Transcript of **Ravin Balakrishnan, Ph.D.**

Tuesday, April 1, 2025

Samsung Patent Appeals

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,

Petitioners

v.

MAXELL, LTD.,

Patent Owner.

Inter Partes Review No: IPR2024-00735 and
IPR2024-00777

U.S. Patent No. 11,017,815

1
2 Washington, D.C.
3 Tuesday, April 1, 2025
4 Deposition of RAVIN BALAKRISHNAN, Ph.D., a
5 witness herein, called for examination by counsel for
6 Petitioners in the above-entitled matter, pursuant to
7 notice, the witness being duly sworn by MARY GRACE
8 CASTLEBERRY, a Notary Public in and for the District
9 of Columbia, taken at the offices of Mayer Brown,
10 1999 K Street, N.W., Washington, D.C., at 9:06 a.m.,
11 Tuesday, April 1, 2025, and the proceedings being
12 taken down by Stenotype by MARY GRACE CASTLEBERRY,
13 RPR, and transcribed under her direction.
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APPEARANCES:

On behalf of the Patent Owner:

ROBERT G. PLUTA, ESQ.
Mayer Brown LLP
71 S. Wacker Drive
Chicago, Illinois 60606
(312) 782-0600
rpluta@mayerbrown.com

On behalf of the Petitioners:

JAMES M. HEINTZ, ESQ.
DLA Piper LLP
One Fountain Square
11911 Freedom Drive, Suite 300
Reston, Virginia 20190-5602
(703) 773-4000
jim.heintz@us.dlapiper.com

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E X H I B I T S

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1 P R O C E E D I N G S
2 Whereupon,
3 RAVIN BALAKRISHNAN, Ph.D.,
4 was called as a witness by counsel for Petitioners,
5 and having been duly sworn by the Notary Public, was
6 examined and testified as follows:
7 EXAMINATION BY COUNSEL FOR PETITIONERS
8 BY MR. HEINTZ:
9 Q. Good morning, Dr. Balakrishnan.
10 A. Good morning.
11 (Exhibit No. 2040 was identified for
12 the record.)
13 BY MR. HEINTZ:
14 Q. Sir, I've placed before you what's been
15 marked as Exhibit 2040 which is labeled as the
16 declaration for IPR 2024-00735. I understand from
17 Mr. Pluta that the declaration for IPR 2024-00777 is
18 identical to this and also labeled as Exhibit 2040.
19 And Mr. Pluta and I have agreed that we'll just use
20 this one copy of the declaration for both of the IPR
21 proceedings.
22 MR. HEINTZ: Is that correct, Mr. Pluta?

1 MR. PLUTA: Yes.
2 BY MR. HEINTZ:
3 Q. Is that all right with you,
4 Dr. Balakrishnan?
5 A. That's completely fine. It's just the
6 front page that is different.
7 Q. So I'll ask you to turn to paragraph 127
8 of your declaration and that appears on what's marked
9 as 91 in the exhibit marking and 88 in the native
10 document marking.
11 A. Yes. I'm there.
12 Q. I think I'll just try to refer to
13 paragraph numbers now to keep this simple, is that
14 all right?
15 A. I think that would be easiest, yes. Thank
16 you.
17 Q. So in paragraph 127, you opine that Horn's
18 MFS is designed for high-performance, data-intensive
19 computing, is that correct?
20 A. That is correct.
21 Q. And then in the second sentence of
22 paragraph 127, you say that Horn's system's

1 architecture and functionality indicate that it is a
2 robust, server-based solution that is intended to
3 handle large volumes of data.
4 Do you see that?
5 A. I do.
6 Q. And you cite Exhibit 1005 at column 6,
7 lines 59 through 63 in support of those opinions, is
8 that correct?
9 A. I do.
10 (Exhibit No. 1005 was identified for
11 the record.)
12 BY MR. HEINZ:
13 Q. So I'm going to hand the witness what's
14 been previously marked as Exhibit 1005 which is U.S.
15 Patent Number 7,275,063 to Horn. So I'll ask if you
16 recognize that document.
17 A. I do. This is what I think we are
18 referring to in this case as the Horn reference.
19 Q. Okay. That's the Horn you're referring to
20 in paragraph 127 of your declaration, is that true?
21 A. That's correct.
22 Q. Okay.

A. Well, I haven't looked at the entire copy here, but it looks like it is.

Q. I believe it to be complete and accurate, but if you would like to go through it, please feel free.

A. I'm happy to take your representation for it unless I see something odd as we go through it.

Q. Fair enough. So I'll ask you to turn to column 6, lines 59 to 63, which is what's cited in paragraph 127 of your report. And I'll ask you what in that passage supports your opinion that Horn's MFS is designed for high-performance, data-intensive computing.

A. So I will note, first of all, that that's a cite to a -- just one cite, but I also, when I talk about that paragraph in the first sentence, I'm referring to the entirety of Horn as well. But just with regards to that particular citation -- let me just reread it, if you don't mind.

