



Transcript of Karansher Singh, Ph.D.

Date: August 7, 2026

Case: Samsung Electronics Co., Ltd., et al. -v- Maxell, Ltd. (PTAB)

Planet Depos

Phone: 888.433.3767

Email: clientservices@planetdepos.com

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

2
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4
5 SAMSUNG ELECTRONICS CO., LTD. And
6 SAMSUNG ELECTRONICS AMERICA, INC.,
7 Petitioners

8 v.

9 MAXELL, LTD.,
10 Patent Owner

11 Inter Partes Review No.: IPR2025-01311

12 U.S. Patent No. 11,812,091

13
14 Deposition of KARANSHER SINGH, Ph.D.

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1 Deposition of KARANSHER SINGH, Ph.D.,
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7 Schweitzer, Registered Professional Reporter,
8 Certified Realtime Reporter, California
9 CSR No. 14612, and Notary Public in and for the
10 Commonwealth of Pennsylvania.
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1 A P P E A R A N C E S

2 ON BEHALF OF THE PETITIONERS:

3 SALVATORE TAMBURRO, ESQUIRE

4 HENRY FILDES, ESQUIRE

5 DLA PIPER US

6 500 Eighth Street, NW

7 Washington, DC 20004

8

9

10 ON BEHALF OF THE PATENT OWNER:

11 ANGELINE PREMRAJ, ESQUIRE

12 MAYER BROWN

13 1999 K Street, NW

14 Washington, DC 20006

15

16

17 ALSO PRESENT:

18 Kieran Morrison, Technician

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1 P R O C E E D I N G S
2 KARANSHER SINGH, Ph.D.,
3 was called, and having been duly sworn,
4 testified as follows:
5 EXAMINATION
6 BY MR. TAMBURO:
7 Q Good morning, Dr. Singh.
8 A Good morning.
9 Q My name is Sal Tamburo, and I'm with DLA
10 Piper, and I'll be asking you some questions
11 today. Thank you for coming today.
12 A Thank you.
13 Q Can you please state your -- your full
14 name for the court reporter?
15 A Sure. My first name is Karansher. Last
16 name is Singh. Most people call me Karan Singh.
17 Q Okay. And who is your current employer?
18 A I work for the University of Toronto.
19 Q Okay. And who are you working for on this
20 matter?
21 A I've been retained by Maxell.
22 Q Okay. And what -- I'm sorry?

1 A No, that's it.

2 Q Okay. Have you worked on any other
3 matters besides this one for Maxell?

4 A One other matter.

5 Q Okay. Was that a litigation or an IPR?

6 A It was a litigation.

7 Q Okay. Currently are you working on only
8 this matter for Maxell?

9 A I -- I may be working on another one, but
10 it -- nothing really substantive at the moment.

11 Q Okay. Do you know if that other one is
12 also against Samsung?

13 A No, I believe it's not.

14 Q Okay. And you've been deposed before,
15 right?

16 A Yes.

17 Q Approximately how many times?

18 A I don't know. Probably more than ten
19 times.

20 Q Okay. This is an IPR matter, as you know.
21 How many other IPR matters besides this one have
22 you worked on as an expert witness, approximately?

1 A Maybe a few. Maybe two or three.

2 Q Okay.

3 A Something along those lines.

4 Q And have you ever testified in court?

5 A On an IPR or litigation matter?

6 Q Any -- any matter.

7 A Yes.

8 Q Okay. About how many times have you
9 testified in court?

10 A Maybe around five times, give or take a
11 few.

12 Q Okay. Were any of those for Maxell?

13 A One, yes.

14 Q Okay. Do you remember the nature of that
15 matter?

16 A Well, it was -- it was a case related to
17 user interfaces on smart phones. I don't remember
18 the exact details or patent numbers, but it should
19 be easy enough to look it up.

20 Q Okay. And who was the other party? Do
21 you recall?

22 A In this case, Samsung.

1 Q In the one that you testified in court for
2 Maxell?

3 A Yes.

4 Q Samsung? Okay.

5 A Yes.

6 Q Could you estimate what percentage of your
7 time you spend as an expert witness versus your
8 university responsibilities?

9 A It -- it really varies. I mean, I -- I
10 don't do expert witness work on a -- on a -- like,
11 an on-rolling -- like, on a going -- on a regular
12 basis. It's -- it's quite episodic, so I think it
13 would be difficult to guesstimate any kind of
14 percentage, really.

15 Q Okay. Is there any reason that -- that
16 you cannot give your best and honest -- most
17 honest testimony today?

18 A No. I -- I believe I can give my best --

19 Q Okay.

20 A -- testimony. Yep.

21 Q Sitting here, where are you located today?

22 A I'm in Toronto, Ontario.

1 Q Okay. And is there anybody else in the
2 room with you today?

3 A No.

4 Q Okay. Do you know if anybody else is
5 listening in besides Angeline, your counsel?

6 A No. I'm alone in the house.

7 Q Okay. And is that your computer you're
8 using today for the deposition?

9 A It is.

10 Q Are there any other applications running
11 currently on your computer open besides the -- the
12 Zoom we're on?

13 A No.

14 Q Do you have any other devices in front of
15 you besides the computer where you're on the Zoom
16 meeting?

17 A Nope.

18 Q Okay. Do you have any hard copy documents
19 in front of you?

20 A No.

21 Q Okay. Okay. So you can turn to
22 Exhibit 1, please, Singh Exhibit 1. If you can

1 open that and just identify what that is.

2 A The one that I was just asked to download?

3 Q Yes.

4 A Okay.

5 Q That's the wrong one. Sorry.

6 A No worries.

7 Q Give me a sec.

8 A Sure.

9 TECHNICIAN: Counsel, would you like to
10 keep that previous as Exhibit 1, or I can redo the
11 new one you're grabbing as exhibit --

12 MR. TAMBURO: Yeah, let's redo it. Sorry.
13 My bad. Can we look at Exhibit 2019?

14 (Exhibit 1 was marked for identification
15 and is attached to the transcript.)

16 MR. TAMBURO: Put that in the chat and
17 download that one, and we'll mark that one
18 Exhibit 1.

19 TECHNICIAN: Yes. One moment, please.

20 MR. TAMBURO: Sorry about that, everyone.

21 THE WITNESS: Do you want me to delete the
22 other one?

1 MR. TAMBURRO: You don't have to delete it.

2 You can just put it aside.

3 THE WITNESS: Okay.

4 MR. TAMBURRO: Yeah, you can just close it.

5 We're not going to look at that now.

6 THE WITNESS: Okay.

7 TECHNICIAN: All right. This one is
8 labeled as Singh 1, but it is a new document.

9 MR. TAMBURRO: Okay. Thank you.

10 BY MR. TAMBURRO:

11 Q So with that glitch out of the way, once
12 you have that open, Dr. Singh, would you mind just
13 identifying that?

14 A Yeah, just a second.

15 Q Yeah.

16 A Yeah, I got it open now.

17 Q Okay. And is that the declaration that
18 you prepared for this matter?

19 A It is.

20 Q Okay. And you'll see the -- on the cover
21 page, it says U.S. Patent Number 11,812,091. If I
22 call that the '091 patent today, is that okay with

1 you?

2 A It is.

3 Q Okay. Thank you.

4 Do you consider that this declaration
5 accurately describes your own opinions in your own
6 words?

7 A Yes.

8 Q And is everything in the declaration true
9 and accurate to the best of your knowledge?

10 A To the best of my knowledge, yes.

11 Q Did anyone help you while you were
12 drafting your declaration, Exhibit 1?

13 A Yes. I work with counsel.

14 Q Okay. Besides counsel, did you have any
15 help from anybody else?

16 A No.

17 Q Okay. Can I ask you to turn to Paragraphs
18 16 through 18? That's the person of ordinary
19 skill in the art section.

20 A Yep.

21 Q Okay. And do you -- in addition to what
22 you wrote here, do you also agree that a POSITA --

1 and when I say POSITA, will you understand what I
2 mean by that?

3 A Yeah. I would understand it to mean a
4 person of ordinary skill in the art.

5 Q Okay. Thanks. I just wanted to make
6 sure. I know you used it, and I just -- I don't
7 want to assume anything. Appreciate that.

8 So would you agree that a POSITA would
9 also have knowledge and experience with set-top
10 boxes?

11 A Well, it's like I say in my declaration,
12 that I would expect a certain level of education,
13 and as part of that education, the POSITA would
14 need to be able to have a basic level of
15 understanding of client server, architecture, and
16 broadcasting, broadcasting content, inasmuch as it
17 is used or referred to in the '091 patent. That's
18 all.

19 Q Okay. And specifically regarding the
20 set-top boxes, is that something that a person of
21 skill in the art would have known about?

22 A To the -- to the extent that it is used in

1 the '091 patent, yes.

2 Q How about if we look at Paragraph 33 of
3 your --

4 A Mm-hmm.

5 Q -- of your declaration.

6 A Okay.

7 Q I think here we are talking about the
8 Phillips reference; is that correct?

9 A Just let me go to Paragraph 33. Sorry.

10 Q Oh, yeah. Sorry.

11 A Sorry.

12 Yeah.

13 Q Okay. So do you see in Paragraph 33,
14 about five lines down, it says, The system is
15 described as supporting multiple user equipment
16 configurations, including a set-top box
17 arrangement.

18 Do you see that?

19 A Yes.

20 Q Okay. Does that -- with that
21 understanding -- I'm sorry.

22 Do you agree, then, looking at that, that

1 a person of skill would have a general
2 understanding of set-top boxes?

3 A Well, a general understanding or
4 sufficient education and background to -- to look
5 up or refresh themselves on something that they
6 may need to.

7 Q Okay. So would they have a general
8 understanding or an education on set-top boxes, a
9 person of skill in the art?

10 A Yeah, inasmuch as is required by -- by the
11 '091 patent.

12 Q Okay. But if they didn't know about the
13 '091 patent, they would also know about set-top
14 boxes, a POSITA?

15 A They would know as general technical
16 knowledge for somebody with a bachelor's degree in
17 computer science or computer engineering, or they
18 would be able to -- they would have sufficient
19 education and understanding to look it up.

20 Q Okay. And would you also agree that a
21 POSITA would have knowledge and experience with
22 video-on-demand systems?

1 A Same answer.

2 Q Got it. Understood. Thank you.

3 You agree that a POSITA would have
4 knowledge and experience with digital video
5 recorders, also known as DVRs?

6 A Again, they would -- if they either had it
7 as a background or they would be able to look up
8 and get whatever knowledge they needed.

9 Q Okay. And what is a DVR?

10 A There's so many acronyms in this space, I
11 would guess it would be a digital video recorder.

12 Q And what are some of the characteristics
13 of DVR using the definition you just gave?

14 A Well, it would be a device that could --
15 could record video.

16 Q Okay. And is it capable of --

17 A Digital.

18 Q I'm sorry. I didn't mean to speak over
19 you.

20 A That's fine.

21 Q Is a DVR something that is capable of
22 recording live video?

1 A Perhaps these -- you know, there are a
2 number of terms like these that are used, a number
3 of devices that have varying capabilities. So in
4 a very, very general sense, potentially, but
5 that's something, again, if one was to look at a
6 very specific device, it would be pretty easy to
7 tell what its capabilities were.

8 Q Is it also correct that a DVR is capable
9 of playing a recorded video?

10 A Well, DVR by itself refers to something
11 that is by -- you know, by the words would be
12 something to record, but typically devices that
13 have recording capability also have playback --

14 Q Okay.

15 A -- capabilities. But, again, this is
16 just -- this is just a very high-level answer.

17 Q Understood. Are you familiar with what
18 used to be known as TiVo DVRs?

19 A Yes.

20 Q What is TiVo generally?

21 A Well, I think TiVo was a particular --
22 particular either brand or way of recording and

1 working with video content, on a high level.

2 Q Do you recall if it came out -- if TiVo
3 came out in the 1999 or 2000 time frame? Does
4 that sound about right to you?

5 A I would be guessing. I -- I'm not sure.

6 Q Okay. Do you have any recollection or
7 knowledge if TiVo was around at the time of the
8 invention of the '091 patent?

9 A Again, it may have been.

10 Q Understood. Do you -- do you recall
11 whether TiVo allowed a user to pause live TV?

12 A I don't recall.

13 Q Okay. Do you know whether TiVo allowed a
14 user to rewind or fast-forward live TV?

15 A Again, you know, TiVo could probably be
16 used in a number of different ways, so I -- you
17 know, I -- sitting here, without being able to
18 look up certain things, I don't think I could
19 answer that one way or the other.

20 Q Is a DVR generally -- in that time frame
21 of the '091 patent, was a DVR capable of pausing
22 live TV? Do you know?

1 A It may have been, and if it did, it really
2 would also depend on -- on -- I mean, it -- it
3 would depend on the context of what -- what the
4 TV -- what live TV it was, what the configuration
5 was. Yeah.

6 Q Okay. And if -- if a user was able to
7 pause live TV, they could also restart the live TV
8 by hitting play; is that right?

9 A I'm not sure what you mean by that. If
10 you have something that is happening live and you
11 pause it and then you -- your -- it's no longer
12 live anymore. So I'm not sure where you're going
13 with that.

14 Q You're right. Let me rephrase.

15 So if the user hits pause on live TV with
16 a DVR, the video and the audio will stop, right?
17 On the display?

18 A In that -- in that very hypothetical
19 scenario, if there was any video that was paused
20 in some scenario, something that was paused
21 would -- would stop.

22 Q Okay. And then -- okay.

1 And then in the background, the DVR is
2 recording the live TV, correct?

3 A Potentially, hypothetically. I'm not sure
4 in this case what the DVR is doing in connection
5 with the playback functionality.

6 Q So the DVRs have the capability of
7 recording live TV while the user pressed the pause
8 button?

9 A Potentially. If it's a completely
10 different -- different device. I mean, if you go
11 back to the days of old stereo, you could have a
12 number of devices, one that was recording, one
13 that was playing back.

14 Q So I'm talking about --

15 A (Inaudible.)

16 Q I'm sorry. I didn't mean to talk over
17 you.

18 A Sorry. Yeah, yeah. No.

19 Q I'm talking about a DVR, just a singular
20 device.

21 A Mm-hmm.

22 Q When the user presses pause while they're

1 watching live TV, I think you said that the video
2 would stop on the display.

3 Is that right so far?

4 A I think I said that in the hypothetical
5 scenario that it could do that, that -- that if it
6 had that functionality, then perhaps, yes, it
7 would stop.

8 Q Okay. And then when the user -- what
9 happens when the user presses play?

10 A I'm not sure. If it is a -- if it is a
11 live broadcast, either there's a certain amount of
12 information that's lost, or maybe it's played in a
13 sped-up fashion, or maybe -- there could be any
14 number of hypothetical ways to -- to address that.

15 Q Okay. Can I ask you to turn to
16 Paragraph 21 in your declaration, Exhibit 1?

17 A Sure.

18 Sorry.

19 Q No worries.

20 A Okay. Yes. I'm here.

21 Q Great. Can you scroll down to that figure
22 on Page 11?

1 A Yes.

2 Q Okay. Can you -- who -- who created this
3 figure on Page 11?

4 A Well, the figure was created under my
5 direction. I believe counsel created it perhaps
6 with some assistance from AI, generative AI, to
7 create this as an illustrative.

8 Q Okay. So you described what you wanted
9 and counsel created it using some sort of AI
10 product?

11 A That's right. That's correct.

12 Q Okay. Why was this figure created?

13 A As an illustrative. Just to provide a
14 high-level overview of a certain process.

15 Q What process are you describing here on
16 Page 11 with this figure?

17 A Well, let's see what I say about it. I
18 mean, I can -- from a very high level, it's --
19 it's kind of describing the way the '091 patent
20 operates in terms of how it receives digital
21 content, and then how it controls the user
22 interface based on that content, and additional

1 information received with that content, that --
2 that is -- pertains to either the user interface
3 panels, as you can see there, or time-related
4 information.

5 And so it's -- it's -- it's kind of a
6 schematic just illustrating that.

7 Q Okay. Is this essentially describing the
8 invention of the '091 patent?

9 A From a high level. The invention of the
10 '091 patent -- '091 patent is in its claims. But
11 if you read the sentence below, in the
12 declaration, it says, Above is an exemplary system
13 architecture design [sic], and then it goes on to
14 talk about it.

15 MR. TAMBURO: Okay. Can we please pull up
16 what should be labeled as Exhibit 1001? That's
17 the '091 patent, and mark that Singh Exhibit 2,
18 please.

19 (Exhibit 2 was marked for identification
20 and is attached to the transcript.)

