20 terminal? 17:17:45

21 A. Well, it would send exceeded cash available, and  
22 "you have" part of the display, but like in Figure 4.

23 Q. At that point the play board display would no  
24 longer show the \$1,500 bet you tried to make; correct?

25 A. At which point? 17:19:13

1 Q. When the message saying that you've exceeded  
2 your balance available is received at the play board.

3 A. I think it would, but you'd -- how would you --  
4 you wouldn't know what happened if it didn't show you.

5 You're talking about the second -- the exceeded? 17:19:51

6 Q. Yes.

7 A. I think it shows you the wager that you're  
8 placing. You could modify that and make it lower.

9 Q. So your reading of Hedges is that you enter  
10 \$1,500 for your bet. Then you get back a message saying 17:20:32  
11 your bet has exceeded your limit, and the display would  
12 still continue to show \$1,500 as your bet input?

13 A. No. That would be sensible, just like it says  
14 here that these are supposed to reflect these games. So  
15 if you made a bet on the table, you could see your bet. 17:21:02  
16 Otherwise, you wouldn't know what to do; right? You  
17 wouldn't know how to modify it or --

18 Q. Isn't it the case that in Hedges, the user  
19 inputs a bet?

20 A. Uh-huh. 17:21:37

21 Q. And then that's sent to the credit station. The  
22 credit station determines whether the debt is allowable;  
23 correct?

24 A. That's correct.

25 Q. And the credit station then sends back some sort 17:21:57

1 of a confirmation message that also includes the amount  
2 of the bet?

3 A. That's my understanding -- the amount of the  
4 bet?

5 Q. Yes. For security purposes. 17:22:16

6 A. I'm not sure that I remember that. I know  
7 there's a security mechanism in it.

8 You're going to ask me a question, I think;  
9 right?

10 Q. No -- 17:27:03

11 A. Not that I'm rushing you or anything, but I just  
12 was worried that maybe I was supposed to answer a  
13 question, and that would really be bad if we were just  
14 waiting for each other.

15 MR. SCHREINER: Was there a pending question?

16 THE WITNESS: No, I don't think there's one  
17 right now.

18 MR. SCHREINER: I think that's right.

19 MR. TOUTON: Maybe it's a good time for a break.

20 MR. SCHREINER: I want to finish this line. 17:27:44

21 THE WITNESS: I do, too.

22 Q. BY MR. SCHREINER: The message that we talked  
23 about where the player tried to make a bet that exceeded  
24 his available funds --

25 A. Okay. 17:30:28

1 Q. -- where is that in the Hedges patent? I  
2 confess I couldn't seem to find it -- oh, I see,  
3 Figure 4.

4 A. Figure 4, yes.

5 Q. So Figure 4, cash exceeded cash available? 17:30:47

6 A. That's an example of it, yes.

7 Q. Okay. And where on Figure 4 is the area where  
8 the player inputs the bet?

9 A. Okay. Well, there's two aspects to inputting.  
10 Do you want to know the amount of the bet or the type of 17:31:28  
11 the bet? If that's the right terminology.

12 MR. TOUTON: You mean what's being bet on?

13 THE WITNESS: What's being bet on, right.

14 Q. BY MR. SCHREINER: Yes. Please explain.

15 A. Both? 17:31:48

16 Q. Yes.

17 A. Okay. Well, obviously you -- for example,  
18 looking at Figure 4, you place the type of bet; in other  
19 words, what you're wagering on, by pressing on, say,  
20 number 17 in the -- I don't remember a lot about 17:32:12  
21 roulette, but you would -- you would touch 17, for  
22 example, to indicate that that's the type of bet that you  
23 want, and that results in a sort of a blinking aspect of  
24 the display.

25 And then so it says at Column 4 at 9, from 9 to 17:32:31

1 13, it says: "Display monitor 60 also displays items  
2 relative to the player's account, such as total credit  
3 remaining, items pertinent to the game such as wagering  
4 limits, payoff odds, and time remaining in which to enter  
5 bet." 17:33:13

6 Let's see. Let me see if it gives a better  
7 explanation back in here.

8 Q. How about Column 13, line 23?

9 A. Right. So here it says the terminal interprets  
10 the wager and amount of entries, feeds back to the player 17:34:06  
11 via display on play board 40, e.g., flashing appropriate  
12 areas and indicating the amount of the wager. I think  
13 it's the area unit amount.

14 Q. On Figure 4?

15 A. On Figure 4. It could be number of units, but 17:34:27  
16 it would be one of those two at least with respect to  
17 this figure. It's possible they do something different,  
18 too, but that seemed to be, when you read that, they're  
19 telling them on the display someplace what the amount is.