Yes. So when I read this citation in the context of the entirety of Horn and when he talks about servers and so forth, and this citation says a

1 network interface coupled to a bus to provide
2 interface to the network for exchange of data amongst
3 various local network users, site computers, routers,
4 et cetera. When I look at that, it's not a
5 single-user system. It's talking about multiple
6 systems, multiple computers and multiple users. So
7 this is not just a single-user computer. I'm drawing
8 that difference.
9 Q. Okay. So in Horn, there's a figure 1.
10 Would you turn to that?
11 A. Yeah, I'm there.
12 Q. In the upper right-hand corner of figure
13 1, there is a device labeled 101. Do you see that?
14 A. I do.
15 Q. Do you understand that to be a laptop
16 computer?
17 A. In the picture? I'm just going to make
18 sure -- see what 101 is actually labeled as in the
19 patent itself. So when I look at the description of
20 figure 1 on page -- how do we do this? In column 11,
21 line 60 of the patent, it says, "Figure 1 illustrates
22 a computer system comprising a computer 101 with an

1 output display screen," et cetera. It does not limit
2 it to a laptop computer.
3 Q. Does it exclude a laptop computer?
4 A. Oh, no, it doesn't.
5 Q. Okay. With reference back to column 6,
6 lines 59 through 63 that you cited again in paragraph
7 127 of your report --
8 A. I'm there.
9 Q. Okay. Line 59 reads, "A network interface
10 is coupled to the bus."
11 Do you see that?
12 A. Yes.
13 Q. Does a laptop computer have a network
14 interface?
15 A. It can. It doesn't have to.
16 Q. Does it typically?
17 A. Today it does.
18 Q. Did it typically in or around 2004 when
19 the Horn patent was filed? I'm sorry, 2003 when the
20 Horn patent was filed?
21 A. In the 2003 time frame, some laptops had
22 been built in. Others you'd have to plug in a

1 separate card to get network connectivity.
2 Q. Are you familiar with a computer known as
3 the Apple Macintosh in this time period?
4 A. Sorry. I talked over you. Yes, I am.
5 Q. Did that computer have a built-in network
6 interface?
7 MR. PLUTA: Object to form.
8 THE WITNESS: I'd have to look at the
9 specs for that particular time period. It probably
10 did, but I can't say for sure whether they always
11 shipped with a network interface.
12 BY MR. HEINZ:
13 Q. So going back to column 6, line 59, it
14 says, "A network interface is coupled to the bus to
15 provide an interface to the data communication
16 network," and then in parenthesis, LAN, WAN and/or
17 internet.
18 Do you see that?
19 A. I do.
20 Q. What is a LAN, sir?
21 A. Generally, that acronym is known -- it
22 means a local area network.

Q. And the acronym WAN, W-A-N?
A. That generally is known to be a wide area network which is typically understood to be much broader than just a local area network.
Q. Sure. And then it says, "And/or internet." Is that the internet we all know in popular culture?
A. I think that's a reasonable inference of what it's trying to say here, yes.
Q. Do laptop computers typically have a network interface that allows connection of the laptop to a data communication network that can be a LAN?
MR. PLUTA: Object to form.
THE WITNESS: A laptop could have it. It doesn't have to have it. And just to be clear, the time frame we're talking about is 2003, you said?
BY MR. HEINTZ:
Q. Yes.
A. Yes. So in the 2003 time frame, I'd say a laptop could have had such an interface but didn't necessarily have to have one. Today the answer is a

1 little bit different.
2 Q. How about in connection to the internet in
3 2003 for a typical laptop computer.
4 A. It would depend on whether the -- A,
5 whether you had a network interface at all; if it
6 did, whether the local area network it connected to
7 was in turn connected to the internet. If it was,
8 then it could have. If it wasn't, then it would not
9 have. So at that time frame, there were local area
10 networks that were not open to the internet, for
11 example, in a lot of workplaces.
12 Q. There was a program known as America
13 Online that was very popular in 1999, 2000 and 2001.
14 Do you remember that?
15 A. In general terms, yes. Not the specifics
16 of it obviously.
17 Q. Sure. And America Online was used by many
18 people at home, correct?
19 A. Without looking at the numbers in front of
20 me, I will take your representation for that. I
21 would say it was used by a good number of people.
22 I'm not sure what "many" means in this context.

Q. And back in the 1999, 2000, 2001 time frame, do you know how users would typically connect to America Online?

A. What time frame are you talking about, 1999 now?

Q. 1999, 2000, 2001.

MR. PLUTA: Object to form.

THE WITNESS: At that time frame, modem connections were actually quite common as opposed to direct connections to the internet like we see today, for example.

BY MR. HEINZ:

Q. Sure. Modem connections were popular. And do you have an understanding as to whether people who connected to America Online would also be allowed to connect to the internet through America Online?

A. In 1999?

Q. Yes.

A. In 1999, I'd have to think back to the boundaries of something like America Online and whether it was always -- were they always allowed a connection to a broader -- the broader internet

1 beyond AOL or not. So it may have. I haven't looked
2 at AOL recently to give you a more definitive answer.
3 Q. How about in 2003. By 2003, do you have
4 any knowledge as to whether the user who connected to
5 America Online would also be allowed to connect to
6 the internet?
7 A. I'd say probably, but not -- I can't
8 definitively say, yes, it always allowed it. If you
9 have something I can look at to more definitively
10 say, yes, I know, I'm happy to look at that.
11 Q. Okay. With respect now to Exhibit 1005,
12 which is Horn, I'm going back to column 6, lines 59
13 through 63. And we read up to the passage where it
14 referred to the LAN, the WAN and the internet,
15 correct? That's at line 61?
16 A. And I think I read a little bit more past
17 that, but yeah.
18 Q. Sure. And after that parenthetical about
19 the LAN, the WAN and the internet, line 61 picks up
20 with, "For exchange of data among the various local
21 network users, site computers, routers and other
22 computing devices."