21 MR. TAMBURO: Put that in the chat.

22 TECHNICIAN: You should see that in the

1 chat now.

2 MR. TAMBURO: Got it. Thank you. I'm
3 going to download this, and if you could do that,
4 too, that'd be great.

5 THE WITNESS: Yep. I am doing it right
6 now.

7 BY MR. TAMBURO:

8 Q Okay. Do you recognize Exhibit 2 as the
9 '091 patent?

10 A Yes.

11 Q Okay. Can we look together at Claim 1 at
12 the bottom? Second page.

13 A Yeah.

14 Q So looking at Claim 1, do you agree that
15 the figure we just looked at on Page 11 of your
16 declaration --

17 A Yeah.

18 Q -- does not match Claim 1?

19 A Well, as I said, the -- the figure is --
20 is a high-level illustration of the general
21 operability of the -- of the '091 patent. It may
22 or may not have every claim element that is there

1 in the different claims, because, I mean, there's
2 Claim 1, but there are 20 claims there. So from a
3 high level, yes, it is indicative of the '091
4 patent.

5 Q Okay. And this was your attempt to
6 display innovation of the '091 patent, right?

7 A It was a high-level illustration of how
8 information flows in the '091 patent relevant to
9 its user interface design.

10 Q Okay. On Page 10 of your declaration, you
11 use the word "innovation," right? You say, The
12 '091 patent's innovation?

13 A Let me go to my declaration. Sorry.
14 Excuse me.

15 Q Take your time.
16 Page 10.

17 A Yeah, no. I was on the wrong document is
18 what it was. Page 10.

19 Yeah.

20 Q Okay.

21 A So -- so what -- where -- where were you
22 pointing me at on Page 10?

1 Q Sure. So five lines up from the bottom,
2 it says, The '091 patent's innovation.

3 A Yeah.

4 Q And so my question is, is this figure
5 displaying the innovation of the '091 patent, or
6 is it a high level? Because I don't see anywhere
7 where you say it's a high level in your
8 declaration.

9 A Well, it's -- it -- it is illustrative of
10 the architecture and the information flow. It
11 doesn't refer to everything that is there in the
12 '091 claims.

13 For example, it doesn't, you know, talk
14 about how the time-related information is being
15 used to select between the panels and so on.
16 So -- but it is certainly indicative of the
17 overall system architecture of -- and information
18 flow of the '091 patent.

19 Q Okay. And if I could just ask you to turn
20 back to the '091 patent again. I'm sorry to
21 keep --

22 A Mm-hmm.

1 Q -- switching back and forth on you.

2 A Yeah, no problem.

3 Q So the '091 patent -- look at the top of
4 Column 6.

5 A Mm-hmm.

6 Q Part of Claim 1. Right?

7 A Yes.

8 Q It says, A network communication circuitry
9 configured to receive digital contents and related
10 information from an outside server.

11 Do you see where it says that?

12 A Yes, I see.

13 Q Okay. And if you could look at your
14 declaration on Page 11, there is no network
15 communication circuitry shown, right?

16 A Yes. But it's -- it would be part of kind
17 of the -- the process by which that digital
18 content would be communicated from the outside
19 server to the controller, and a POSITA would
20 understand that this is an exemplary high-level
21 depiction of the architecture. It doesn't -- it
22 certainly may have certain details abstracted.

1 Q Okay. But you -- but it's your opinion,
2 though, that a POSITA would understand that there
3 must be a network communication circuitry in here
4 even though it's not shown?

5 A Well, a POSITA reading the '091 patent
6 would certainly know that.

7 Q And you left that out just because you
8 didn't feel like you needed to include every
9 detail?

10 A No. I left it out because I wanted to
11 focus on the control logic that was responsible
12 for the presentation of the user interface
13 content. The user interface -- the information in
14 the user interface, the user interface design.

15 Q Okay. And do you consider the network
16 communication circuitry to be part of the
17 invention?

18 A Well, it's required by the claim as -- as
19 we just read in Claim 1.

20 Q So you do believe it's part of the
21 invention?

22 A It's part of the claim. And the invention

1 is the entire claim put together. So it's a
2 component.

3 Q And the figure on Page 11 also does not
4 include the decoder that's in Claim 1, right? You
5 left that out for the same reasons, I guess?

6 A That's right. It was -- the -- the figure
7 that you pointed to is -- has been designed to
8 focus on the flow of control that determines the
9 user interface presented to the user.

10 Q Why didn't you use the figures in the '091
11 patent to explain the innovation of the '091
12 patent?

13 A No particular reason other than that I
14 felt this was clearer as a description from a
15 high-level.

16 Q So when you say "clearer," do you believe
17 clearer than -- the figure you created is more
18 clear and better conveys the innovation of the
19 '091 patent than the figures in the '091 patent?

20 A No, I don't believe that. I believe that
21 it is just a simpler abstraction to -- in addition
22 to the figures that are there in the '091 patent.

1 Q Okay. If you look at the '091 patent, if
2 you can go back to that.

3 A Mm-hmm.

4 Q There's Figure 1 you could have used. Why
5 didn't you use Figure 1?

6 A No particular reason other than, as I
7 said, I wish to focus on showing the control
8 related to the user interface presentation, and
9 further, in that show, for example, two different
10 kinds of panels that -- that it -- it
11 distinguishes between and it determines, and that
12 piece of information is not there in Figure 1. It
13 doesn't mean that it's not there in the '091
14 patent. It is. It is in other figures in the
15 '091 patent and in the specification and in the
16 description.

17 So, yes, I could have created a
18 complicated sequence of multiple figures from the
19 '091 patent to illustrate the same concept, or I
20 could have just created what I believe is a
21 simpler, high-level illustration conveying that,
22 and that's what I did.

1 Q Okay. And you didn't use Figure 5 either,
2 right? Is that for the same reason?

3 A Yes.

4 Q You don't think Figure 5 conveys the
5 information that you have in your -- Page 11 of
6 your declaration, that's the figure that you
7 created?

8 A Yeah. It doesn't talk about two different
9 panels that the '091 patent refers to as a linear
10 patent -- a linear panel or interactive panel.

11 Q But those are -- those are in Figures 3
12 and 4, right? So you -- you did use those
13 elsewhere in your declaration, right?

14 A Sure. Yes.

15 Q So the '091 patent does disclose the
16 linear operation panel and interactive operation
17 panel, right?

18 A Absolutely.

19 Q So why didn't you use the figures in the
20 '091 patent if it discloses both of these panels?

21 A Well, as -- as -- as I answered before,
22 the -- the illustrative figure that I used shows

1 what is illustrated in multiple figures of the
2 '091 patent in a single mock-up schematic. That's
3 it.

4 Q You thought it was easier to understand
5 your figure than it would be to understand the
6 figures in the '091 patent?

7 A I said that in addition to the figures in
8 the '091 patent, here is another figure that is
9 illustratively bringing it all together.

10 Q Okay. Can we look at the '091 patent?

11 A Okay.

12 Q And can we go to Figure 4?

13 A Mm-hmm.

14 Q This is an interactive content operation
15 panel, right?

16 A It is, yeah, an example -- illustrative
17 example of an interactive content operation panel.

18 Q Okay. Do you see the arrows in the middle
19 of the panel?

20 A I do.

21 Q They go up, down, left, and right,
22 correct?

1 A Yes.

2 Q And then there's an okay button in the
3 middle?

4 A Yep.

5 Q What is the purpose of those arrows and
6 the okay button?

7 A Well, in a general sense, it could be --
8 they could be a way by which one could control the
9 equivalent of a selection cursor or selection item
10 between -- you know, to select between other --
11 other elements, let's say interface elements, on
12 that panel.

13 There are many ways to do that. You know,
14 in early days, it -- they would -- it would happen
15 through buttons on a physical remote. Later on,
16 on screens that were computer screens. The same
17 thing could be done using a mouse. These days
18 with mobile devices, the same thing can be done
19 with your fingers using a touch screen.

20 Q What are some examples of interactive
21 content that would be used with these arrows and
22 the okay button?

1 A I believe I referred to a couple of them
2 in -- in my declaration. Maybe we can see what
3 examples I -- I provide there.

4 Q If you want to go back to your declaration
5 and take a look, I guess I'll just keep the
6 question open.

7 What are some examples of interactive
8 content that could be used to navigate with those
9 arrows and the okay button?

10 A Okay. Let me just take a look.

11 Actually, if I read here on Page 14 -- no,
12 what page is this? Page 13, Paragraph 46. For
13 example, in a live television competition, it may
14 make sense to present voting buttons for
15 participants while the competition is going on.

16 Q I'm sorry. Where -- I'm sorry. Where
17 were you, Doctor?

18 A Paragraph 46, Page 13.

19 Q Okay. When I'm looking at Page 46, I see
20 Page 34.

21 A Page 34? Really? That's not what I see.

22 Paragraph 46 -- no, sorry. Paragraph 23.

1 I apologize. Yeah. There -- there was a 46
2 starting -- starting one of the lines of the -- in
3 the text, and -- and -- yeah. Paragraph 23.

4 Q Got it. I see what you mean. I see what
5 you've been looking at. I see. Thank you.

6 All right. So Paragraph 23, Page 12 --
7 and let me see if I can remember my question.

8 A So down to -- Paragraph 13. Sorry, not
9 Paragraph 13. Sorry, sorry. Page 13.

10 Q So I'll just ask the question again, and
11 just --

12 A Yeah.

13 Q -- so it's clear, and maybe we can just
14 read together, since we're both in the right spot
15 now.

16 So looking at Figure 4 of the '091 patent,
17 what are some examples of interactive content that
18 could be navigated using the arrows and the okay
19 button?

20 A Mm-hmm. So, as I say over here, for
21 example, in a live television competition, it may
22 make sense to prevent -- present voting buttons

1 for participants while the competition is still
2 going on. So you can imagine, for example, in a
3 quiz show, you know, users/viewers potentially
4 being presented with, you know, a number of, like,
5 multiple choice questions. You know, is the
6 answer one, two, three, or four?

7 And the arrows, in this case, could allow
8 the -- the viewer to kind of navigate between
9 those buttons showing one, two, three, four, and
10 then hit okay on what the -- what they wanted to,
11 you know, their vote, which would then be
12 communicated back to the server.

13 Q Okay. So would there be something like a
14 menu with the votes, and you could pick one of the
15 votes?

16 A Not necessarily. Sometimes the -- the --
17 you know, the information for what the answers are
18 just shows up on the screen. It's displayed with
19 the video.

20 Q So if you were navigating up and down,
21 left and right, would that be some sort of a -- a
22 menu display potentially?

1 A No, that's not what I said. I actually
2 said the -- the arrow navigation, the typical
3 purpose of it is kind of an old-style way of
4 selecting between other elements of -- of the UI,
5 which on modern devices just happens directly by
6 clicking on -- either by clicking with a mouse or
7 by touching with your finger on touch screens.

8 Q So you would select what the -- you would
9 select the item you want by clicking okay, right?
10 The okay button?

11 A You could, or you could just use the touch
12 screen. If you look at, you know, on airplanes,
13 when you're on a flight, often you now can use --
14 operate a touch screen, but they still have some
15 old-style devices that allow you to kind of go
16 through buttons, kind of working through old-style
17 arrow buttons and an okay.

18 Q Right. I just want to make sure we're
19 both looking at this in the context of Figure 4 of
20 the '091 --

21 A Mm-hmm.

22 Q -- patent.

1 So just to bring us back to that, Figure 4
2 of the '091 patent has up, down, left, right
3 buttons, right?

4 A Yes.

5 Q And those up, down, left, and right arrow
6 buttons are used to move the cursor around; is
7 that fair?

8 A Sure.

9 Q And when they click on the cursor --

10 A I mean, that's one use. That's one use.
11 There can be other uses.

12 Q Okay. And is one use of these buttons on
13 Figure 4 to direct your cursor to the item you
14 want to select, and then once you arrive at that
15 item, you hit okay to select that item? Is that
16 fair?

17 A Yeah, that's one use. I mean, there are
18 other uses where the buttons kind of have direct
19 use themselves. For example, if you're playing,
20 you know, in certain kinds of situations where,
21 you know, where -- where you're controlling
22 information, where you're interacting with -- with

1 an actual screen, these -- these buttons -- these
2 arrows are also used for that there. They're
3 really used to convey spatial control.

4 Q Okay. And would a menu be something that
5 could be navigated using these arrows and the okay
6 button?

7 A In a very hypothetical sense. You mean
8 a -- you mean menu items, I would imagine you
9 mean, not -- not the menu itself? Because you
10 can't really navigate a menu. You can navigate
11 through items in a menu.

12 Q Okay. So items in a menu being the things
13 you can select?

14 MS. PREMRAJ: Objection to form.

15 A In -- in a very high-level, general sense,
16 yes. Potentially.

17 Q So you can use these -- I'm sorry. I keep
18 speaking over you.

19 So in Figure 4, you can use these arrows
20 and the okay button to navigate items in a menu
21 and then select the item that you want to select,
22 correct?

1 A Figure 4 is just an illustration of a
2 certain set of buttons. Those kind of buttons
3 could be used to potentially in one -- in one use
4 to -- yeah, to -- to possibly navigate menu items.
5 I mean, that's a very high-level hypothetical
6 question in user interface design.

7 Q Okay. And is a menu considered to be
8 interactive content?

9 A It depends on what's in that menu.
10 Interactive content is -- you know, is -- the '091
11 uses interactive -- interactive content in -- in a
12 particular way. And so if the menu items are --
13 you know, kind of follow that, then yes. If they
14 don't, then no.

15 Q Okay. And what type of menu items would
16 fall within the '091 patent where you can use
17 Figure 4 to navigate it?

18 A Well, as an example, if the buttons that
19 you see along the side -- you know, the numbers,
20 the -- the -- the color buttons, if they were
21 presented on that panel as a list of menu items,
22 then that would just be another visual way of

1 presenting that interactive panel.

2 Q Okay. Can we go to your declaration,
3 Exhibit 1 --

4 A Mm-hmm.

5 Q -- Paragraph 21.

6 A Paragraph 21.

7 Yep.

8 Q Do you see three lines down where you say,
9 And interactive content such as game shows?

10 A Three lines down from Paragraph 21?

11 Q In Paragraph 21. I'm sorry.

12 A In Paragraph 21. Okay.

13 In Paragraph 21. Hold on.

14 Yes.

15 Q Okay. So you say, And interactive content
16 such as game shows, right?

17 A Yeah, as an example.

18 Q Okay. Why do you refer to game shows as
19 being interactive content?

20 A Well, it could be, especially if -- if the
21 viewer were not a passive viewer but an active
22 viewer that is a participant.

1 Q And does the game show in your example --
2 let me rephrase that.

3 Is the game show in your example some sort
4 of moving content being displayed? Or can --

5 A Yes.

6 Q Can it be static content?

7 A In the context of the '091, it's moving
8 content.

9 Q Okay. So in your opinion --

10 A It's video.

11 Q -- in the context of the '091 patent,
12 interactive content cannot be static, it must be
13 moving?

14 A Well, in general, the '091 patent is about
15 video content. It's all through the
16 specification. It's...

17 Q You say generally the '091 patent is about
18 video content?

19 A Yeah, in general. Yes.

20 Q Does the '091 patent exclude static
21 content, non-moving content?

22 A Well, it largely talks about video

1 content.

2 Q But it doesn't exclude static content,
3 right?

4 A It specifically talks about moving image
5 content, about content that is moving.

6 Q Okay. Does it exclude -- I know it talks
7 about moving content, but does it exclude?

8 A As I said again, it explicitly talks about
9 video content.

10 Q Okay. Can you point me to anywhere where
11 it excludes static content?

12 A Well, everything about the -- about the
13 '091 patent refers to and is related to video and
14 moving image content, and that's exactly the way I
15 believe a POSITA would -- would understand it. I
16 think if you look, even in the -- yeah. So, for
17 instance, if you look around Column 3, around 55,
18 I think it specifically talks about moving image
19 content.

20 Q Okay. And then it talks about during
21 reproduction in line 60 of interactive contents,
22 such as --

1 A Mm-hmm.

2 Q -- broadcast content.

3 Do you see that?

4 A Yep.

5 Q An interactive content operation panel is
6 displayed?

7 A Yep.

8 Q And you understand that this is excluding
9 static content?

10 MS. PREMRAJ: Objection; form.

11 A Yeah. I mean, in general, a POSITA, I
12 believe, would understand that this additional
13 interactive content is other -- you know, other
14 content that -- that accompanies video and is --
15 it's typical in -- in the art. If you look at all
16 the figures, you look at all the -- all the
17 specifications in the -- in -- yeah, all the text
18 in the '091, it talks about video content.