20 Q. So with our scenario we talked about -- let me 17:34:59  
21 just rephrase.

22 So is it correct that in your analysis of  
23 Hedges, that you're using the entry of the bet to satisfy  
24 both the receiving user-specific data and contacting the  
25 remote data source, that is, the credit station? 17:36:37

1           A. Well, certainly in the sense that you're  
2 receiving user-specific data, and after you receive it,  
3 you contact this remote credit station -- maybe I don't  
4 understand the question, but it's sort of built into the  
5 claim, isn't it? 17:37:10

6           Q. So let's say you've got your cash available. I  
7 think that would be "you have," the "you have" block on  
8 Figure 4 --

9           A. Oh, that's possible.

10          Q. -- of Hedges. It says you have -- 17:37:27

11          A. Yes.

12          Q. -- \$1,000.

13          A. Right.

14          Q. And you enter \$50 into the -- I think you and I  
15 agree that the bet entry windows are one or more of the 17:37:45  
16 unit amount and the number of units?

17          A. That's right.

18          Q. So you enter \$50. So is it correct that \$50 is  
19 now displayed on your play board?

20          A. It must be because it says it is. 17:38:01

21          Q. And is it correct that as a result of a request  
22 sent to the credit station, the game table would be  
23 updated to show \$950 for your "you have" balance?

24          A. That's correct.

25          Q. When the display is updated to show 950 for your 17:39:27

1 cash available --

2 A. Uh-huh.

3 Q. -- that's what you consider to be the locally  
4 generated image in your analysis; is that correct?

5 A. I'm sorry, say it again. 17:40:03

6 Q. When the display is updated to show \$950 --

7 A. Okay.

8 Q. -- for your balance available, it is that  
9 display that you consider to be the locally generated  
10 image in the claim; correct? 17:40:22

11 A. Yes, that's correct.

12 Q. And isn't it the case that that updated display  
13 is generated only by processing the remotely originated  
14 data in the form of \$950 received from the credit  
15 station? 17:42:06

16 A. Would you just repeat the question, make sure I  
17 heard it correctly.

18 Q. Isn't it the case that the updated display is  
19 generated only by processing the remotely originated data  
20 in the form of the \$950 received from the credit station? 17:46:45

21 A. One more time. Unfortunately, I can't see it,  
22 which would make it easier. But yeah. Just read it to  
23 me one more time, and if I can't get it, I'll maybe make  
24 some notes.

25 Q. Isn't it the case that the updated display is 17:47:14

1 generated only by processing the remotely originated  
2 data, which is the message containing \$950 received from  
3 the credit station?

4 A. I don't think that's correct, but I may  
5 misunderstand the question. 17:48:34

6 Q. Okay. So we've got a first display that shows  
7 \$50 that the user entered as his requested bet; right?

8 A. Right.

9 Q. That gets transmitted up to the credit station?

10 A. Uh-huh. 17:49:05

11 Q. And the credit station sends back a confirmation  
12 and a message that says you have \$950 of cash available.

13 A. Okay.

14 Q. Does the updated display process the piece of  
15 data for the \$950 message and again process the \$50 data 17:49:33  
16 that was input by the player, or does it only process the  
17 \$950 message data?

18 A. Well, I think it -- okay. So previously it  
19 processed the user data to put the --

20 Q. The \$50. 17:50:17

21 A. -- the \$50 on there, but that's now in the RAM  
22 of the system, and now the information that comes back  
23 from the credit station is processed. And that's going  
24 to make some change to the RAM, and then the new display  
25 is generated from that RAM image. So I think what you're 17:50:37

1 saying is correct.

2 Q. So in that case the -- is it -- isn't it correct  
3 that the updated display is based on processing the  
4 remotely originated data but not the previously input  
5 user-specific data? 17:51:16

6 A. No, you execute processor instructions to change  
7 the RAM. I don't think in that case -- I think the  
8 new -- the new data would -- I think the answer is yes,  
9 the new data would change that part of the display, the  
10 display still being generated, of course, from the RAM, 17:53:29  
11 the whole display, because it's a RAM-based display.

12 MR. SCHREINER: Okay. We're going to take a  
13 break.

14 THE WITNESS: Oh, we're still on the record.

15 (Discussion off the record.) 17:54:17

16 (Time noted: 5:55 p.m.)

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I declare under the penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on \_\_\_\_\_, 2013, at \_\_\_\_\_.

\_\_\_\_\_

SIGNATURE OF THE WITNESS

1 STATE OF CALIFORNIA ) ss:  
2 COUNTY OF MARIN )

3  
4 I, LESLIE ROCKWOOD, CSR NO. 3452, do hereby  
5 certify:

6 That the foregoing deposition testimony was  
7 taken before me at the time and place therein set forth  
8 and at which time the witness was administered the oath;

9 That testimony of the witness and all objections  
10 made by counsel at the time of the examination were  
11 recorded stenographically by me, and were thereafter  
12 transcribed under my direction and supervision, and that  
13 the foregoing pages contain a full, true and accurate  
14 record of all proceedings and testimony to the best of my  
15 skill and ability.

16 I further certify that I am neither counsel for  
17 any party to said action, nor am I related to any party  
18 to said action, nor am I in any way interested in the  
19 outcome thereof.

20 IN WITNESS WHEREOF, I have subscribed my name  
21 this 11th day of October, 2013.

22  
23  
24  
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\_\_\_\_\_  
LESLIE ROCKWOOD, RPR, CSR NO. 3462

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