Do you see that?

A. Yes.

Q. Would a laptop connected to the internet, whether via directly or through a LAN connection or through a connection, for instance, through America Online to the internet, be capable of communicating with other local network users?

A. Possibly, as one item within the entirety of the ecosystem.

Q. Would that computer also be capable of connecting with site computers?

A. Maybe, maybe not. It depends on how closed or what kind of access credentials were necessary with the site computers.

Q. Assuming the user had the site credentials necessary to connect to a site computer, would the user be capable of communicating with a site computer via his or her laptop?

A. Might be -- if the system allowed it, it's possible.

Q. How about routers. Would a user using a laptop connected to the internet, whether directly or

1 through a LAN, be capable of communicating with
2 routers?
3 A. I think the answer to that is a bit more
4 nuanced because the router would typically be what I
5 would call a back end piece of hardware that was set
6 up by the administrators of the systems. The router
7 may be involved in moving some of the data around the
8 broader network. But whether or not the laptop user
9 could connect to the router directly or have any
10 control to that, I think that would really, you
11 know -- less likely than more likely because most
12 system administrators will not give endusers direct
13 access to a router in that time frame.
14 Q. Sure. So recall that this computer has
15 network interface that's connected in some cases to a
16 LAN, correct?
17 A. Which computer are we talking about now?
18 Q. The network interface that's discussed at
19 column 6, line 59. We're talking about the computer
20 that has that network interface.
21 A. Okay.
22 Q. Okay. That computer, it says in column 6,

1 lines 59 to 63, that that computer has network
2 interface that's coupled to a bus which provides an
3 interface to a data communication network such as a
4 LAN, correct?
5 A. Well, it says here the network interface
6 is coupled to a bus that provides a connection to the
7 communication network, for example, a LAN, WAN, and
8 all of the internet.
9 Q. Right. So a --
10 A. So I'm not sure I understand the
11 question --
12 Q. Sure.
13 A. -- because I'm not sure what it states.
14 Q. So we've established that it's possible
15 that the computer with the network interface that's
16 being discussed at column 6, lines 59 through 63 is a
17 laptop computer and has a network interface by which
18 it's coupled to a LAN, correct?
19 MR. PLUTA: Object to form.
20 THE WITNESS: I don't think I've agreed
21 that it has to be a laptop computer. I believe I
22 said a laptop computer that might have a network

1 interface could connect to a LAN. It doesn't have to
2 be a laptop computer.
3 BY MR. HEINTZ:
4 Q. Yeah. And I'm not saying here that it has
5 to be. I think we've agreed that it could be a
6 laptop computer such as the one pictured in figure 1
7 that we looked at earlier, correct?
8 A. If it had the network interface, it's
9 possible.
10 Q. Right. And such a computer, such a laptop
11 with a network interface connected to a LAN would be
12 communicating with a router, wouldn't it?
13 A. It could. It doesn't have to. I already
14 talked about the router and the credentials required
15 to connect to a router. It would depend on the way
16 the router is configured and whether the system
17 administrators allowed for an enduser to connect to a
18 router directly or not.
19 Q. So I'm not talking about a connection
20 where the end user controls the router or configures
21 the router. I'm talking about a computer that's on a
22 LAN and let's say is using the LAN to access the

1 internet. Wouldn't such a laptop computer be sending
2 messages that go through the router on their way out
3 to the internet?
4 A. Yes, that's possible.
5 Q. Okay. And such a laptop with a network
6 interface connected to a LAN through which a
7 connection to the internet is established would also
8 communicate with other computing devices if it were
9 connecting to a device over the internet per se,
10 correct?
11 A. The way you've phrased it, I think I would
12 give a more nuanced answer. I think it can get data
13 from other servers, but when you say connecting to
14 other computing devices, if there was another
15 computing device on that server, connected to the
16 internet, it's unlikely that this laptop would be
17 able to talk to that other computing device easily,
18 right? Because that's not how these things normally
19 work because there are security credentials and all
20 sorts of things that would prevent that kind of
21 connection.
22 Q. So you mentioned that such a laptop with a

1 network interface connected to a LAN that connects
2 through the internet would connect to a server,
3 correct?
4 A. Yes.
5 Q. A server is a computing device, isn't it?
6 A. Sure. But I just want to make sure that
7 you don't mean any computing device.
8 Q. I'm just saying it's a server. A server
9 is an example of a computing device with which a LAN
10 can communicate through a LAN -- I'm sorry, I may
11 have rephrased it. Let me start again.
12 A laptop is a device that can have a
13 network interface that's coupled to a bus through
14 which the laptop is connected to a LAN and can
15 communicate via the LAN through the internet with a
16 computing device in the form of, for example, a
17 server, correct?
18 MR. PLUTA: Object to form.
19 THE WITNESS: As stated that way, I would
20 say probably that's true.
21 BY MR. HEINTZ:
22 Q. Okay. We talked a little bit about