19 Q The '091 patent talks about linear content
20 such as moving image content.

21 Do you see that on line 54 to 55 in
22 Column 3?

1 A I do.

2 Q And it's your opinion that even when it's
3 talking about interactive content, the '091 patent
4 is still referring to moving content; is that
5 correct?

6 A Yes. And then there it provides examples
7 of this when it comes to talking about
8 appreciation and time appreciation and the fact
9 that certain video content may have certain
10 interactive aspects to it, which when a certain
11 time has lapsed, perhaps would then only allow
12 linear reproduction of that video.

13 So everything in the '091 patent is
14 providing guidance towards that.

15 Q So when you read on line 60 or 61 of
16 Column 3 --

17 A Mm-hmm.

18 Q -- during reproduction of interactive
19 contents such as data content -- broadcast
20 contents, what does that mean to a -- in your
21 opinion?

22 A I mean, in my opinion, to a POSITA, that

1 would mean basically content -- video content that
2 would additionally have aspects that could be
3 interactive.

4 Q Even though the word "video," "moving
5 video," is not used here in connection with the
6 interactive --

7 A Not --

8 Q -- content?

9 A Not explicitly, but in -- if -- if you
10 read the '091 patent as a whole, in my opinion,
11 that's how a POSITA would -- would read it.

12 Q So you think the '091 patent is limited to
13 just video content and there's no static content
14 contemplated?

15 A The '091 patent is designed for video
16 content with or without interactive elements.

17 Q What specific portion of the '091 patent
18 would you point to, to support your opinion that
19 static content is excluded?

20 A Well, at the very least, the point that --
21 the place that I just pointed at.

22 Q Which is? I'm sorry.

1 A Paragraph 3. Paragraph 3, what is it?

2 Q You mean Column 3? I'm sorry.

3 A Yeah, Column 3, around Line Number 54,
4 possibly. That's one place. Other places where
5 the -- where the -- the patent talks about video,
6 movie -- yeah, their examples of the content, and
7 as I said, read as a whole, I believe that's how a
8 POSITA would understand the -- would understand
9 the '091 patent.

10 Q Okay. So just looking at that Paragraph
11 again beginning at line 51 in Column 3 --

12 A Mm-hmm.

13 Q -- you see it says Figures 2 to 4 show
14 image display states during digital broadcast
15 reproduction?

16 A Showing -- so -- where?

17 Q Column 3, line 51.

18 A Column 3, line 51. So image display
19 states. Yes.

20 Q Okay. And it says next, a monitor A1 has
21 a content display area A2 and an operation panel
22 display area A3.

1 Do you see that?

2 A Yes. Yeah.

3 Q Okay. And then it says during
4 reproduction of linear contents, such as moving
5 image content --

6 A Mm-hmm.

7 Q -- the content operation panel is
8 displayed.

9 Do you see that?

10 A I do.

11 Q And the linear content operation panel, if
12 you go back and look at Figure 3 --

13 A Mm-hmm.

14 Q -- that is a -- Figure 3 is a linear
15 content operation panel, right? That's what it's
16 labeled?

17 A Yeah.

18 Q And what's the purpose of those buttons in
19 box A4?

20 A So those are typically buttons that
21 control video or audio or content that is -- is
22 moving. That varies over time.

1 Q Okay. And then the next thing this spec
2 says on Column 3 -- let me back up.

3 It -- the specification starting on
4 line 55, it says, The linear content operation
5 panel provides functions that reproduce, stop,
6 temporary stop, fast forward, fast backward,
7 previous skip, next skip, and the like.

8 Do you see that?

9 A I'm sorry. Could you tell me where you're
10 reading from again?

11 Q Yeah, sorry. Column 3, starting around
12 line 55.

13 A Yes. Yeah. I --

14 Q Okay. It says, A linear content operation
15 panel A4 is displayed.

16 A Mm-hmm.

17 Q The linear content operation panel
18 providing functions of reproduce, stop, temporary
19 stop, fast forward, fast backward, previous skip,
20 next skip, and the like.

21 Do you see that?

22 A I do.

1 Q And that's the buttons we were just
2 looking at in Figure 3, correct?

3 A Yes.

4 Q Okay.

5 A Was it Figure 3 or Figure 4? I --

6 Q Yeah.

7 A Yeah, sorry. You've got to go back and --

8 Q It's -- it's Figure 3, I believe, but it's
9 box A4. So it gets a little --

10 A Yeah, that's right. Figure 3, A4.

11 Q Then continuing in Column 3 --

12 A Mm-hmm.

13 Q -- it says now, During reproduction of
14 interactive contents --

15 A Mm-hmm.

16 Q -- such as data broadcast contents --

17 A Mm-hmm.

18 Q -- an interactive content panel A5 is
19 displayed.

20 A Mm-hmm.

21 Q And in -- it describes the numerical keys
22 from 0 to 9, up/down/left/right keys, and colored

1 keys.

2 Do you see that?

3 A Yes.

4 Q Now, the paragraph here beginning at 60
5 doesn't mention anything about linear contents or
6 moving image content, does it?

7 A Well, it talks about data -- where does it
8 say that? Data broadcast contents, and I believe
9 in general and in this context, data broadcast
10 contents is additional, you know, content that --
11 that accompanies audio/video content that
12 potentially can be interacted with.

13 And then if you look at the rest of the
14 patent, in particular the examples relates to the
15 appreciation term, it's clearly talking about
16 video content that may have an interactive aspect
17 and certainly has a linear aspect to it that --
18 you know, that, based on a certain time interval,
19 may use to display one or the other. One or the
20 other panel. Sorry. To complete.

21 Q Where are you looking at to support
22 that -- all of that stuff is moving content that

1 you just mentioned?

2 A Like I said, the -- the -- the --

3 Q Sorry. For example, you said appreciation
4 term. Where -- where are you referring to? Can
5 you point me --

6 A I don't know. We'll have to look -- we'll
7 have to look at it somewhere.

8 Q I'll withdraw that question.

9 A Mm-hmm.

10 Q We've been going for over an hour. You
11 want to take about a five-minute break?

12 A Sure.

13 Q Okay. See you back in five.

14 A Thanks.

15 (A recess was taken.)

16 BY MR. TAMBURRO:

17 Q Dr. Singh, this is one of the questions I
18 hate to ask, but during the break, did you talk to
19 anybody?

20 A I briefly spoke to counsel. Nothing
21 substantive.

22 Q Did you discuss -- did you discuss your

1 testimony at all with counsel?

2 A No.

3 Q If you turn to Paragraph 59 of your dec.

4 A Paragraph 59. Okay.

5 Q Okay. 59.

6 A Yep.

7 Q 59. Okay. And this is directed to your
8 opinions regarding the alternative lead display
9 limitation; is that right?

10 A Hold on. I have to scroll back up to see
11 where -- alternative lead display. Yes.

12 Q Okay. And in Paragraph 59, going back to
13 that --

14 A Mm-hmm.

15 Q -- about five lines down, you say, But
16 this citation does not cure the technical
17 deficiency I have identified.

18 Right?

19 A Yep.

20 Q And just going back to the top of 59, you
21 say, Dr. Bederson relies on a prior PTAB decision
22 in the Blackberry IPR to support his mapping,

1 quoting the Board's statement --

2 A Mm-hmm.

3 Q -- that Figures 17a and 18 are examples of
4 the alternative display of either the linear
5 content operation panel or the interactive content
6 operation panel together with outputted digital
7 content.

8 Do you see that?

9 A Mm-hmm. Yes.

10 Q Okay.

11 A I see that.

12 Q So the board in the Blackberry IPR found
13 that both Figures 17a and 18 -- and they're
14 referring to the Phillips reference, correct?

15 A Yes, I -- I believe so.

16 Q Okay. And the board found that both 17a
17 and 18 of Phillips both show a linear content
18 operation panel or an interactive -- let me
19 rephrase that.

20 The board found that Figures 17a and
21 18a -- and 18 of Phillips are examples of the
22 alternative display of either the linear content

1 operation panel or the interactive content
2 operation panel together with outputted digital
3 content, right?

4 A That's what it says.

5 Q Okay. Do you disagree with that or do you
6 have reason to doubt what it says?

7 A Well, just -- it says what it says, and
8 that's fine.

9 Q Okay. Do you have an understanding
10 whether the board in the Blackberry IPR found that
11 Figure 17a and 18 are examples of the alternative
12 display of either the linear content operation
13 panel or the interactive content operation panel
14 together without outputted digital content?

15 A Well, I mean, the Blackberry IPR was an
16 IPR on -- on a related patent, not on this patent,
17 as far as I know.

18 Q Okay.

19 A And so this statement, you know, refers to
20 something that the board found in that -- perhaps
21 in that context.

22 Q Okay. Do you disagree with the board's

1 finding there?

2 A No. I'm not -- I'm not disagreeing with
3 the board's finding there.

4 Q Okay. So you agree with the board's
5 finding?

6 A I -- I'm pointing out that the board's
7 finding, even if you were to look at the board's
8 finding, as -- as it was in the context of the
9 '091 patent, it doesn't support Dr. Bederson's
10 argument.

11 Q Okay. But you agree with the board's
12 finding as far as the Blackberry IPR, the patent
13 at issue there?

14 A I -- I haven't been through the board's
15 finding in detail. I am simply rebutting what
16 Dr. Bederson is using as an argument in the
17 context of the '091 patent.

18 Q Okay.

19 A I have not analyzed the board's findings
20 in the prior IPR in -- in detail.

21 Q Okay. But you previously said you don't
22 disagree with it. Do you want to change that

1 testimony or are you going to stick with that?

2 A I'm just saying that I have not performed
3 that analysis. So I -- I'm not talking about that
4 conclusively one way or the other.

5 Q Okay. So you have no reason to disagree
6 with it?

7 A Or agree, for that matter. I'm simply
8 rebutting Dr. Bederson's argument.

9 Q And it's your opinion that Phillips's
10 Figure 17a does not display reproduced digital
11 content; is that correct?

12 A That is correct.

13 Q We can go back to Paragraph 25 of your
14 declaration, and we can look at Figure 17a.

15 A Yeah.

16 Okay. Paragraph 25.

17 Q So the Blackberry --

18 A Yeah.

19 Q Yeah. The Blackberry IPR and the board
20 found that Figure 17a does disclose reproduced
21 digital contents.

22 Isn't that what you wrote in Paragraph 59?

1 A I just copied what -- what was -- you
2 know, what -- from Dr. Bederson's assertion over
3 there, but I looked at Phillips -- the Phillips
4 patent myself, and I found that it doesn't
5 support -- well, it supports what I have to say in
6 that paragraph later on.

7 Q So you disagree with the board, then, in
8 the Blackberry IPR; isn't that correct?

9 A As I said, I have not looked at the
10 overall content in the context of the board's
11 finding in the IPR, and I'm simply using what
12 Dr. Bederson's arguments were and analyzing that
13 with respect to the Phillips -- Phillips's prior
14 art and presenting my opinions.

15 Q Did you review the Blackberry IPR?

16 A I may have looked at it, but I did not
17 review it in detail.

18 Q Okay. So in Paragraph 59, you quote the
19 board's statement?

20 A Mm-hmm.

21 Q Is that what you say? You quote the
22 board's statement.

1 A Okay.

2 Q Okay? And it says, Figure 17a -- and I'll
3 paraphrase --

4 A Mm-hmm.

5 Q -- shows out -- it shows outputted digital
6 content.

7 Is that fair? Is that a fair paraphrase
8 of the quote?

9 A In a -- from a high level, yes. Yeah.

10 Q Okay.

11 A That's what it says, yes.

12 Q Do you agree with that statement or you
13 disagree with that statement from the board?

14 A Well, I -- inasmuch as it is used in the
15 claims of the '091 patent, I believe that there
16 is -- there's a difference in that it does not
17 match the claim language, and that is what I'm
18 opining on.

19 Q Okay. But do you agree that Figure 17a
20 shows digital content?

21 A From a very high level, some form of
22 digital information. Yes. But as I said, if you

1 look at the explicit disclosure of Phillips, I
2 believe there's guidance over there as to what
3 Figure 17a is actually showing.

4 Q Okay. So you said that, from a high
5 level, some form of digital information is shown
6 in Figure 17a.

7 Do you believe that Figure 17a shows
8 digital content?

9 A You know, I -- I would say if you want
10 more conclusive answers, why don't we just look at
11 Phillips and look at what Phillips actually has to
12 say about 17a?

13 Q Well, we'll get to it, but I'm just asking
14 you if you -- looking at 17a of Phillips, which
15 we're doing now in Paragraph 36 of your
16 declaration --

17 A Mm-hmm.

18 Q -- looking at this figure, do you agree
19 that there are digital content displayed?

20 A Sorry. I'm lost on where -- where that
21 figure is in my report. Can you tell me again?

22 Q It is on Page 25, Paragraph 36.

1 A Okay. Page 25.

2 Okay. Could you -- could you repeat your
3 question, please?

4 Q Yes. Absolutely.

5 So looking at Figure 17a in your
6 declaration -- let me rephrase that.

7 Looking at Figure 17a of Phillips in your
8 declaration, do you agree that it shows digital
9 contents?

10 A Well, it shows digital information within
11 the Box 236, and if I remember, Phillips makes it
12 clearer that it is information and not the -- the
13 content that it refers to later on, for example,
14 in Figure 18, and that's essentially -- if you
15 read my -- what my report says, that's -- that's
16 what it pertains to.

17 Q Okay. So the board, as you quoted in
18 Paragraph 59, the board from the Blackberry IPR
19 found that Figure 17a does show outputted digital
20 content? Do you agree --

21 A In a very general sense. In a very
22 general sense.

1 Q I'm sorry. In a general sense, you agree
2 Figure 17a shows outputted digital content?

3 A Digital information.

4 Q You disagree with the word "content"?

5 A Inasmuch as it is used in Figure 18.

6 Q I'm not sure what you mean. We're talking
7 about Figure 17a.

8 A Okay.

9 Q And my question is do you agree with the
10 board's finding that Figure 17a shows outputted
11 digital content?

12 A Well, it has additional digital content.
13 It's showing an ad, perhaps, on the left-hand
14 side. It shows an ad below that. I'm not sure
15 what exactly in Figure 17a the board is referring
16 to when it -- it says that it's showing digital
17 content. It could be multiple things in this
18 window.

19 Q Like what?

20 A Well, like the ad on the left-hand side.

21 Q That would be digital content, correct?

22 A Potentially. A disparate piece of

1 content. Yeah.

2 Q Okay. And the video window, would that be
3 digital content?

4 A I'm not sure what the video window is.
5 We'll have to look at Phillips to see specifically
6 what -- what that video window is referring to.

7 Q Okay.

8 A And even the ad, really, we'll have to
9 look at what it -- what it says.

10 MR. TAMBURO: Can we download in the
11 chat -- or upload what is titled Exhibit 1010, and
12 mark that Exhibit 3?

13 TECHNICIAN: Yes. One moment.

14 (Exhibit 3 was marked for identification
15 and is attached to the transcript.)

16 TECHNICIAN: That's in the chat.

17 MR. TAMBURO: Thank you.

18 BY MR. TAMBURO:

19 Q So, Dr. Singh, can you open up Exhibit 3
20 and --

21 A Yeah, I'm just downloading it.

22 Q -- that?

1 A I don't know. For some reason, it's
2 taking a minute.

3 A All right.

4 Q Okay. Is this the Phillips patent that
5 you reviewed?

6 A Yes.

7 Q Okay.

8 A I believe so.

9 Q And if we can look at Column 19 in
10 Phillips, Exhibit 3.

11 A Mm-hmm.

12 Q And starting at line 44?

13 A Okay.

14 Q You see it says, If the user selects
15 Option 44 the video clip containing information on
16 the video-on-demand content of interest?

17 A Mm-hmm.

18 Q E.g., a promotional video such as a
19 preview, trailer, review, et cetera.

20 Do you see that?

21 A Yep, I see that.

22 Q So having read that, going back to

1 Figure 17a, do you agree with me that figure --
2 sorry.

3 Do you agree that the video window in
4 Figure 17a includes digital content?

5 A Well, if I read up -- a little higher up
6 on Figure 17a, it says 3 and 232 may include
7 information to 36 on the selected video-on-demand
8 content such as title, run time, price, rating,
9 and a description of the selected video, and
10 that's kind of what's shown in 17a.