1 America Online before, correct?
2 A. We did.
3 Q. Are you aware that users of America Online
4 can communicate with each other via their computers
5 through various messaging applications?
6 A. The messaging functionality. At that time
7 I don't think the word application was used. But,
8 yes, you could communicate through various messaging
9 methods, functionality.
10 Q. So in those situations, an end user on one
11 laptop connected to a LAN could communicate with
12 another user's laptop connected on a different LAN
13 but commonly connected to an America Online server
14 back in 2003, correct?
15 A. I would disagree with the characterization
16 a little bit. I don't think it's communicating with
17 that other laptop directly. It's mediated through
18 the server. So one laptop doesn't actually see the
19 other laptop in any direct way. It sends a message.
20 The server mediates it. And the other laptop sends a
21 message back.
22 Q. So there's a message at one user's laptop

1 and that message winds up at the other user's laptop
2 and it goes through the America Online server,
3 correct?
4 A. Sure.
5 Q. You said in your paragraph 127 that the
6 MFS is designed for high-performance, data-intensive
7 computing. What in Horn tells you that Horn's MFS is
8 designed for high-performance, data-intensive
9 computing?
10 A. I don't think -- actually, can I pause for
11 a second? Is it possible to lower the blinds? It's
12 right in my eyes.
13 All right. So I'll rely on my report
14 here. I would go to, first of all, paragraph 128
15 where I talk about -- or I cite to Horn describing a
16 server architecture doing automatic organization,
17 indexing and retrieval of data from multiple sources
18 and I cite paragraph -- sorry, not paragraph --
19 column 3, lines 10 to -- 10 onwards.
20 Q. I believe it's 10 through 17?
21 A. Ten through 17, that's right. And then I
22 go on to the -- in paragraph 129, it's talking about

1 data from multiple inputs, indexing, et cetera. So
2 these are not things at that time that were done by
3 single laptop type computers at that time frame.
4 Today, the answer is a bit different.
5 Q. I'm sorry, did that complete your answer?
6 A. For now, sure. I'm sure you'll get into
7 it.
8 Q. So in paragraph 127, you use the words
9 "high performing" -- sorry, "high-performance and
10 data-intensive computing," correct?
11 A. Yes.
12 Q. Is there anywhere in Horn where it uses
13 those words, "high-performance" or "data-intensive
14 computing"?
15 A. I'd have to search Horn and I don't have a
16 search functionality in front of me. So I don't know
17 if you want me to read through this again looking for
18 those words.
19 Q. I didn't find them --
20 A. If you'd like me to --
21 Q. -- but if you can find them, I would be
22 more than happy for you to tell me where they are.

A. Well, I'd have to spend the time going through the entire document again because I don't have a cite for that.

Q. There's no cite for it in your report, correct?

A. Not for those words.

Q. And I'm not going to ask you to do that now. Perhaps at the end of the day we can do it if we have time.

A. Sure.

Q. Okay? Let's go to column 37 of the Horn patent.

A. Column 37.

Q. Column 37, yes, sir.

A. Yep, I'm there.

Q. So I'm going to direct your attention to the subheading at line 21, I guess this is, called industrial applicability. Do you see that?

A. Sorry, you said column 37 and then --

Q. It says industrial applicability.

A. Yes, I'm there.

Q. All right. Now, in that passage, it

reads, "The inventive data storage organization, archiving, retrieval and presentation system architecture and technology can be used in a wide variety of applications."

Do you see that?

A. Yes.

Q. The next part of that passage reads, "The primary being desktop file organization and server data management."

Do you see that?

A. Yes.

Q. And it says, "The inventive system is remarkably robust yet is a relatively small application program that can function with any type of operating system."

Do you see that?

A. Yes.

Q. And we have listed as potential operating systems Microsoft Windows, Windows NT, Windows 2000 and Windows XP. Do you see that?

A. Yes.

Q. Then it says, "Apple Macintosh OS9 and

1 OSX; BSD UNIX, HP-UX, Sun Solaris, Linux, and the
2 like."
3 Do you see that?
4 A. I do.
5 Q. The next sentence reads, "Currently, the
6 inventive technology is preferably implemented in its
7 current best mode form" -- sorry. Let me rephrase
8 that and start again.
9 "Currently the inventive technology is
10 preferably implemented in its current best mode in a
11 form that is executable on the Apple Macintosh OS9
12 and OSX operating systems."
13 Do you see that?
14 A. Yes.
15 Q. What was the Apple Macintosh OS9 operating
16 system to the extent you know?
17 A. What do you mean what was it? It was an
18 operating system that ran on Macintosh.
19 Q. And what kind of computer was a Macintosh?
20 A. At that time frame, it was a desktop
21 computer.
22 Q. Would it be fair to characterize that as a

1 personal computer?
2 A. It could be used as a personal computer.
3 I also know people who combined a bunch of them into
4 a server architecture as well.
5 Q. When used as a single computer, was it
6 often used as a personal computer?
7 A. Yes.
8 Q. In paragraph 128 of your report, which
9 again is Exhibit 2040 --
10 A. Right.
11 Q. -- you talk about the emphasis on handling
12 vast amounts of structured data. Do you see that?
13 A. Yes.
14 Q. Where does Horn talk about vast amounts of
15 structured data?
16 A. Well, if I look at Horn, it's talking
17 about server data management among other things. And
18 even in the paragraph you just read, I think on
19 column 37, lines 23 on -- I think you read the whole
20 paragraph in -- it says can be used in a wide variety
21 of applications including server data management, and
22 then it goes on to cite some examples that you

1 focused on like a Macintosh, but also cites what at
2 that time were what I would consider and people
3 skilled in the art would consider to be back-end
4 server type computers; for example, HP-UX, Sun
5 Solaris and Linux and so forth. They ran bigger
6 systems in the back. So this was designed for
7 handling that range of data.
8 And if I keep going down -- maybe I'll
9 stop there for now. But it's clear to me when I read
10 the entire disclosure that it's not just limited to a
11 personal computer type architecture. It's intended
12 to handle data across several architectures, and
13 that's why I used that term.
14 Q. You mentioned it isn't limited to a
15 server. In fact, what Horn tells us is its best mode
16 is in the form that's executable on the Macintosh OS9
17 operating system which runs on a personal computer,
18 correct?
19 A. Sorry, where did you just read that from?
20 I know I saw it earlier, but --
21 Q. Yeah, it's column 37.
22 A. Yep.

Q. I guess that's line 32.
A. Right.
Q. "Currently the inventive technology is preferably implemented in its current best mode in a form that's executable on the Apple Macintosh OS9 and OSX operating systems," which you testified earlier are operating systems that can run on personal computers, correct?
A. They could run on personal computers, the Macintosh, yes.
Q. Let's go to Horn's figure 1 that we looked at earlier. Again, that's Exhibit 1005.
A. I'm there.
Q. Earlier we discussed what appears to be a computer labeled as 1001, correct?
A. Yeah, 1001.
Q. I'm sorry, 101.
A. 101.
Q. I apologize.
A. Give me one moment. Let me get back to the paragraph that describes it. I had that a while ago.

1 Q. So the description of figure 1 begins at
2 column 11, line 60.
3 A. Yes, that's where it was. Okay.
4 Q. So looking at figure 1, there's a computer
5 labeled 101, correct?
6 A. There is, yes.
7 Q. And as depicted in figure 1, what kind of
8 computer does that appear to be to you?
9 A. Well, the description says a computer
10 system comprising a computer with an output display
11 screen, an input keyboard and a memory unit and one
12 memory unit such as a hard drive and one or more
13 network links where an email server -- actually,
14 that's the description of what 101 is.
15 Q. Sure. And I'm asking you in figure 1,
16 there's a graphical depiction of a computer 101.
17 What kind of computer does 101 appear to be to you,
18 sir?
19 A. You mean the actual picture in 101? That
20 looks like some kind of laptop.
21 Q. Okay. Now, in figure 1, there is a dashed
22 line that's labeled MFS 1. Do you see that?

A. Yes.

Q. Do you have an understanding as to which computer MFS 1 is located in? And in particular, is it your understanding that the MFS 1 is a part of the computer 101 shown in figure 1?

A. I think an instance of it could be implemented on or running on computer 101, but not the entirety of it. And if you read the rest of the disclosure, it talks about MFS being in different places as well.

Q. In figure 1, the MFS connects to an external server called an email server 114 via a network, correct?

A. Yes.

Q. In figure 1, there's no network connection between the MFS and the computer 101, is there?

A. If you're saying is there an arrow connecting MFS to 101, I don't see such an arrow, if that's what you're asking.

Q. You don't see an arrow connecting anything in MFS 101 to computer 101?

A. No, I think you said network connection.

Q. Ah, there is no network connection between MFS 1 and computer 101, correct?

A. In this diagram, there doesn't appear to be one.

Q. Okay. Thank you.

A. Although I would say, just to maybe expand on that, there is clearly a -- it talks about an input/output display layout connection. It doesn't really get into how that is implemented, so that may be implemented on a network connection. It's possible. But it doesn't say either way.

Q. But no network interface is shown between MFS 101 and computer -- sorry. I said that wrong again. I apologize.

Figure 1 doesn't show any network interface connection between the MFS 1 and the computer 101, does it?

A. It doesn't use that word. And I think I was just clarifying that the arrow 106 talks about input/output display layout, and it doesn't really get into how that input/output display layout is connected to -- let's get the number correct -- 101.

1 That could be done through a network. But it doesn't
2 have that word "network" in that particular arrow
3 between 106 and 101, for example.
4 Q. In figure 1, there's an object labeled
5 disc, and that's got the reference number 110,
6 correct?
7 A. Yes, I see that.
8 Q. Is the disc in figure 1 part of the
9 computer 101? And to help you answer that question,
10 I can direct your attention to column 11, lines 60 to
11 63.
12 A. It says -- 110, it says it's a memory unit
13 such as a hard drive. So as an example, it could be
14 a hard drive. It doesn't say whether or not that
15 hard drive is inside the computer or not. It could
16 be internal; it could be external. I think it
17 contemplates all of the above.
18 Q. Column 11, lines 60 to 63, reads, "Figure
19 1 illustrates a computer system comprising a computer
20 101 with an output display screen, an input keyboard
21 and a memory unit, such as hard drive, 110, and one
22 or more network links via an email server 114,"

1 correct?
2 A. Yes.
3 Q. So Horn indicates at column 11, lines 60
4 to 63, that the hard drive is included in the
5 computer 101, does it not?
6 A. I think that is incorporated in my earlier
7 answer. I said it doesn't preclude it. It could be
8 in there. It doesn't have to be, is my point.
9 Q. Doesn't this description at column 11, 60
10 to 63, says it is part of the computer 101 in the
11 same way that the keyboard and the display screen are
12 part of the computer 101?
13 A. I think it's contemplating that it could
14 be. It doesn't say it has to be and that's my point,
15 because it's drawing it outside the box. And so I'm
16 not disagreeing that it could be part of 101, right?
17 But all I'm saying is it could also be external to
18 101. I don't think this excludes the possibility of
19 an external drive or a connection to an external
20 drive.
21 Q. Okay. Let's go to paragraph 147 in your
22 expert declaration which again is Exhibit 2040.