11 Q Right. But I'm talking specifically about
12 the video window in 17a. There's -- as you said
13 earlier --

14 A Yeah.

15 Q -- there's different -- there's different
16 types of content in Figure 17a, right?

17 A Mm-hmm.

18 Q So I want to --

19 A Yes.

20 Q -- focus on -- I want to focus on one at a
21 time, if that's okay.

22 A Okay.

1 Q So, again, I'll repeat the question.

2 Figure 17a, the video window, having just
3 read the excerpt in Paragraph 19 regarding the
4 video window, do you agree that the video window
5 includes digital content?

6 A It -- it doesn't say where the -- where
7 this video clip is being displayed, for one. I
8 don't see it's saying that it's displayed in
9 window -- in 246, for example. And if it were,
10 it's also referring to a different piece of
11 content such as a preview or a trailer or a
12 review.

13 Q I'm sorry. Are you --

14 A To me, that's inconclusive here.

15 Q Okay. So you don't know whether the video
16 window, which includes the promotional video such
17 as a preview, a trailer, or review, you don't know
18 one way or the other whether that's digital
19 content? Is that going to be what your testimony
20 is today?

21 A That's not what I said.

22 Q Okay. So let me ask it -- let me ask the

1 question again.

2 So in the video window in Figure 17a of
3 Phillips, which we just read --

4 A Could you point me at what -- is there --
5 is there a call-out box for the video window?
6 Like a call-out number just as you pointed me to
7 236?

8 Q Yeah. Give me one second. Bear with me
9 one minute.

10 A Mm-hmm.

11 Q Go to Figure 15 of Phillips.

12 A 15? Okay.

13 Let me go back up. It has it's -- it's
14 turned upside down. Is it all right if I rotate
15 it by 90 degrees to --

16 Q Yes. Whatever's easier for you, yes.

17 A Okay.

18 Q Okay. So if you look at 15, Figure 15 --

19 A Yeah.

20 Q -- you see video window 221.

21 You see that?

22 A I see that, okay. Yes.

1 Q And let me get you to the right place in
2 the specification.

3 A Mm-hmm.

4 Q Column 19, line 13.

5 A Column 19, line 13.

6 Okay.

7 Q So Column 19, did I say that? I'm sorry.

8 A Yes, you did.

9 Q Okay. Column 19, line 13.

10 Do you see where it says, Video window 221
11 may be provided in any video-on-demand information
12 screen and may provide information relating to a
13 video-on-demand program selected by the user or
14 any other suitable video information.

15 Do you see that?

16 A Mm-hmm.

17 Q Okay. And then if you look further down
18 regarding Figure 17a, it gives further information
19 on the video window, as we just read. It could be
20 a -- in connection with Figure 17a. It's
21 referring to a promotional video such as a
22 preview, a trailer, a review, et cetera.

1 Do you see that from where we just read
2 earlier?

3 A Yeah, but it doesn't say where it's
4 displayed.

5 Q Okay.

6 A It doesn't say, like, figure -- call out
7 221 or anything.

8 Q Okay.

9 A And -- and, I mean, prior to that, you
10 asked me specifically about Box Number 236, and I
11 think Box Number 236 is what Dr. Bederson refers
12 to in his report.

13 And if you look at 236, you read a Line
14 Number 35, it's pretty clear what it says.
15 Information and title, run time, price, rating,
16 and the -- the figure actually supports that.

17 Q Okay. So I just want to go back to
18 Figure 17a, the video window, if we can.

19 Is that all right?

20 A Sure.

21 Q Okay. So you disagree that the video
22 window includes digital content, bottom line,

1 right?

2 A No. I'm not -- I'm not disagreeing. I'm
3 just asking -- you asked me a line of questions
4 where you tried to connect certain aspects of the
5 specification to the figure, and I don't see it --
6 the explicit connections that you are pointing to.

7 Q Okay. Do you agree that the video window
8 in Figure 17a includes digital content?

9 A Maybe; maybe not. I mean, it says video
10 window, but specifically with the way you read
11 certain passages to me, I didn't see the
12 connection, and more specifically in the context
13 of Dr. Bederson's declaration, he's talking
14 about -- call out Number 236.

15 Q So you don't have enough information to
16 determine whether the video window in Figure 17a
17 includes digital content; is that correct?

18 A I haven't performed that -- that aspect of
19 analysis. I focused on what Dr. Bederson has
20 asserted, which is the call-out number 236.

21 Q Okay. So you haven't examined, you
22 haven't analyzed whether the video window in 17a

1 includes digital content; is that fair?

2 A I have inasmuch as Dr. Bederson has
3 asserted it does.

4 Q So when you said I haven't performed that
5 aspect of analysis, what do you -- what do you
6 mean by that?

7 A I meant in the complete hypothetical,
8 outside the scope of what Dr. Bederson is calling
9 video content in Figure 17a.

10 Q Okay. And Figure 17a, the video window in
11 the top left corner, does that include digital
12 content or not?

13 A Perhaps.

14 Q Okay. And the ad boxes in Figure 17a, the
15 ad, you understand that to mean advertisement; is
16 that right?

17 A From a high level, but if you want a more
18 conclusive answer, we can look at what the -- what
19 the patent specification actually says. But from
20 a high level, sure. I mean, Phillips has
21 designed -- it's -- the invention is about ads.

22 Q Okay. So are ads, as shown in Figure 17a,

1 digital content?

2 A Potentially a disparate piece of digital
3 content. That is not the same as the digital
4 content referred to as Dr. Bederson later on,
5 let's say, in Figure 18, for example.

6 Q Okay. And in Box 236 of Figure 17 --

7 MS. PREMRAJ: Objection; form. Sorry.

8 MR. TAMBURO: I'm sorry. In -- I wasn't
9 done. I'm sorry.

10 MS. PREMRAJ: Sorry about that.

11 BY MR. TAMBURO:

12 Q In Box 236 of Figure 17a, Dr. Singh, is
13 content displayed?

14 A Well, if I read from the -- the patent,
15 the patent -- let's see what the patent actually
16 says for Box 236. The -- where has it gone? Bear
17 with me for a second.

18 So the patent says -- I've lost where I
19 was. Hold on. Just bear with me a second.

20 Yeah. So the patent says that 236
21 includes information on video -- selected
22 video-on-demand content, and then it provides

1 examples of that information: title, run time,
2 price, rating, description of the selected
3 video-on-demand, and then if you look at the
4 Figure 17a and you see what's displayed over
5 there, which kind of echoes this, yes, it's
6 digital information, and that's what's displayed
7 on 236.

8 Q Okay. There's digital information
9 displayed in 236. You agree with that?

10 A Information, not digital content in the
11 way that is then referred to by Dr. Bederson later
12 on when describing Figure 18.

13 Q You agree it's digital information, just
14 not digital content, right?

15 A In the same way as described in Figure 18,
16 yes.

17 Q And do you agree that the back arrow at
18 the bottom of Figure 17a is an interactive button?

19 A The back arrow? Hold on. Let me go back
20 to -- does the specification specifically call out
21 the back arrow? If it does, maybe you can --
22 maybe you can just point me at it.

1 Q Or if -- yeah.

2 You don't know by looking at Figure 17a
3 whether the --

4 A Well, from a high level, yeah. From a
5 high level -- let me see. Let me look.

6 Yeah. From a high level, the back arrow
7 is likely to be an -- yeah, is likely to be an
8 interactive button, though perhaps not an
9 interactive button in the content -- in the
10 context of the '091 in that it -- in terms of how
11 it communicates with the server. It may just
12 communicate locally back and show -- show a
13 different screen, for example.

14 And I don't see anything in the disclosure
15 of Phillips, you know, specifically talking about
16 it, and I would imagine that there's nothing
17 specific because it hasn't been called out with a
18 number, at least in 17a. Maybe somewhere else.

19 Q Okay. And how about the buy button at the
20 238 at the bottom of Figure 17a? Is that an
21 interactive button?

22 A Yeah, that, perhaps, is more likely to be

1 an interactive button. Yes.

2 Q Okay. And how about the record button,
3 237? Is that an interactive button in Figure 17a?

4 A Not necessarily. In the context of the
5 '091 patent, in terms of how it communicates with
6 a server or not.

7 Q Can we go to Paragraph 38 of your
8 declaration?

9 A Sure.

10 Paragraph 38. Yes.

11 Q Okay. What's the purpose of the figure in
12 Paragraph 38?

13 A Figure -- are you talking about Figure 18
14 or the -- the -- kind of the illustrative figure?

15 Q Yeah. That Paragraph 38 on Page 25,
16 there's a figure --

17 A Illustrative figure. Page 25? 27.

18 Q I'm sorry, 27. Page 27, yes.

19 A Correct. Okay. So... so the illustrative
20 figure is simply showing kind of a user workflow
21 illustrative of how Phillips describes its -- its
22 user interface for video-on-demand. And

1 there's -- there's kind of a caption below that
2 describing it.

3 Q Okay. And is part of the reason you
4 include this illustrative figure in Paragraph 38
5 to demonstrate that in Figure 17a, the user is
6 purchasing a video-on-demand, and in Figure 18,
7 the user is playing the video purchased in
8 Figure 17a?

9 A From a high level, yes.

10 Q Did you understand that the video window
11 in Figure 17a is, based on what we read earlier in
12 Phillips, is playing the video that is eventually
13 purchased and displayed in Figure 18?

14 A No, I don't think so. If -- if -- if the
15 video -- the screen in 17a was playing the video
16 in Figure 18, nobody would purchase anything.

17 Q Okay. So is it playing a preview as -- as
18 the spec says? Is Figure 17a playing a
19 promotional video such as a preview, a trailer of
20 the video that's purchased and played in
21 Figure 18?

22 A The only thing that Dr. Bederson has

1 pointed to in terms of what is happening in
2 Figure 17a refers to that call-out box 236 that is
3 providing information to -- to -- to a user, which
4 once purchased then switches to a different screen
5 that has the digital content of the -- the video
6 that is shown -- that is described in Figure 18.

7 Q Okay.

8 A And that's what this figure is
9 illustrating.

10 Q Okay. Well, I'm not asking you about what
11 Dr. Bederson said. I'm asking you what your
12 opinion is.

13 A Mm-hmm.

14 Q And if you don't -- if you don't have an
15 opinion and you haven't analyzed it, that's fine.
16 I just want to know if you have an opinion whether
17 the video preview or trailer that is displayed in
18 Figure 17a in the video window is the same
19 video -- or is a preview of the video that's
20 purchased and eventually watched by the user in
21 Figure 18?

22 A Well, firstly, as I said below, it's

1 unclear where or how the video preview is actually
2 displayed, whether it's displayed in that
3 Figure 17 itself or on a completely different
4 screen that is -- that at least I didn't find kind
5 of clarity on that in the Phillips disclosure.

6 And then, hypothetically, even if you were
7 to take that preview or trailer or teaser, it's a
8 different piece of digital content from the actual
9 film. As I said, if it was the same piece of
10 digital content, then -- then I don't see a reason
11 for anybody to actually purchase anything.

12 Q Going back to Paragraph 59.

13 A 59. This is my declaration, Counsel?

14 Q Yes.

15 A Okay.

16 Q Just give me one second, if you can.

17 A Yep.

18 Q Well, let me just go back if I can before
19 we get to 59. Just the last question I asked
20 regarding Figure 17a and then Figure 18.

21 So was it --

22 A Okay.

1 Q -- fair to -- is it fair to say that you
2 just don't have enough information to determine
3 one way or the other whether the preview shown in
4 the video window in Figure 17a is of the same
5 video that's purchased in Figure 18 and watched --

6 A Actually, that's not what I said. I
7 actually said that, firstly, it's unclear that the
8 preview that you referred to in the spec is shown
9 in that video window or somewhere else. That,
10 inasmuch as you were able to point me at in the
11 spec, I believe is unclear.

12 And, further, that that video is clearly
13 referred to as a teaser or a trailer, which is a
14 different piece of content from the content that's
15 shown in Figure 18, and the one indication of it
16 being a different piece of content would be that
17 figure -- the content in Figure 18 is played when
18 a purchase is made. And if the other piece of
19 content that you referred to, the preview content,
20 was the same content, then -- then there would be
21 no motivation for anybody to make a purchase.
22 It's the same thing that I've answered before.

1 Q Okay. Looking at Paragraph 38 again of
2 your declaration, that illustrative figure that
3 you created?

4 A Yes.

5 Q Okay. So is it your opinion that
6 Figure 17, you label that as the purchase screen,
7 right? You see where you say that?

8 A Let me -- I'm just -- I'm still going back
9 to -- okay.

10 Where do I label it as a purchase screen,
11 or --

12 Q In the box the second from the right.

13 A Second -- okay. Yes. Yeah, I see that.
14 Yes.

15 Q You see where you say before purchased on
16 the left side, and then on the right side, you say
17 after purchase?

18 A Yes.

19 Q So it's your opinion, though, that
20 Figure 17a, the user is purchasing a video,
21 correct?

22 A Yes.

1 Q And in Figure 18, the user is watching
2 that same video, correct?

3 A The video that has been purchased.

4 Q Yes. Okay. You're just not sure whether
5 the video window in Figure 17a is showing a
6 preview of the -- of the video being purchased; is
7 that what your testimony is?

8 A No. My testimony is that the purchase
9 screen that was categorically pointed -- the
10 window that was categorically pointed at by
11 Dr. Bederson that's referring to the content is
12 clearly showing digital information and not that
13 content, and that is what my report refers to.

14 Q Okay. So I'm going to ask you a different
15 question, because apparently -- maybe I misspoke.

16 So looking at Figure 17a, the video
17 window, do you agree that that shows a preview of
18 the video being purchased in Figure 17a? Your
19 opinion, I'm asking.

20 A Yeah. My opinion is not necessarily --
21 you pointed me -- firstly, Dr. Bederson does not
22 say anything about that, as far as I can tell, and

1 you pointed me at a portion of the specification
2 that talks about a video preview being shown, but
3 it does not specify where that video preview is
4 being shown. So it could be shown in that video
5 window, or it could be shown on a different screen
6 altogether. And so that's my opinion.

7 Q So you don't know -- you don't have enough
8 information to agree that the video window in
9 Figure 17a is showing a preview or a trailer of
10 the video being purchased in Figure 17a; is that
11 what you're saying?

12 A I'm saying that the portion of the
13 specification that you pointed me at, sitting in
14 my deposition right now, does not make it clear as
15 to where that video -- that teaser or trailer or
16 preview, whatever the -- the specification of
17 Phillips precisely says, is being displayed.

18 Q So it's your opinion, then, that a POSITA
19 would potentially think that some other video is
20 playing in the window -- the video window of 17a
21 while the user is purchasing a completely
22 different video? Is that what your testimony is?

1 A No, that is not what my testimony is. My
2 testimony is simply what I already answered, which
3 is that that video preview, it is not
4 categorically disclosed as to where it is being
5 shown.

6 Q Where in 17a would a video clip of a
7 preview or a trailer be shown if not in the video
8 window?

9 A It could be shown on an entirely different
10 screen. If you look at the -- the video window as
11 it's shown schematically in the -- in Figure 17a,
12 it's tiny in comparison to everything else.

13 So if the goal was to, you know, entice
14 somebody to purchase a video that you then see in
15 Figure 18, you know, occupying most of the screen,
16 you might want to show it in something bigger than
17 a thumbnail.

18 Q Because it's small, you don't believe it's
19 the same video or a preview of the same video
20 being purchased?

21 A No.

22 Q Is that your testimony?

1 A No. My testimony is that it's not -- it's
2 not clearly pointed out in Phillips. So it could
3 be there, but equally, it could not be.

4 Q Okay.

5 A And for the purposes of rebutting
6 Dr. Bederson's report, that window has not even
7 been referred to. It's -- the -- the window that
8 is referred to is 236. Or the -- the region,
9 whatever. Not window necessarily, but the region
10 of the screen.

11 Q Okay. So you didn't analyze the --
12 whether the window can include the same video
13 contents, or -- let me rephrase.

14 You didn't analyze, for purposes of your
15 declaration, whether the video window in
16 Figure 17a is a preview of the same video being
17 purchased in Figure 17a; is that fair?

18 A My report was an analysis that was
19 sufficiently reviewed by Dr. Bederson's report,
20 and his report says nothing about that particular
21 video window as far as I could tell.

22 Q Okay. And is that why you did not analyze

1 whether the video window in Figure 17a includes a
2 preview or a trailer of the same video being
3 purchased in Figure 17a?