A. I'm there.

Q. In paragraph 147, you write, "As discussed above, I have applied the District Court's construction that the user profile term should be construed to mean a collection of settings and information associated with a user," correct?

A. Yes.

Q. Now, in paragraph 148, Horn defines a collection to mean a grouping of objects that were grouped together by a user, correct?

A. And you're reading the citation, the excerpt that I cited, right, where it says "a grouping of objects that have been grouped together specifically by the user," yes.

Q. So you would agree that in Horn, the collection means things that were grouped together specifically by the user, correct?

A. That's what the citation -- the excerpted part of the citation says. It doesn't mean it's associated with the user, which is what the claim construction that I'm relying upon is -- I think that's the distinction I'm trying to make.

1 Q. Let's look at Horn at column 6, lines 19
2 through 22.
3 A. Just give me a moment to read the entire
4 paragraph if you don't mind.
5 Q. Okay.
6 A. Okay.
7 Q. So it looks like -- and only a patent
8 lawyer could do this. It looks like Horn includes a
9 sentence that begins at column 5, line 47 and runs
10 all the way through to column 6, lines 20- -- I think
11 that's 22.
12 A. Sorry. I interrupted you, but I thought
13 you were looking at just a few lines in column 6 and
14 now you're going back to column 5?
15 Q. Yeah. So maybe you should read --
16 A. Why don't we start again if you don't
17 mind.
18 Q. Sure. Why don't you read to yourself Horn
19 starting at column 5, line 47 through column 6, I'll
20 call it line 22. It's the end of that first partial
21 paragraph in column 6.
22 A. Okay. Yeah, give me a moment, then.

Q. Sure.
A. Okay.
Q. So I'm going to direct your attention to the last portion of that passage that I believe begins at line 18 and reads, "And so as to provide information management tools that facilitate communication to generate, transmit and receive, archive, search, order, retrieve and render objects, including information organization personalized for each individual user based on preferences selected by the user."
Do you see that?
A. Yes.
Q. Now, organization of information that's personalized for each individual user implies that Horn's system is concerned with multiple users, correct?
A. I think I can agree that Horn's system handles -- can handle multiple users, yes.
Q. And Horn teaches that its system personalizes the organization of individual -- sorry. Let me try it again.

1 Horn teaches that Horn's system
2 personalizes the organization of information for each
3 individual user based on preferences selected by the
4 user, correct?
5 A. I think this paragraph or this section
6 says that Horn includes -- can include information
7 organization that is personalized for each individual
8 user based on preferences selected by the user.
9 Q. Isn't information organization
10 personalized for each individual user based on
11 preferences selected by the user an example of
12 settings and/or information associated with the user?
13 A. That's not what Dr. Bederson was arguing
14 when he realized on the notion of collections and I'm
15 rebutting Dr. Bederson's assertions and that's my
16 focus in my report. So he, from my understanding at
17 the time I read his report, he was saying -- he was
18 relying on his disclosure of -- Horn's disclosure
19 regarding collections. I cited that and I'm
20 distinguishing that from the user profiles as
21 construed by the Court.
22 Q. Regardless of anything Dr. Bederson may

1 have said, isn't it true that information
2 organization personalized for each individual user
3 based on preferences selected by the user is
4 information and settings that are associated with the
5 user?
6 A. It might be. I haven't considered that
7 because Dr. Bederson or Dr. Bederson -- I'm not sure
8 how to pronounce the name correctly -- did not cite
9 to that. The burden's on him to cite to what he
10 wants to rely on and not for me to go shopping around
11 looking for stuff to support his job.
12 Q. It's Bederson, by the way. That's the way
13 he pronounces it.
14 A. Thank you.
15 Q. You're welcome. So as you sit here today,
16 you have no opinion as to whether information
17 organization personalized for each individual user
18 based on preferences selected by the user could be an
19 example of settings and information associated with
20 the user, is that correct?
21 A. I'm saying I'm not prepared to render the
22 opinion because I haven't considered that aspect that

1 you are just bringing up as part of Dr. Bederson's
2 assertion. At least I don't recall it being in his
3 report as something he relied upon.
4 Q. Let the record reflect that I'm handing
5 the witness what's been labeled previously as Exhibit
6 1003, which is the declaration of Dr. Benjamin B.
7 Bederson.
8 A. Thank you.
9 (Exhibit No. 1003 was identified for
10 the record.)
11 BY MR. HEINTZ:
12 Q. Dr. Balakrishnan, I'll ask you to turn to
13 paragraph 146 of Dr. Bederson's declaration which
14 again is Exhibit 1003. If you'll just let me know
15 when you're there.
16 A. Yes. Yes, I'm there.
17 Q. All right. Paragraph 146 reads, "To the
18 extent the '815 patent discloses this limitation" --
19 and this refers to limitation 1c -- "the
20 Horn-Baumgartner combination renders this limitation
21 obvious. Horn discloses that at least some of the
22 plurality of information is associated with a user

1 profile." And he quotes, "So as to provide
2 information management tools that facilitate
3 communication to generate, transmit and receive,
4 archive, search, order, retrieve and render objects,"
5 and then bolded and in italics, "Including
6 information organization personalized for each user
7 based on preferences selected by the user."
8 And Dr. Bederson is citing Horn at column
9 6, at lines 11 through 22. Do you see that?
10 A. Yes, I do. Thank you for bringing that
11 up. And then he goes on to talk about collections as
12 the example. And that's what I'm rebutting in my
13 paragraph 147 and 140 -- sorry, 148 and 149. So I
14 read them in -- I think I read the entirety of his
15 argument there and I think you're right, he is citing
16 that paragraph that we just went over, but then he
17 uses a specific example that Horn provides with
18 regards to collections and that's what I'm rebutting.
19 Q. And it's -- well, let's take a step back.
20 So the line I read three or four times -- and you
21 previously said Dr. Bederson didn't rely on,
22 specifically, information organization personalized

1 for each individual user based on preferences
2 selected by the users, in paragraph 146 of
3 Dr. Bederson's report, in bold and italicized
4 language, correct?
5 A. That I agreed with, yes. Thank you. You
6 have refreshed my memory on that. Thank you.
7 Q. So as you sit here today, do you still
8 have no opinion as to whether information
9 organization personalized for each individual user
10 based on preferences selected by the user can be an
11 example of settings and information associated with
12 the user?
13 A. The reason I say it's not clear to me that
14 it is because, in the same paragraph, Dr. Bederson
15 then talks about the collections. And when he talks
16 about collections being an example of
17 personalization, it doesn't seem to fit the Court's
18 construction. So that's -- when I read the whole
19 thing as a whole, if you take out the collections
20 part, maybe, but he seems to be saying the
21 collections are an example of something that's
22 personalized in -- sorry, what is the construction --

1 the collection of settings and information associated
2 with the user. And I disagree with that for the
3 reasons I provide in paragraphs 148 and 149.
4 So I think taken as a whole and the
5 example that Dr. Bederson relies upon, I think I
6 disagree.
7 Q. So in the example of collections cited in
8 paragraph 146 of Dr. Bederson's declaration, there
9 was a passage from Horn at column 15, lines 12
10 through 27, right?
11 A. Yes.
12 Q. And the end of that passage reads, "And
13 can create and set up user-defined collections as
14 well."
15 Do you see that?
16 A. Sorry, I'm just going to get to that.
17 Where is that?
18 Q. It's in that paragraph in that quotation
19 that's right below --
20 A. Yes.
21 Q. -- that italicized and bolded language we
22 just read. Do you see the end of that passage reads,

1 "Create and set up user defined collections as well"?
2 A. Yes.
3 Q. So these collections that are disclosed in
4 Horn are identified -- sorry, are set up and defined
5 by a user, correct?
6 A. Yes. I'm not disagreeing with that part.
7 I think my disagreement with Dr. Bederson is that
8 that's not necessarily been associated with the user.
9 If it's been -- I don't disagree that the user in
10 Horn could create these collections manually or
11 automatically, but where I'm disagreeing, it doesn't
12 become -- it doesn't necessarily mean it's associated
13 with the user.
14 Q. Even though the passage that we talked
15 about earlier at column 6, lines 11 through 22 talk
16 about information organization personalized for each
17 individual user based on preferences selected by the
18 user. Is that still your opinion as you sit here
19 today?
20 A. Yes.
21 Q. So you don't think that that passage is
22 talking about collections will be set up and defined

1 by a user and the display of those collections will
2 be personalized for a user as discussed at column 6,
3 lines 11 through 22? Is that your opinion?
4 A. So with a piece -- there's different parts
5 of that. The first part, the collections created by
6 the user, I don't disagree with that. The
7 collections are being created by the user. The part
8 that I think the disagreement is is whether or not
9 that collection, after it's been created by the user,
10 remains associated with that user. And that's the
11 crux of the disagreement.
12 Q. Okay.
13 MR. HEINTZ: We've been going for about an
14 hour. Why don't we take a 10, 15-minute break.
15 THE WITNESS: Sure.
16 (Recess.)
17 BY MR. HEINTZ:
18 Q. Welcome back, Dr. Balakrishnan. Sir, I
19 would ask you to return back to Exhibit 2040 which is
20 your declaration.
21 A. Okay.
22 Q. And I'll ask you to turn to paragraph 96.

A. Okay.

Q. Paragraph 96 discusses a document that's been labeled as WinTV, correct?

A. Yes. Yeah, the manual. Sorry. Yes.

Q. So I'll hand to the witness what's been marked previously as Exhibit 1010, which is the WinTV installation and reference manual.

A. Thank you.

(Exhibit No. 1010 was identified for the record.)