4 A As I said, I -- the -- my analysis
5 rebutted the arguments of Dr. Bederson, in
6 addition to that, sitting over here, I have looked
7 at what you have shown me, and based on what
8 you've shown me, it is my opinion that it could or
9 it could not, and if you're looking for a more
10 detailed answer, I may perform a more detailed
11 analysis and supplement those opinions at a later
12 point.

13 Q Okay. We've been going about an hour, a
14 little bit more. You want to take a break?

15 A Sure.

16 Q Okay. Let's take five, if it's okay with
17 everyone?

18 A Five is good. Thanks.

19 (A recess was taken.)

20 BY MR. TAMBURIO:

21 Q Okay. Turning to Paragraph 59 of your
22 declaration. Paragraph 5-9.

1 A Yes. Just give me a second.

2 Yep. I'm there.

3 Q Okay. So you see where you say, at the
4 bottom of Page 42, The board's prior statement
5 does not alter the fact that Phillips's system
6 presents these screens sequentially, in different
7 use contexts, not as alternative panels displayed
8 together with the reproduced digital contents.

9 Do you see that?

10 A I do.

11 Q Okay. So it's your opinion that
12 Figure 17a -- let me rephrase that.

13 It's your opinion that even if Figure 17a
14 does include reproduced digital contents, the
15 ultimate display limitation is still not met
16 because Figure 17 and Figure 18 are sequential
17 screens, correct?

18 MS. PREMRAJ: Objection; form.

19 A Well -- well, not only are they
20 sequential, they're not the same content.

21 Q Okay.

22 A They're not displaying the same content.

1 Q Okay. We'll take those one at a time. I
2 appreciate that, though.

3 A Mm-hmm.

4 Q When we look at the '091 patent,
5 Exhibit 1 -- I'm sorry, Exhibit 2, can you show me
6 where in the specification or the claims the '091
7 patent says sequentially presented screens are
8 excluded from the alternatively display
9 limitation?

10 A Well, the point behind saying that these
11 are displayed sequentially is -- is pointing to
12 the fact that we're looking at completely
13 different -- essentially different pieces of UI
14 and content and information on two different
15 screens that are a part of a workflow, and that's
16 not what the -- the specification of the '091
17 patent describes.

18 The '091 patent describes -- the '091
19 patent describes certain workflows of how user
20 interface elements are presented based on the
21 content and time-related information for a
22 particular piece of content.

1 So it doesn't match, is really what I'm
2 pointing to.

3 Q Okay. Let's take it one step at a time.

4 A Okay.

5 Q Do you see the word "sequentially"
6 anywhere in the '091 patent?

7 A The specific word, maybe, maybe not. No.
8 Maybe not.

9 Q You do not see the word "sequentially" in
10 the '091 patent?

11 A The -- the word may, maybe not, but the
12 word -- the use of a sequence of display screens
13 and -- and user interface display is referring to
14 a particular user workflow, and that user workflow
15 is not the user workflow that's described in the
16 '091 patent.

17 Q So when you say --

18 A It's not the word. It's the use --
19 it's -- it's what its meaning is in the context of
20 the '091 patent.

21 Q Okay. And where in the '091 patent are
22 you relying on for your understanding that if

1 there are screens that are sequentially displayed,
2 they are not meeting the alternatively displayed
3 limitation?

4 A Well, the '091 patent refers to a certain
5 workflow. They're examples. For instance, if you
6 look at, I think, maybe Column 5 where it's
7 talking about an appreciation term, there's a
8 second content that is shown, and it's shown with
9 either an interactive panel or a linear panel, and
10 those are -- that's -- those are alternative
11 display -- alternative user interfaces for the
12 same piece of content, and what's shown in
13 Figure 17a and Figure 18 are two disparate pieces
14 of an overall user interface that are not the
15 same.

16 Q Okay. Is there anything else in the '091
17 patent that you rely on for your opinion, or is it
18 just the discussion regarding the appreciation
19 term?

20 A The overall '091 patent, if you read it,
21 its -- its design philosophy is about taking a
22 single piece of content, and in a content specific

1 way for that piece of content, based on
2 information received from the seller for that
3 content, either showing an interactive panel or a
4 linear panel over that content, with an additional
5 time limitation aspect to it, and it pervades
6 the -- pervades the description through --
7 throughout the patent.

8 And my -- the point made in Paragraph 59
9 is quite simply to say these are two different
10 portions of an overall user workflow that should
11 not be conflated with what's described in the '091
12 patent.

13 Q I'll ask you again: Is there any specific
14 place in the '091 patent you can point me to,
15 other than saying the overall '091 patent, is
16 there a specific place in the '091 patent you can
17 point me to, to support your opinion that
18 sequential screens are not alternatively
19 displayed?

20 MS. PREMRAJ: Objection; asked and
21 answered.

22 Q If your answer's the same, that's okay. I

1 just want to know if you can point me to anywhere
2 in the specification or the claims. If you're
3 going to point me to the entire '091 patent,
4 that's fine. I'm giving you an opportunity to
5 point me to somewhere more specific.

6 So with that, I'll ask it again. Can you
7 point me to anywhere in the specification, any
8 specific place in the specification or the claims
9 of the '091 patent to support your opinion that
10 Phillips' system presents screens sequentially,
11 and because of that, they are not displayed
12 together with reproduced digital content?

13 A But the -- the point of describing or
14 showing the workflow in a sequence is to point out
15 that it is a completely different workflow from
16 the '091 patent. The '091 patent does not operate
17 in the same way of Phillips as shown in Figure 17a
18 and 18 does, and that is evident through the
19 specification of the patent and the claims.

20 Q Okay. And I'll just ask you: Is there
21 any particular word or series of words in the
22 specification or the claim that you're relying on

1 for your opinion --

2 MS. PREMRAJ: Objection -- objection;
3 asked and answered.

4 A As I said, it's described throughout the
5 patent. The design of the UI is based on
6 receiving information that defines the user
7 interface for a specific piece of digital content,
8 and that is not what is being described in
9 Figure 17a, and subsequently in Figure 18.

10 Q Let's look at Claim 1 specifically. Is
11 there anything in Claim 1 that supports your
12 opinion that sequential screens are not dis- --
13 alternatively displayed operation panels together
14 with the reproduced --

15 MS. PREMRAJ: Objection -- I'm sorry.

16 MR. TAMBURO: Right.

17 MS. PREMRAJ: Objection; asked and
18 answered.

19 MR. TAMBURO: Let me ask that again.

20 THE WITNESS: Yeah.

21 MR. TAMBURO: Let me ask that again. I
22 got interrupted.

1 BY MR. TAMBURIO:

2 Q Looking at Claim 1 specifically, is there
3 anything in Claim 1, the language of Claim 1 --
4 and I'll wait, and you can read it --

5 A Mm-hmm.

6 Q -- that sequential screens displaying
7 operation panels do not meet the alternatively
8 displayed limitation of the claim?

9 MS. PREMRAJ: Objection; asked and
10 answered.

11 A Well, the sequential screens, even if they
12 do display -- even in the hypothetical that they
13 do display digital content, if they are not
14 displaying the same digital content, then they are
15 not alternatively displaying that content. And
16 that's -- that's basically what the claim
17 language -- the claim language says.

18 Q Okay. Where does the claim language say
19 that?

20 A Well, so it says the controller is
21 configured to alternatively display either, let's
22 say, a linear panel or an operation panel, that

1 communicates with the -- with the outside server,
2 with the reproduced digital content for that piece
3 of digital content.

4 And going further, it also talks about --
5 it provides guidance on how that linear panel
6 or -- or interactive panel is displayed, which is
7 based on time information from the server and
8 panel information from the server that is
9 content-specific.

10 And so central to that claim is that piece
11 of digital content. When you look at a sequential
12 screen, whether it has digital content or not, if
13 it has disparate pieces of digital content, it's
14 talking about something other than what is
15 described in the '091 patent.

16 Q So it's your understanding that Claim 1,
17 when it says reproduced -- with the reproduced
18 digital contents, it requires the same exact
19 reproduced digital contents to be displayed with
20 either the linear operation panel or the
21 interactive operation panel?

22 A Well, it is the -- the -- the piece of

1 digital content that is coming from the server
2 that is driving the user interface display, as
3 described all through the '091 patent. And as
4 I've asked -- as I've answered multiple times,
5 Phillips's disclosure is designed for something
6 completely different, its UI workflow is entirely
7 different, and what's shown on the different
8 screens, 17a and 18, are different.

9 Q And where's your support in the
10 specification that you have a linear operation
11 panel and an interactive operation panel
12 alternatively displayed on the same exact digital
13 contents?

14 A All through the -- all through the patent,
15 but more specifically, if you look at figure --
16 not -- if you look at figure -- maybe Column 5
17 towards the end when it's talking about an
18 appreciation term, it's talking about a single
19 piece of digital content, and then it's -- it's --
20 it's describing a logic that determines whether to
21 choose a linear panel or an interactive panel.

22 So that's, you know, providing clear

1 guidance on that. What's -- what is further
2 described earlier in the patent is that the goal
3 of this kind of customized UI in the '091 at a
4 high level is to reduce visual clutter in -- in
5 the UI display, and then, therefore, being able to
6 provide a user with -- with an easier navigation
7 experience, and that's not what Phillips is about.

8 Q Can I ask you to look at Column 3 of the
9 '091 patent?

10 A Sure.

11 Q And starting at line 30 -- I'm sorry.
12 Starting at line 53.

13 A Mm-hmm.

14 Q You see where it says, During reproduction
15 of linear content such as moving image content, a
16 linear content operation panel A4 is displayed?

17 A Yes.

18 Q Okay. And you see in the next paragraph
19 starting at line 60, During reproduction of
20 interactive content, such as data broadcast
21 content, an interactive broadcast content
22 operation panel is displayed.

1 Do you see that?

2 A Yes.

3 Q Is it your understanding -- is it your
4 opinion that the linear contents mentioned in
5 line 54 is the same exact digital contents as the
6 broadcast contents in line 61?

7 A It's talking about two different example
8 instances of content. It's providing separate
9 examples, but each one needs to be looked at
10 within a single workflow.

11 Q Okay.

12 A If I talk to you -- I can say that the
13 '091 provides one kind of behavior for, let's say,
14 Video 1, and it does something when you watch
15 Video 2. When you talk about Claim 1, you're
16 either talking about Video 1 or you're talking
17 about Video 2. You're not conflating the two.
18 And I don't see anything in Column 3 that is
19 inconsistent with that.

20 Q Okay. Do you agree with me that linear
21 contents on line 54, such as moving image
22 contents, is not the same exact thing as

1 interactive content such as data broadcast content
2 on line 60? Do you agree with that statement?

3 It's not the same digital contents?

4 A Are you talking about a general
5 categorization, or are you talking about a
6 specific instance of content?

7 Q I'm asking you about the words that we're
8 reading in the '091 patent, which you read --

9 A Right.

10 Q -- a couple times --

11 A Right.

12 Q -- and I'm asking whether you agree that
13 the linear contents such as moving image contents
14 described at 54 to 55 in Column 3 is not the same
15 exact digital contents as data broadcast contents
16 at line 60 to 61? You agree that those are not
17 the same exact digital contents?

18 A The words are describing a category of
19 contents. They're not referring to specific
20 instances of -- of a piece of content.

21 So if I tell you I have a piece of music
22 that is classical, and I have another piece of

1 music that's fusion, well, the fusion could also
2 be classical, the classical could have aspects of
3 jazz in it, and I'm only talking about genes of
4 audio over there. I'm not talking about a
5 specific piece of music.

6 Q You agree --

7 A So.

8 Q I'm sorry.

9 You agree that the content that the -- the
10 category of the contents described as linear
11 content such as moving image contents is different
12 from the category of contents described as
13 interactive content such as data broadcast
14 contents; is that correct?

15 A Well, they're -- they're different
16 categorizations. When looked at for specific
17 instances of content, they may have overlap. They
18 are not mutually exclusive. So you could have a
19 piece of content that could be considered linear,
20 as well as interactive, and --

21 Q So they could -- they could overlap, and
22 they could also not overlap. Fair?

1 A Yeah, fair.

2 Q Okay.

3 A But these are categories. We're not
4 talking about specific instances.

5 Q Okay. So there's -- so -- so you're
6 saying that it's possible -- let me just make sure
7 I understand your testimony.

8 You're saying that it's possible that the
9 linear content, such as moving image content, is
10 the same exact digital content as the interactive
11 content such as broadcast contents? That's
12 your -- that's what you're saying, right? Could
13 be -- could be the same contact footage, could be
14 the same exact digital content, correct?

15 A Well, as -- if you turn to Column 5, I
16 believe, for guidance, where it talks about
17 content with regards to an appreciation term, you
18 can have a piece of content that can be viewed and
19 operated in a linear fashion. It can also be
20 viewed with certain amounts of interactivity, and
21 both are possible, and the goal of the '091 patent
22 is for a specific piece of content in a

1 content-specific way. The server provides
2 guidance on how the user interface panels are
3 configured as either linear or interactive for
4 that piece of content based on the piece of
5 content, as well as on temporal information along
6 with that content.

7 Q You say appreciation term, right?

8 A Right.

9 Q That shows up in Claim 8, right?

10 A Okay.

11 Q You agree with that?

12 A I -- yeah. Let me look at -- yep, I see
13 that.

14 Q Okay.

15 A Okay.

16 Q Appreciation term is not in Claim 1. Do
17 you agree with that?

18 A That's right.

19 Q Okay.

20 A But even if you remove -- sorry.

21 Q I'm talking about appreciation term in
22 Claim 1.

1 A Okay. So even if you remove the
2 appreciation term, the -- the patent clearly talks
3 about determining for a piece of content based on
4 time-related information. Whether that
5 time-related information is captured using an
6 appreciation term, which is one specific example
7 of -- it's one embodiment of time-related
8 information being used to determine which panel is
9 displayed.

10 So it might choose to use time-related
11 information in another way to make that decision
12 on whether to display a linear panel or to display
13 an interactive panel.

14 Q Okay. So "sequentially," we established,
15 is not in the patent. That was your word, right?

16 A The word "sequentially" is not in the
17 patent.

18 Q Okay.

19 A In the '091 patent.

20 Q That's right. Okay. Thank you for
21 clarifying that.

22 And looking back at Paragraph 69, you say

1 at the bottom of Page 42, The board's prior
2 statement does not alter the fact that Phillips's
3 system presents the screen sequentially in
4 different use contexts.

5 A Mm-hmm.

6 Q So the words "different use contexts" are
7 not in the '091 patent either, right?

8 A Not specifically those words, but the '091
9 patent talks about a cohesive user workflow, and
10 it talks about how user interface panels are --
11 are -- are displayed based on a piece of content.

12 Phillips provides a number of different
13 aspects of user interface panels and designs, but
14 they're all -- they're all presented in various
15 different disparate contexts that are invoked by a
16 user. They're user-invoked in different contexts
17 that I believe it is inappropriate to pull them
18 out of that context and then attempt to put them
19 together in a -- in -- in the manner that is being
20 described in the '091 patent. And that's what I
21 am saying at the bottom of Paragraph 59.
22 That's -- I've said it already many, many times

1 now in different ways.

2 Q Look at Paragraph 21 of your declaration.

3 A 21. Okay.

4 Yep.

5 Q Okay. You say, Given the diversity --
6 four lines down.

7 You say, Given the diversity in the types
8 of content that can be presented and how a user
9 might want to interact with it, a plurality of
10 ways of interacting with the content can be
11 useful.

12 Right?

13 A Sorry. Given -- given the diversity. All
14 right. Let me just read that.

15 Q Yep.

16 A Yes. Okay.

17 Q Okay. So you agree that there's diversity
18 in the type of content that can be presented,
19 right?

20 A I do.

21 Q Okay. And one example of the content that
22 can be presented is a recorded movie, as you say,

1 right?

2 A Yes.

3 Q And a recorded movie needs playback
4 buttons, as you say?

5 A Right.

6 Q And another example, when a user plays an
7 interactive game show --

8 A Mm-hmm.

9 Q -- there's different navigation buttons
10 needed. Those are up, down, left, right, correct?

11 A Yes.

12 Q So in this example you provided in
13 Paragraph 21, does that describe either linear
14 operation panel or an interactive operation panel
15 being alternatively displayed together with the
16 digital contents?

17 A No. It's providing a high-level embedding
18 in a setting for what the '091 patent describes.
19 If you -- if you read a couple of sentences down,
20 it says, Before the '091 patent, the systems
21 either displayed all of that UI together,
22 cluttering the user and confusing what they could

1 or could not do with that UI, or required a user
2 to manually switch between various different user
3 interface modes, which is actually what -- what
4 Phillips discloses.

5 So that's the motivation, and there are
6 multiple ways, multiple user interface designs,
7 and workflows by which this diverse content can be
8 navigated. There were ways that prior art did it,
9 including some disclosures in Phillips, and the
10 way that the '091 patent does it, which is
11 different.

12 Q Turning to the '091 patent, if we can.
13 Sorry to keep bouncing around.

14 A Mm-hmm.

15 Q Column 3, starting at line 51.

16 A Okay.

17 Q Okay. Actually, go -- starting at 53. It
18 says, During reproduction of linear content such
19 as moving image contents --

20 A Mm-hmm.

21 Q -- content operation panel A4 is displayed
22 in the operation display panel area.

1 A Mm-hmm.

2 Q And then it talks about the specific
3 functions of the operation panel --

4 A Yep.

5 Q -- including fast forward, play, that sort
6 of thing.

7 A Yep.

8 Q Then it says, reproduction of -- next
9 sentence says, During interaction of interactive
10 content, such as data broadcast content.

11 A Mm-hmm.

12 Q Content operation panel is displayed, and
13 then it gives examples of the buttons displayed on
14 the interactive operation panel, right? You see
15 that?

16 A Yeah. Yep.

17 Q So is this embodiment we're looking at --
18 we just read on Column 3, say line 53 up to
19 line 63 or so --

20 A Yeah.

21 Q -- is that covered by Claim 1?

22 A That's just talking about generally

1 examples of content and what is potentially a
2 preferable way to display them, and -- and the --
3 the '091 is actually very clear in -- in -- both
4 in terms of its motivation to provide these
5 alternative displays and -- and how to make them
6 content specific.

7 I mean, I just -- while you were reading
8 that to me, I -- you can see on Column 4 on the
9 other side, around 25, it's talking about, you
10 know, linear operation panel, and then in some
11 cases, only usable operation keys being displayed,
12 and then it provides, you know, guidance as to why
13 this is -- why this is useful and important, and
14 it says user operation learning time can be
15 shortened, panel rendering area smaller because
16 you have only what you need in the user interface.
17 Mouse motion, distance, the amount you need to
18 move to select something happens easier. User
19 performance is improved.

20 So -- so all of this is -- is -- is
21 providing guidance to what I -- what I summarize
22 in Paragraph 21, and that's different from the

1 multiple user interface modes that are user
2 invoked in -- in Phillips.

3 Q So do you agree -- I'm sorry. Were you
4 done?

5 A Yeah.

6 Q Okay. Do you agree --

7 A Sure.

8 Q -- that the examples shown on Column 3,
9 line 53 to line 63, do you agree that that is an
10 embodiment that's covered by Claim 1?

11 A Well, it's an embodiment that is talking
12 about simply showing linear content, and then
13 Figure 4 is showing -- is showing an interactive
14 panel. Claim 1 is -- is a longer claim with --
15 with clear elements that -- that describe various
16 steps that determine what is shown.

17 Q Do you agree that --

18 A So --

19 Q I'm sorry. Keep going.

20 A That's all. Yeah. Go ahead.

21 Q Do you agree that -- so -- so is that a
22 yes or a no or you don't know, or you don't --

1 A Well, I'm -- I'm not sure I understand the
2 question.

3 Q Okay. Is the embodiment we just read in
4 Column 3, line 53 to line 65, where they talk
5 about the two different operation panels --

6 A Mm-hmm.

7 Q -- is that -- is that covered by the
8 alternatively displayed limitation in Claim 1?

9 A They're two examples that are -- that are
10 disconnected. One example is showing a linear
11 display. So, yes, that is part of Claim 1.
12 Claim 1 does not -- Claim 1 alternatively
13 displayed one or the other, and the interactive
14 example, it's showing an interactive display.

15 However, it's talking about these as -- as
16 different categories of examples. So it's
17 referring to them entirely separately. They are
18 just examples of video in a UI.

19 When you refer to Claim 1, Claim 1 is --
20 is an overall -- overall description of a workflow
21 for what is displayed, and what is displayed there
22 is -- is consistent. What is described in

1 Figure 2 and Figure 4 is consistent.

2 Q So what is described in Figure 2 and
3 Figure 4 is consistent with Claim 1?

4 A Yes.

5 MR. TAMBURO: Now may be a good time to
6 break for lunch, if that's acceptable.

7 MS. PREMRAJ: Does that work for you,
8 Dr. Singh?

9 THE WITNESS: Sure. That's fine. I don't
10 need very long for lunch, but -- yeah. I'm happy
11 to keep going whenever you want to --

12 MR. TAMBURO: How long do you want?

13 THE WITNESS: Me? As long as you need,
14 Counsel. I'm good.

15 MR. TAMBURO: You want to do 40 minutes?

16 THE WITNESS: As you like.

17 MR. TAMBURO: Okay. Be back in 40.

18 Thanks.

19 (A recess was taken.)

20 MR. TAMBURO: Can we please have the
21 exhibit that is titled Exhibit 1011? This will be
22 Exhibit 4.

1 (Exhibit 4 was marked for identification
2 and is attached to the transcript.)

3 TECHNICIAN: Exhibit 4 is in the chat.

4 MR. TAMBURO: Great. Thanks.

5 BY MR. TAMBURO:

6 Q Okay. Dr. Singh, do you recognize
7 Exhibit 4 as the Wallis publication that you
8 reviewed?

9 A Yeah. Do you want me to look at it on the
10 your screen? Because I'm not seeing the shared
11 screen. Or -- or do you want me -- I'll just open
12 the document, I guess.

13 Q Yeah. I think -- I'm not sure how we've
14 been doing it so far.

15 A Yeah, I think it's probably been a mix.

16 Q Yeah.

17 A Okay. Anyway, I'm there.

18 Q Okay. Is -- is that -- I just want to
19 confirm it is what it is. Exhibit 4 is the Wallis
20 publication you reviewed for your declaration?

21 A Yes.

22 Q Okay. Can we look at your declaration and

1 go to Paragraph 72, please?

2 A 72. Just give me a second.

3 Yes.

4 Q Okay. So is it your opinion that Wallis
5 does not disclose buttons being rendered on a
6 screen; rather, it discloses physical remote
7 control keys that are active or inactive?

8 A Well, at a high level, Wallis, I believe,
9 is about access control, and so it describes what
10 kind of operations are either permissible or not.
11 That's -- that's kind of the -- that's what Wallis
12 is focused on.

13 Q You agree, though, that Wallis does
14 disclose buttons, interactive buttons being
15 displayed on a screen?

16 A I'll have to look at Wallis carefully.
17 My -- my recollection is that it was mostly about
18 buttons on our remote control, but perhaps if you
19 feel that they are shown on a screen, you can
20 point me at -- where that might be.

21 Q Okay. Well, I'm just looking at
22 Paragraph 72. It says --

1 A Mm-hmm.

2 Q -- of your declaration. It says these --

3 A Okay.

4 Q -- one, two, three, four, five -- six
5 lines down in Paragraph 72. It says, These are
6 very different concepts. One describes which
7 buttons to render on screen in an operation panel;
8 the other describes which physical remote control
9 keys are responsive to user input during playback
10 of a particular content item in a promotional
11 sequence.

12 A Yes.

13 Q So based on what you wrote here --

14 A Mm-hmm.

15 Q -- is it your opinion -- I think you said
16 you believe Wallis just -- just discloses remote
17 control buttons, physical remote control buttons.
18 Is that -- is that what you said?

19 A Well, Wallis actually discloses permission
20 control attributes, is what Wallis does, and
21 the -- the -- the intention of Wallis, which is
22 why it kind of works with the permission control

1 kind of -- you can imagine the overall workflow,
2 is that it either enables or disables certain
3 actions. And that's -- that's Wallis. That's
4 what the emphasis of Wallis is, and that's really
5 what I'm saying. Yeah. I believe that's what I'm
6 referring to.

7 Whereas I'm contrasting it with the '091
8 patent, that is about using content-specific
9 information coming from a server to impact how the
10 user interface is designed and displayed.

11 Q Okay.

12 A So that's -- that's -- that's the -- the
13 conceptual difference that I'm drawing there.

14 Q So you agree, though, that Wallis
15 discloses display of interactive buttons on a
16 screen, right?

17 A I'll have to look at Wallis to answer that
18 conclusively and see what Wallis does or does not
19 specifically disclose with regards to displaying.

20 Q Okay. So you don't have anything right
21 now as you sit here reading your declaration about
22 Wallis, you don't have an opinion that Wallis

1 either does or does not disclose display
2 buttons --

3 A Well, in my memory --

4 Q Sorry. I have --

5 A In my memory -- sorry.

6 Q -- to finish.

7 A Go ahead. Yeah, yeah. Absolutely.

8 Q The court reporter has to hear one of us
9 at a time. I'm sorry.

10 A Sure.

11 Q So as we sit here, you -- is it correct
12 that you don't have an opinion one way or the
13 other regarding whether Wallis discloses
14 displaying interactive buttons on a screen?

15 A Well, it may -- it's been a while since I
16 wrote my report. So if you want me to answer that
17 conclusively, I'm happy to dig into Wallis, or if
18 you would like to point me at -- somewhere in
19 Wallis's disclosure, I'll be happy to look at
20 that.

21 Q Okay. Putting aside Wallis for now, your
22 declaration, can you discern from reading your

1 declaration whether you believe Wallis displays
2 interactive buttons on a screen or not?

3 A Well, reading that portion, I'm
4 referring -- I'm drawing a conceptual difference.
5 There may be other parts of my declaration where
6 I -- I specify what Wallis does or does not do.
7 In my recollection, Wallis was about remote
8 control button and their enablement or
9 disablement, enabling or disabling them.

10 Q Okay. I guess we could take a look at
11 Wallis, then.

12 A Okay.

13 Q If you go to Exhibit 4.

14 A Mm-hmm.

15 Q Just marked. If we go down to
16 Paragraph 19.

17 A Paragraph 19. Okay.

18 Yeah. Let me just read that through.

19 Q Yeah. Let me know when you're there.

20 A Okay.

21 Q So you see at Paragraph 19 of Wallis, it
22 says, The menu provides an interactive graphical

1 user interface with user selectable portions,
2 whereby the attributes of the current content item
3 govern the presentation of the selectable portions
4 on the screen.

5 Do you see that?

6 A Yeah. Just let me read it through.

7 Q Yes, sir.

8 A Can you point me to which menu is being
9 referred to in Paragraph 19? Is that potentially
10 in 18 or somewhere else?

11 Q I'm not certain. You're welcome to look
12 at more --

13 A Okay.

14 Q -- if you need to. I'm just asking, did
15 this impact your opinion? Do you have an opinion
16 either way whether Wallis discloses displaying
17 interactive buttons on the screen?

18 A Well, it -- it -- it talks about -- just
19 hold on one second.

20 Conceivably, this menu can be -- yeah. It
21 refers to a graphical user interface. So there
22 would be a user interface on a screen in Wallis,

1 but in -- you know, in the context of the 01 --
2 '091, it's kind of distinct as in it talks just
3 like the remote control of a pre-defined kind of
4 local user interface.

5 Q Okay. Can we turn to Paragraph 123?

6 A Paragraph 120?

7 Q 1-2-5.

8 A 1-2-5. Okay.

9 Q Are you there yet?

10 A No. I'm sorry. I'm moving a little
11 slowly. Just give me a second.

12 Q Yep.

13 A I am there now. Yes.

14 Q Okay.

15 A Yep.

16 Q Now, this is your opinion regarding the
17 Ellis '430 reference, right?

18 A Yes.

19 Q Okay.

20 A Right.

21 Q Can --

22 A Sorry. Let -- let me just go back up. I

1 did see Ellis '430 there. I just want to make
2 sure -- yes. Okay. Yes.

3 Q Okay.

4 A I'm going back to 125. Yes.

5 Q Very good. I just wanted to confirm,
6 because it's not clear whether you agree Ellis
7 discloses a controller or not.

8 A I guess what I am trying to say is Ellis
9 '430 does not disclose controller in the context
10 of the '091 patent in terms of how the controller
11 is able to use server site context that is
12 content-specific and time-specific to then
13 configure the -- the user interface of the -- of
14 the display.

15 Q Okay. But you agree Ellis includes a
16 controller, just you disagree that it includes a
17 controller recited in the '091 claims?

18 A Well, the -- the word "controller" is a
19 very generic term. It can be used in so many
20 different contexts. I'm referring to the use of
21 the word "controller" specifically in how the '091
22 patent is -- is using it.

1 Q Okay. So do you agree, then, that Ellis
2 '430 includes a controller, just not a controller
3 in the sense of the '091 patent?

4 A It may. Again, I would probably need to
5 look at Ellis '430 carefully to -- to conclusively
6 answer that, but certainly the Ellis '430, you
7 know, does allow certain things to be controlled.
8 So you can -- you know, in a very generic sense,
9 you could say that, you know, there is a
10 controller. But what I'm referring to over here
11 is specifically in the context of the '091 patent.

12 Q Can we turn to -- actually, we're still in
13 125. Can we look at 125 of your -- you state --
14 I'm sorry. Are you there yet? I don't want to
15 get ahead of you.

16 A I'm there.

17 Q Okay. So in Paragraph 125, you state, six
18 lines down --

19 A Mm-hmm.

20 Q -- in the model-view-controller, MVC
21 pattern, well-established by 2005, a controller
22 receives input, processes it according to an

1 application -- to application logic --

2 A Mm-hmm.

3 Q -- and determines which view to present.

4 Do you see that?

5 A Right. Yep.

6 Q And then you say, The '091 patent's
7 controller performs exactly this function.

8 Do you see that?

9 A Yes, based on server-delivered metadata
10 that is content and time-sensitive.

11 Q Okay. So it's your opinion that the
12 controller recited in Claim 1 of the '091 patent
13 is a model-view-controller?

14 A Well, it's a controller that -- I mean,
15 the controller in Claim 1, there could be a number
16 of ways in which its control is implemented. What
17 is relevant to Claim 1 is the application logic in
18 terms of how it displays one user interface panel
19 or another user interface panel using
20 content-sensitive information and time-sensitive
21 information that is received from the server,
22 along with the content.

1 Q Okay. So is it your opinion that the '091
2 patent controller is a model-view-controller or it
3 doesn't necessarily have to be a
4 model-view-controller?

5 A I mean, it could be implemented in a
6 number of different ways at a -- at a low-level
7 functional point of view, but by and large, it
8 could also be a model-view-controller where the --
9 where the behavior was determined by the
10 server-delivered information and metadata as
11 described in the claims.

12 Q Okay. So your -- your statement here in
13 Paragraph 125 is the '091 patent's controller
14 performs exactly this function.

15 A Mm-hmm.

16 Q When you say exactly this function, you're
17 talking about the model-view-controller function,
18 right?

19 A Well, function, yes, from a high level.
20 The function of being able to -- for users to
21 interact with content.

22 Q And that's the model -- I'm sorry. Go

1 ahead.

2 A That's it.

3 Q And that's the model view -- the
4 model-view-controller function is exactly what the
5 '091 patent controller performs?

6 A Functionally.

7 Q In your declaration?

8 A Functionally.

9 Q Okay.

10 A From a high level.

11 Q Okay.

12 A But with -- with -- but using the workflow
13 that is laid out in the claims.

14 Q Okay. Do you want to change the wording
15 here now? Because I don't see any of that wording
16 here. You said functionally, you said high-level,
17 and you said something about workflow.

18 None of those words are here. Do you want
19 to now reword this Paragraph 125, or are you happy
20 the way it is?

21 A No, it's fine the way it is. It's just
22 that a POSITA in reading it would -- would

1 understand that I'm referring to how a controller
2 receives input, processes it, and then determines
3 a certain display, and in the case of the '091,
4 that determination is based on content-sensitive
5 information received and time-sensitive
6 information received from -- received from a
7 server, along with the content.

8 So it's what it says.

9 Q Okay. So there's nothing in this
10 Paragraph 125 you would change? You agree with
11 it, correct?

12 A Yeah. In -- in how a POSITA would
13 interpret it, yes.

14 Q Okay. You want -- you agree that there's
15 no mention of model-view-controller anywhere in
16 the '091 patent, right?

17 A That is correct. At least I don't think
18 so. I mean, I can -- if you want me to check, we
19 could check conclusively, but I -- you know, if --
20 if you represent to me that it -- it is not, then
21 I'll believe you.

22 Q Okay. Because you didn't cite to the '091

1 patent in your Paragraph 125, I noticed, right?

2 A That's right. I did not try to --

3 Q You don't cite to anything, do you, in
4 125, right?

5 A No. I don't cite to anything. No.

6 Q Okay. And --

7 A I cite -- I cite higher up to things in --
8 in -- probably Ellis '430.

9 Q Is Ellis '430 --

10 A If you would like, I can go and look
11 there.

12 Q Yeah. Do you know if Ellis '430 discloses
13 a model-view-controller?

14 A I'm not sure. I'd have to -- you know,
15 it's been a while since I looked at that
16 reference. We could go and look conclusively, but
17 from a high level, you know, that is how, you
18 know, control input is -- is -- is received,
19 processed, and displayed. It's just a very
20 high-level construct.

21 Q If you look at Paragraph 129 of your
22 declaration.

1 A Okay.

2 Q Are you there yet?

3 A Yeah, I'm there. Okay.

4 Q Okay. So if we look at six lines into
5 Paragraph 129 --

6 A Mm-hmm.

7 Q -- there's a sentence that begins, In flip
8 mode.

9 Do you see that?

10 A Yes.

11 Q Okay. You say, In flip mode, a user may
12 change the channel to change the current channel
13 that is being displayed and to change Title 264.

14 A Mm-hmm.

15 Q These are all local operations -- channel
16 tuning, program title browsing, and PVR playback
17 initiation --

18 A Mm-hmm.

19 Q -- executed between the set-top box and
20 its locally connected equipment.

21 Do you see that?

22 A Yes.

1 Q Okay. So it's your opinion that when the
2 user changes the channel, there is no instruction
3 being sent to the outside server telling the
4 outside server that the user wants to change the
5 channel?

6 A It doesn't have to.

7 Q Well, I'm asking what your opinion is in
8 the Ellis '430. Is it your opinion that Ellis
9 '430 discloses a -- and I'm not saying it has to
10 be the only way. Does it disclose one way to do
11 it is that the -- an instruction is sent to the
12 outside server telling the outside server the user
13 wants to change the channel? Is that one way
14 Ellis '430 discloses it?

15 A Well, Ellis '430 typically talks about a
16 tuner, and -- and -- and if you're using a tuner,
17 a tuner is essentially locally flipping between
18 frequencies to -- to locally switch the channel
19 that you're looking at, and further, you know, the
20 flip or the interaction is not -- is not content
21 sensitive. It's -- it's channel sensitive. It
22 doesn't matter what is playing on the channel. If

1 you flip a channel, you just go to a pre-defined
2 channel before it or after it.

3 Q Okay. Did you read Ellis '430?

4 A I did, quite some time back.

5 Q Okay. Because I'm going to ask you to
6 take a look at it, and we'll have to pull it up.

7 A Okay.

8 MR. TAMBURO: And can we pull up the
9 exhibit that is labeled 1021, Exhibit 1021, and
10 call that Exhibit 5, please?

11 (Exhibit 5 was marked for identification
12 and is attached to the transcript.)

13 Q Okay. You got it. Let's both open it up,
14 if you can.

15 A Sorry. I haven't -- I didn't get it yet.

16 Q It should be in the chat.

17 A Yeah, yeah. I just noticed it. Sorry
18 about that.

19 Q Yeah, yeah. No problem.

20 A Okay.

21 Q Okay.

22 A I just got it.

1 Q So is -- is Exhibit 5 the Ellis '430 you
2 reviewed for your declaration?

3 A Yes.

4 Q Okay. Do you agree that Ellis '430
5 discloses that the set-top box is receiving
6 broadcast signals from a distribution facility?

7 A Perhaps. Can you point me at -- where is
8 this? It's 174-page document.

9 Q Right. This is a long one, but I've seen
10 longer than this.

11 A Perfect.

12 Q Can we go to Paragraph 168, please, in
13 Exhibit 5?

14 A For some reason, it's just frozen. Just
15 give me a second.

16 Q Yep.

17 A Maybe I have to -- one or the other.

18 Q Actually, Paragraph 170 when you get
19 there.

20 Okay. So it's on the screen. I don't
21 know if that's --

22 A Okay. Fine.

1 Q Is that okay? Can you see that?

2 A Yeah. If I close --

3 MR. TAMBURO: Can we make that slightly
4 bigger for him?

5 THE WITNESS: Yeah, maybe if you can zoom
6 into it.

7 BY MR. TAMBURO:

8 Q Okay.

9 A Okay.

10 Q So you see where it says, Set-top box may
11 receive signals transmitted by distribution
12 facility --

13 A Mm-hmm.

14 Q -- audio, video, or interactive television
15 application data?

16 A Okay. Yeah.

17 Q So do you agree that the set-top box is
18 receiving audio and video signals from the
19 distribution facility?

20 A Sure.

21 Q Okay. And then if we go to Paragraph 234,
22 please, in Ellis.

1 A Mm-hmm.

2 Q So Paragraph 234 in Ellis '430.

3 A Yeah, I can provide it -- get to it. What
4 page is it, or what column are we talking about?

5 Q It's Page 17, and it's Paragraph 234.

6 A Okay.

7 Q I think we have it displayed for you, if
8 you want to --

9 A Okay. Yeah, I got it. A little bigger.

10 Q Okay.

11 A Go ahead.

12 Q Okay. So about in the middle of that
13 Paragraph 234, there's a sentence that begins,
14 When the interactive television application is in
15 a browse mode, the interactive television
16 application may provide the user with the ability
17 to scroll through channels using change channel
18 option.

19 A Yes.

20 Q In -- okay. And in response to a change
21 of channel, Title 264 may change to be the title
22 of the current program on the new channel.

1 Do you see that?

2 A Yes.

3 Q So how does the distribution facility know
4 to change the channel or to change the broadcast
5 or to change the audio and video signals being
6 transmitted to the set-top box if the set-top box
7 is not sending an instruction to change the
8 channel?

9 A Well, I think in -- in technology that
10 involves tuners, at least one way is simply to
11 locally change the frequency that your -- that --
12 that you're tuning into, and -- and the channels
13 are simultaneously being cast. So in that
14 scenario, you don't need to communicate back to --
15 to flip your channels. So that's one distinction.

16 And -- and as I mentioned, secondly, you
17 know, the channels that we're talking about over
18 here are -- are kind of distinct from the way
19 interaction and some interact -- content-sensitive
20 inter- -- interaction is described in the '091
21 patent.

22 Q Okay. And going back to Paragraph 129 of

1 your declaration --

2 A Mm-hmm.

3 Q -- when you say four lines from the bottom
4 of Page 94, you say, These are all local
5 operations -- channel tuning, program title
6 browsing, and PVR playback initiation.

7 A Mm-hmm.

8 Q Do you see that?

9 A Yes.

10 Q You don't cite to anything -- you don't
11 cite to Ellis '430 at all for those statements in
12 your declaration, right?

13 A I think if I look further up, when talking
14 about Ellis '430, I think I do talk about the fact
15 that there's a tuner, and it talks about tuning
16 through channels, and -- so, you know, in that
17 paragraph, I may not, but -- but, you know, that's
18 a fairly long section on Ellis '430. So there may
19 be -- there may be information on it prior to it.

20 Q So are you saying that Ellis '430 excludes
21 any instruction from going from the set-top
22 backseat to the distribution facility or that

1 local is just one way to do it?

2 A I'm saying that -- looking at the
3 disclosure of Ellis '430, it was my opinion, and I
4 believe a POSITA's interpretation, that local
5 would be the way to handle those interactions as a
6 first point, and then as a second point, the
7 interactions that are described are further
8 pertaining to -- to moving between channels that
9 are pre-defined and not interaction that is
10 sensitive to content and to time information that
11 is further received from a server.

12 So that's my opinion.

13 Q Okay.

14 If we go to Paragraph 62 -- I'm sorry,
15 Page 62 of your declaration. Page 62.

16 Yep, I'm there.

17 Q Okay. Did you create these illustrative
18 images?

19 A Yes. They were created under my
20 direction.

21 Q Okay. Did the lawyers create this under
22 your direction?

1 A Yes.

2 Q And the first image, it says, What
3 Phillips Actually Discloses, correct?

4 A Yes.

5 Q And you agree with me that none of these
6 images actually appear in Phillips, correct?

7 A These are illustrative mock-ups showing
8 what I believe a POSITA would understand the
9 workflow and user behavior that is disclosed in
10 Phillips.

11 Q Okay. And none of these images appear in
12 Phillips, correct?

13 A They don't. They're illustrative.
14 They're illustrative mock-ups of what Phillips
15 discloses.

16 Q Is there a reason why you didn't use the
17 actual figures in Phillips?

18 A Same answer that I provided back when you
19 asked me the question with regards to another
20 figure before. These figures capture an overall
21 workflow that is not clearly illustrated in any
22 one figure. You have to take a number of the

1 figures, and then you have to take the text talk
2 to text, and then you have to understand that to
3 be able to -- and what you're seeing here is a
4 distillation of that.

5 Q Okay. Under the first image, you say, No
6 toolbar appears.

7 Do you see where you're saying that?

8 A Right.

9 Q What do you mean by that?

10 A I mean that -- that basically the time --
11 you know, time-based -- time-based operation on --
12 time-based operation in Phillips is -- is
13 disconnected from time-based UI behavior that you
14 see in -- in the '091 patent, and the '091 patent,
15 based on time, you either see one form of -- you
16 see one form of a user interface or another, a
17 linear or an interactive, and that determination
18 is based on time. It's based on content.

19 In Phillips, a user invokes any user
20 interface panel, and the -- the temporal aspect
21 disclosed in Phillips is a fixed time-out, which
22 is well-known in the art for -- for a user

1 interface element to simply disappear from, and
2 it's not showing something or something else.
3 It's -- it's simply a time-based removal -- a
4 fixed local time-based removal that is
5 completely -- has nothing to do with content, and
6 that's what's being shown, quite simply.

7 Q What do you mean by "toolbar"?

8 A Well, a toolbar in this case could be, for
9 example, a linear panel, for instance.

10 Q Okay. So you don't think Phillips
11 discloses a linear panel?

12 A Certainly doesn't disclose a menu kind of
13 disappearing over time based on information coming
14 from the server and based on the content, and then
15 replacing it or -- or having a linear time bar --
16 a linear bar in place.

17 So -- so to answer your question, you
18 know, it's that entire workflow that we're
19 referring to that doesn't happen.

20 Q Could an interactive operation panel still
21 be a toolbar?

22 A Potentially.

1 Q Is the word "toolbar" used anywhere in the
2 '091 patent? It is not, correct?

3 A No. Perhaps you could replace it with the
4 word "no panel," "no alternate panel."

5 Q Okay. But "toolbar" is a word you made
6 up, right?

7 A Well, it's a well-known word in the -- in
8 the art. It's not a word that I made up.

9 Q Okay. But it's not in the '091 patent?
10 You're attributing --

11 A No, but a POSITA would have no problem
12 understanding it.

13 Q Okay. Do you cite to anything for the
14 word "toolbar" in your report, in your
15 declaration?

16 A Like I said, it's a general UI, user
17 interface term that I -- a POSITA would have no --
18 no problem understanding.

19 Q And the second image --

20 A Mm-hmm.

21 Q -- on Page 62, you say, What Wallis
22 Actually Discloses, right?

1 A Correct.

2 Q And none of these images appear in Wallis,
3 correct?

4 A No, they do not, but the titles, I
5 believe, are from Wallis's disclosure, words like
6 Sting A, Content B, Promo C.

7 Q Okay.

8 A And -- and perhaps the attributes match
9 those -- what's defined in the text as well.

10 Q And is it the same reason why you gave
11 earlier for why you didn't use the actual figures
12 for Wallis in your declaration?

13 A Yes.

14 Q So none of these references had sufficient
15 disclosure, including the '091 patent, so you had
16 to create additional figures? Is that what you're
17 saying?

18 A That's not at all what I'm saying.

19 Q If you look at Page 84 of your
20 declaration.

21 A Mm-hmm. Okay.

22 Q And were these --

1 A Yeah.

2 Q Sorry. Let me know when you get there.

3 A Yeah.

4 Q Okay. Were these illustrative figures
5 created by your counsel at your direction?

6 A Yes.

7 Q You created these to help explain your
8 opinion that Ellis does not disclose the recited
9 appreciation term, correct?

10 A From a high level, I think if you read
11 the -- the caption associated with the image, it
12 will -- it will clarify that Ellis is related to a
13 different aspect of -- of content, content
14 management; in this case, storage of content,
15 whereas the '091 is -- pertains to the
16 presentation of content, and this figure is
17 essentially illustrating the difference between
18 the two in how an application would relate to the
19 different -- different aspects of -- of its logic
20 that is necessary to get content, as well as to
21 present -- both the content as well as the -- the
22 user interface and how a viewer might view and

1 interact with that content.

2 Q Okay.

3 A That's --

4 Q I'm going to apologize --

5 A Yeah. Sorry.

6 Q I'm sorry. Are you done? I'm sorry. I
7 didn't mean to interrupt you.

8 A Yes, I'm done.

9 Q Can we just take a quick five-minute
10 break? It's a byproduct of being the older person
11 on this videoconference.

12 A I think I may be older than you, Counsel,
13 but that's -- that's all right.

14 Q We'll compare -- we'll compare -- but if
15 you could just give me, like, five minutes. I'll
16 be back.

17 A No worries.

18 Q I'll be back.

19 A Absolutely. Sure.

20 (A recess was taken.)

21 MR. TAMBURO: Can we please pull up the
22 Exhibit 1014 and mark that -- I think it's

1 Exhibit 6, please?

2 (Exhibit 6 was marked for identification
3 and is attached to the transcript.)

4 MR. TAMBURO: So 6 is in the chat.

5 THE WITNESS: Just give me a second to --

6 MR. TAMBURO: Yep.

7 THE WITNESS: -- get it.

8 BY MR. TAMBURO:

9 Q Okay. So I'm going to ask you some
10 questions about Exhibit 6.

11 Can -- can you just confirm that Exhibit 6
12 is the Ellis patent -- I'm sorry, the Ellis
13 publication that you reviewed for your
14 declaration?

15 A Mm-hmm. Yes, I can confirm that.

16 Q Okay. So just -- if I can just switch
17 gears back to your declaration, and Page 84.

18 A Okay. One second.

19 Yeah, I think my Acrobat gets a bit heavy
20 with -- with all these different -- okay.

21 Page 84. I'm at Page 84, yes.

22 Q Okay.

1 A Yeah.

2 Q Okay.

3 A Okay.

4 Q And Page 84, these -- can -- can you
5 confirm that none of these images appear in the
6 '091 patent?

7 A Which images?

8 Q On Page 84.

9 A Yes, I can -- yes, I can confirm that --
10 well, when you say "images," there's really just
11 one image. It has, like, three little boxes to
12 it, but -- but it's just one image.

13 Q Okay. And this one image with the three
14 boxes, does that appear in exhibit -- I'm sorry,
15 that does not appear in the '091 patent, correct?

16 A It does not appear in the '091 patent.

17 Q Can you confirm that this image on Page 84
18 also does not appear in the Ellis patent
19 publication, which is Exhibit 6?

20 A No. As I've answered for many of these
21 images and illustrations before, these are
22 illustrative images distilling disclosure that is

1 in the '091 patent and in the Ellis patent.

2 Q Okay. And in the first box, the top box
3 of the image on Page 84, you say -- actually, it's
4 the label to the right of the top box.

5 A Mm-hmm.

6 Q You say, Appreciation term operates here.
7 Do you see that?

8 A I see that, yes.

9 Q And when you say "operates here," are you
10 referring to the presentation layer?

11 A Yes. I'm referring to the fact that the
12 server provides content-sensitive information
13 regarding what panels to display, but also
14 time-sensitive information. An example of that
15 time-sensitive information is the appreciation
16 term, and then that appreciation term participates
17 in some logic that decides which panel to display,
18 whether it's interactive or linear.

19 Q Okay. Do you agree that the
20 word "presentation layer" does not appear anywhere
21 in the '091 patent?

22 A Not the words, but the '091 patent, any

1 POSITA would understand that the '091 patent is
2 all -- is focused on -- on the user interface
3 layer or the presentation or the display of user
4 interface elements and how they are interacted
5 with and how they are presented to -- to the user.

6 So if -- so to restate what I've already
7 stated, this image is illustrative, and some words
8 here might be paraphrasing what is described in
9 the '091 patent, as well as in the Ellis patent.

10 Q Okay. Do you have any citations to any
11 portion of the '091 patent to support these
12 statements on Page 84, right?

13 A Sure. I mean, that's what the -- that's
14 what the '091 patent is all about. The
15 appreciation term certainly appears in the '091
16 patent, I believe somewhere in Column 5, and if
17 you read all around it, it talks about what is
18 presented, what is displayed.

19 So certainly this is talking about what
20 is -- what is actually in the '091 patent.

21 Q Okay. Because I don't see any citations
22 in Paragraph 115 to the '091 patent. Well, if I

1 read the -- if I read the -- the caption below, it
2 talks about where in the '091 patent's
3 appreciation term. So, yes, there's no specific
4 citation there, but maybe if I read through the
5 rest of my declaration, there is a citation that
6 gets attached to the appreciation term. And I'm
7 happy to try and do that, if you like.

8 But it is pretty evident that the
9 appreciation term is cited as an example of
10 time -- content-based and time-based UI
11 management -- UI presentation.

12 Q Okay. In the third image in Page 84, you
13 say Ellis expiration date operates here on the
14 right side.

15 Do you see that?

16 A Yes. Mm-hmm.

17 Q And it says data/storage layer. Is that
18 what you're referring to?

19 A Yes. That is correct.

20 Q Okay. And you agree with me that nowhere
21 in Ellis is there any mention of a data layer or
22 storage layer, correct?

1 A Same answer as for the '091 patent.
2 Ellis's use of time pertains to the deletion of
3 content that has been stored and is past an
4 expiration date.

5 So the words "data/storage" are
6 representative of that concept that is disclosed
7 in Ellis.

8 Q But the words "data/storage layer" do not
9 appear in Ellis, correct?

10 A I'm sure the word "data" and "storage"
11 does appear. The phrase "data/storage layer" may
12 not appear, but, again, this image is illustrative
13 of a concept. The concept certainly does appear
14 in Ellis. And a POSITA would have no problem
15 understanding that concept.

16 Q You don't cite to any portion of Ellis to
17 support that it discloses a data/storage layer,
18 correct?

19 A Well, all of the specification -- the
20 invention of Ellis is -- is about this concept.
21 So, I mean, in terms of what -- what this image is
22 providing is its providing a high-level

1 understanding of the entire -- the entire
2 invention and operation of the Ellis patent.

3 And just to be -- just to add to that,
4 like I said, this image that you referred to shows
5 up as part of an entire section, and if I just
6 scroll up, there are actually citations to the
7 Ellis patent that would provide further guidance
8 to somebody reading this declaration as to what is
9 shown illustratively in the figure.

10 Q Can we look at the '091 patent?

11 A Okay. I'm there.

12 Q Okay. Can we go to Column 5, please?

13 A Yep.

14 Q And starting with line 42, it says,
15 Information on data -- I'm sorry. Yeah.

16 Information on data added digital
17 broadcasting includes up-to-date news, weather
18 forecast and the like. These contents have a
19 nature of an appreciation term and is difficult to
20 consider that these contents are referred to
21 after, for example, one month.

22 Do you see that?

1 A I do.

2 Q And then if we continue down, it says, If
3 contents are outside the appreciation term -- this
4 is line 49.

5 A Mm-hmm.

6 Q If contents are outside the appreciation
7 term, data broadcasting is not displayed even if
8 the auto_start_flag is "1," but the linear content
9 operation panel is displayed.

10 A Mm-hmm.

11 Q If the contents are within the
12 appreciation term and a user does not still view
13 the contents, the data broadcasting is
14 automatically displayed even if the
15 auto_start_flag is "0" and the interactive content
16 operation panel is displayed.

17 Do you see all that?

18 A I do.

19 Q Okay. So is it fair to summarize -- do
20 you agree with the summary here that if the
21 contents are within the appreciation term, the --
22 I'm sorry. Let me rephrase that.

1 Do you agree that if the contents are
2 outside the appreciation term, the linear
3 effort -- linear content operation panel is
4 displayed, and if the contents are within the
5 appreciation term, an interactive content
6 operation panel is displayed?

7 A In this example. Yeah, in this
8 embodiment. Yes.

9 Q Okay. So you agree that whether the
10 content is within the appreciation term directly
11 determines whether the interactive content
12 operation panel is displayed? Fair?

13 A Can you -- could you just repeat that?
14 Sorry.

15 Q Yes.

16 A Yeah. Sorry.

17 Q No problem.

18 So when you agree that whether the content
19 is within the appreciation term directly
20 determines whether the interactive operation panel
21 is displayed?

22 A In conjunction also with the -- with any

1 content-sent specific panel information that is
2 coming. Right? So together, they -- they -- in
3 this particular example, they -- they provide one
4 way by which both the time information and the
5 content-sensitive information can be logically
6 combined to decide whether to display the
7 interactive panel or the linear panel.

8 Q Okay. Where do you see panel
9 information -- panel-related information described
10 in this paragraph?

11 A Linear content operation panel at line 51.
12 Interactive content operation panel is displayed
13 at line 55. All of that.

14 Q Yeah, that's the -- that's the operation
15 panel being displayed?

16 A Yeah. Did I -- did I say something else?
17 I'm sorry if I did.

18 Q Can I ask you to look at Ellis, which is
19 Exhibit 6?

20 A Okay.

21 Q If we look at Paragraph 165, please.

22 A Okay. Page?

1 Q It's on Page 13.

2 A Okay.

3 Okay. All right. So I'm there.

4 Q Okay. Now, this Paragraph 165 talks about
5 programs stored that have an expiration date.

6 Do you agree with that?

7 A Mm-hmm.

8 Q Yes?

9 A Yeah. It talks about program will be
10 deleted from the system. So, yes, it talks about
11 an expiration date. Yes. From a high level.

12 Q Okay. And it says in the example of
13 Figure 24, the network-based recording copy of
14 Seinfeld will be available only until 8:00 p.m. on
15 Friday, after which it will expire.

16 Do you see that?

17 A Okay. I do see that. Yes.

18 Q Okay. So if we look at Figure 24 --

19 A Okay.

20 Q You'll have to scroll up to Figure 24.
21 Let me know when you get there.

22 A I'm there.

1 Q Okay. Can you agree that Figure 24
2 includes interactive buttons?

3 A Well, without actually looking at the
4 disclosure of 24, you know, there is a yes and a
5 no, so I suppose there would be some interactive
6 ability to press yes or no, but, again, these are
7 likely to be local interactions and not server
8 site interactions.

9 Q Okay.

10 A Which is what the '091 patent refers to.

11 Q Okay. How about arrow 286? Is that an
12 interactive button, too?

13 A Arrow 286? I'm not sure what arrow 286 is
14 referring to because there's also a back arrow on
15 the other side. So, yeah, I don't know. I don't
16 know what it refers to.

17 Q Okay. Based on the paragraph we just
18 read, 165 -- and we can go back and look at it
19 again --

20 A Mm-hmm.

21 Q -- do you agree that up until Friday
22 8:00 p.m., this screen will be available for a

1 user to interact with and watch Seinfeld, and
2 after Friday at 8:00 p.m., after the storage of
3 the show expires, this Figure 24 will not be
4 available for the user to interact with?

5 A Well, if you're asking me this in a very
6 high-level, general sense, that may be the case,
7 but it's certainly not the case if you are reading
8 this in the context of the '091 patent. There,
9 you know, time expiration is being used to -- as a
10 way of -- as a way of controlling the -- the
11 display of customized user interface elements.

12 In this case, once you're outside the --
13 outside the expiration period, the content is
14 gone. So, you know, that -- comparing it to the
15 '091 patent where, you know, outside the
16 particular time frame there's -- you know, there's
17 either interactive panel or linear panel, all of
18 that becomes moot because there's no content
19 anymore after you're outside the expiration time
20 frame.

21 Q Okay. I've got to that point where I
22 check my notes, and we all know what that means.

1 So let me -- a quick break, and I'll be
2 right back.

3 A Okay.

4 Q Thanks.

5 A Thanks.

6 (A recess was taken.)

7 MR. TAMBURO: Okay. I have no further
8 questions. Thank you very much, Dr. Singh. I
9 appreciate it. It was nice to meet you.

10 THE WITNESS: Thank you, Counsel. I
11 appreciate it as well because I need to go pick up
12 my kids from camp, so I -- I thank you for -- for
13 me not having to rush.

14 MR. TAMBURO: No. Have a good weekend.
15 Thank you.

16 Over to you, Angeline, if you have any
17 questions.

18 MS. PREMRAJ: Sorry, Dr. Singh. I just
19 have a few more questions, but I won't keep you
20 for too long.

21 THE WITNESS: Okay.

22 MR. TAMBURO: You can't blame me.

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EXAMINATION

BY MS. PREMRAJ:

Q Dr. Singh, do you recall earlier when Mr. Tamburo asked you about the toolbar that you mentioned in a figure, an illustrative figure in your declaration?

A Yes.

Q Can we please pull up -- and you can pull this up on your end, too -- Singh Exhibit 3?

A Okay.

Q And once you have that up, can you please confirm that that's the Phillips reference?

A Sorry. Yeah. One second.

Yes, this is the Phillips reference. Just want to double-check.

Yes.

Q Can I please ask you to scroll down to paragraph -- paragraph. Sorry. Column 20, lines 20 through 22 of the Phillips reference.

A 20 -- lines 20 through 22. Yes.

Q Do you mind reading out that sentence between those lines?

1 A Starting from "as shown in the lower
2 portion of the screen"?

3 Q Sure.

4 A Okay. Or I can just read the -- the
5 paragraph.

6 Ordered video-on-demand content may be
7 displayed for the user on a display screen such as
8 video-on-demand playback screen as shown in the
9 lower portion of the screen 246. Interactive
10 options may be displayed in a toolbar 248 or other
11 suitable format.

12 Q Does that passage refresh your
13 recollection of where you got that term, toolbar,
14 for your image?

15 A It does. But equally, like I said, when
16 counsel asked me the question, you know, a toolbar
17 is a well-known term in -- in human-computer
18 interaction for kind of a group of user interface
19 elements presented together, and that's what's
20 being referred to here in Phillips.

21 Q Sure. Earlier, Counsel asked you
22 questions about the presentation layer and a

1 storage data layer in one of the earlier images in
2 your declaration.

3 Do you remember that?

4 A Yes.

5 MS. PREMRAJ: Could we please pull up --
6 and you too, Dr. Singh, if you want to pull it up
7 on your own --

8 THE WITNESS: Yeah.

9 MS. PREMRAJ: -- Singh Exhibit 2. That's
10 the '091 patent.

11 THE WITNESS: Okay.

12 BY MS. PREMRAJ:

13 Q Can I please direct your attention to
14 Column 5? And we're looking at the paragraph that
15 starts on line 41.

16 A Okay.

17 Q You've looked at this paragraph a few
18 times already. Does this paragraph, in your
19 understanding, reflect an example of an
20 appreciation term?

21 A Okay. So this is where we talk about
22 Figure 13?

1 Q Yes.

2 A It shows examples of -- okay. Certainly.
3 I mean, it -- it talks about contents having a
4 nature of an appreciation term where basically
5 contents have a -- have a period of freshness, and
6 it uses as an example one month, and -- and based
7 on that appreciation term, you know, it describes
8 logic on whether the -- whether a linear operation
9 panel or interactive operation panel should be
10 presented for -- for viewing, as it says, like,
11 around line 55.

12 Q So let's pick up on line 55, the sentence
13 where it says, only new information can be
14 presented for viewing by controlling the display
15 state in accordance with information on digital
16 contents.

17 What, if anything, does this passage tell
18 you about what layer, if any, this function is
19 enacted on?

20 A Well, it talks about a presentation layer
21 without explicitly using those words. The
22 word "presented" is given before display state is

1 given, and so any POSITA would understand that to
2 be the -- the portion of an application or the
3 module or the layer that is responsible for
4 presenting and displaying content.

5 Q Okay. And I'd like to flip to Singh
6 Exhibit 6. This should be the Ellis reference.

7 A Okay.

8 Q Could you please scroll down to
9 Paragraph 165?

10 A 160 -- yeah. Okay.

11 Q Do you see the sentence in this paragraph
12 where it says, On other situations, programs will
13 be deleted from the system or at least the
14 publicly-available portion of the system to save
15 on storage, space, or to follow the practices of
16 the system operator.

17 Do you see that sentence?

18 A I do.

19 Q And what impression, if any, does this
20 sentence have on your understanding of whatever
21 layer this function is enacted on?

22 A Well, as I said, there's -- in such a

1 system, there will be a portion, layer, module
2 that is responsible for managing the storage of
3 content, and this particular sentence talks about
4 removing that content from this storage.

5 So within that module's purview of
6 operation, under circumstances like when the
7 content expires. So it is referring to storage,
8 as I described in the image.

9 Q I have just a few more questions here.

10 This was a while ago, earlier on during
11 Mr. Tamburo's questioning. He asked about certain
12 ads in the Phillips reference.

13 Do you remember that?

14 A I do.

15 Q Okay. Let's flip to the Phillips
16 reference. That's Singh Exhibit 3. And let me
17 know when you pull that up.

18 Okay. We're going to scroll down to
19 Column 18, lines -- starting at line 67, and we're
20 going to go into Column 19, line 3.

21 A Okay.

22 Q Could you please read for us what it says

1 in this passage starting at line 67, starting with
2 screen 202?

3 A So from when the user selects Option 128?

4 Q You can start on line 67, if you could --
5 line 67.

6 A 67.

7 Q It's the last line.

8 A Okay. Screen 202 may include logos such
9 as logo 204, selectable (or non-selectable)
10 advertisements such as advertisements 206, and a
11 screen title 208. The user may -- yeah.

12 Q Thank you. Can we go up now to
13 Figure 17 -- one second.

14 Can we please go up to Figure 14?

15 A In the -- in the patent? Figure 14?

16 Q Yes, in Phillips.

17 A Yeah. I'm -- sorry. I'm too zoomed in,
18 so it's kind of taking a minute.

19 Yeah. I'm there.

20 Q And this figure, would you agree that it
21 refers to two blocks labeled "ad" as 206, which is
22 the item about which you just read, 206?

1 A Yes.

2 Q Okay. Great. And then if we could go up
3 to column 1 --

4 A Mm-hmm.

5 Q -- lines 43 to 47.

6 Could you please read just that paragraph?

7 A Column 1, lines what?

8 Q 43 to 47.

9 A Okay. 43 to 47.

10 Sometimes a user of an interactive
11 television application, such as an interactive
12 television program guide, may have only just
13 enough time to briefly peruse a program guide
14 advertisement. The user may not have time to view
15 more extensive information; example, of the time
16 that might be provided in an advertising video.

17 Q Do you remember earlier when Mr. Tamburo
18 asked you about whether or not the -- a
19 promotional video may be displayed in Figure 17a?

20 A Yes.

21 Q Based on your reading of this passage, has
22 your understanding changed or evolved in any way?

1 A Well, it would appear reading this -- and
2 this is essentially a focus of the Phillips
3 invention -- is that information regarding
4 advertising can be provided at a very high level
5 that then users can -- can essentially sort of
6 look at at a later period of time if they need to.
7 In this case, it says that the user may not have
8 time to view more extensive information.

9 MS. PREMRAJ: That's all the questions for
10 me. Thank you.

11 THE WITNESS: All right.

12 MR. TAMBURO: I have nothing further.
13 Thank you very much again. Thank you, everybody.

14 (Off the record at 2:12 p.m.)
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ACKNOWLEDGMENT OF DEPONENT

I, KARANSHER SINGH, Ph.D., do hereby
acknowledge that I have read and examined the
foregoing testimony, and the same is a true,
correct and complete transcription of the
testimony given by me and any corrections appear
on the attached errata sheet signed by me.

(DATE)

(SIGNATURE)

1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

2 I, Brooklyn E. Schweitzer, Registered
3 Professional Reporter and Notary Public in and for
4 the Commonwealth of Pennsylvania, do hereby
5 certify:

6 That KARANSHER SINGH, Ph.D., the witness
7 whose deposition is hereinbefore set forth, was
8 duly sworn by me before the commencement of such
9 deposition and that such deposition was taken
10 before me and is a true record of the testimony
11 given by such witness.

12 I further certify that the adverse party,
13 PATENT OWNER, was represented by counsel at the
14 deposition. I further certify that the deposition
15 of KARANSHER SINGH, Ph.D, occurred virtually on
16 August 7, 2026, commencing at 9:00 a.m.

17 I further certify that I am not related to
18 any of the parties to this action by blood or
19 marriage, I am not employed by or an attorney to
20 any of the parties to this action, and that I am
21 in no way interested, financially or otherwise, in
22 the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my
hand this 10th day of August, 2026. My commission
expires: May 20, 2030.

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18  _____

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20 COMMONWEALTH OF PENNSYLVANIA
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