BY MR. HEINTZ:

Q. Do you recognize that, Dr. Balakrishnan?

A. I do, yes.

Q. Is that the installation and reference manual that's discussed in paragraph 96 of your declaration?

A. It appears to be. Obviously I'm not going to read all 85 pages of it. But, yeah, it looks like the same thing that I looked at.

Q. As far as I know, it's an accurate copy. I downloaded it from the PTAB website.

A. Sure.

Q. In paragraph 98 --
A. Ninety-eight?
Q. -- 98 of your declaration, you say that, "Other than being presented with the WinTV manual (Exhibit 1010), and by accessing the link provided by petitioner, I could not independently find the manual as set forth by petitioner after considerable attempts through the use of the internet Archive around 2003."
Do you see that?
A. Yes.
Q. What do you mean by considerable attempts?
A. I spent about an hour poking around the web archive trying to get this same manual, just searching for it and could not get to it. And I think I provided some links of what I was trying to do in -- in paragraph 99, I have a table that I tried a bunch of links. One of them actually ends up with an access denied situation.
So I could not get the manual -- I could get the manual if I clicked on the link that I copied on paragraph 97. The link was provided by

1 Dr. Bederson of your -- Samsung. So that one works,
2 but I couldn't get to that by independent searching.
3 And that's the point I was -- I'm trying to make.
4 Q. So as you're sitting here today, do you
5 know whether the manual can be navigated to by
6 starting at the Hauppauge home page as represented on
7 internet archive and then clicking links to navigate
8 to the manual?
9 A. Are you saying separately from the actual
10 link provided in paragraph 97? Like the way I did it
11 in paragraph 99, I could not do it. I tried it again
12 yesterday. I couldn't do it.
13 Q. So as you're sitting here today, as far as
14 you know, it's not possible to access the manual
15 that's been labeled Exhibit 1010 by navigating
16 starting at the Hauppauge home page and clicking
17 links just to get to the manual. As far as you know,
18 that's not possible as you sit here today?
19 A. As far as when I tried it, yes.
20 Q. Okay.
21 A. Now, again, I just want to be very clear
22 that the PDF is at that web page that I link at 97.

1 So that I'm not disputing. When I put that full URL
2 in that's on paragraph 97, that shows up a PDF
3 version of Exhibit 1010. So that -- I'm not
4 disputing that. But I couldn't get to that without
5 knowing that link.
6 Q. You weren't able to navigate to that link
7 that gets you to that manual from the Hauppauge
8 computer homepage, is that fair?
9 A. Yes, that's fair. I just want to -- your
10 word "navigate," I couldn't navigate if I knew the
11 full link, but by clicking through, I could not get
12 to it. I just wanted to be very clear on the record.
13 Q. Very good. Now, putting aside what you
14 were able to do when you tried this yesterday and
15 maybe some time ago when you did your declaration,
16 has anybody told you whether it's possible or not?
17 MR. PLUTA: Object to form. Calls for
18 speculation.
19 THE WITNESS: I haven't discussed this
20 with anybody else except counsel.
21 BY MR. HEINTZ:
22 Q. Did counsel tell you whether or not it's

1 possible to navigate by clicking links to get to the
2 page that will allow a user to download Exhibit 1010
3 of the manual?
4 MR. PLUTA: Object to form. Hearsay.
5 THE WITNESS: No, nobody told me that it
6 could be done or how to do it, beyond that one full
7 link that's in paragraph 97.
8 BY MR. HEINTZ:
9 Q. So I've placed the computer in front of
10 you.
11 MR. HEINTZ: And I'll represent to
12 counsel -- and Counsel, you can inspect it, if you
13 like -- that this is as labeled what my IT department
14 calls a plain vanilla computer. It is a relatively
15 recent computer. There's no special software on it.
16 It's got a Windows operating system.
17 BY MR. HEINTZ:
18 Q. Dr. Balakrishnan, I'd like you to try to
19 get onto the computer. It may be asking you for a
20 PIN. And if you look, there's a label on the
21 computer with a PIN.
22 A. Yeah. Let me try to get organized here.

1 Q. Sure. And feel free to bring it closer to
2 you --
3 A. Sure.
4 Q. -- to make it easier for you to navigate
5 or operate.
6 A. Okay. I'm on the Windows desktop.
7 MR. PLUTA: I'll make an objection for the
8 record to relevance and subject to our prior
9 objections with respect to Exhibit 1010 to this line
10 of questioning.
11 BY MR. HEINTZ:
12 Q. Okay. So Dr. Balakrishnan, do you see an
13 icon for invoking the Chrome web browser?
14 A. I do.
15 Q. Would you please click on the icon and
16 open the Chrome web browser.
17 A. Okay. I have.
18 Q. Okay. Now, are you familiar with what's
19 called the bookmarks bar in the Chrome browser?
20 A. In general terms, yes.
21 Q. And I believe there are a couple of
22 bookmarks there and the most recent one starts with

1 the word "Hauppauge." Do you see the Hauppauge
2 bookmark in the bookmarks bar?
3 A. I see a Hauppauge computer. I'm not sure
4 it's the most recent, but it's certainly one of three
5 links.
6 Q. The one furthest to the right on the
7 bookmarks bar is the Hauppauge one, right?
8 A. Yes.
9 Q. All right. Would you please click that.
10 A. (Witness complies). Okay.
11 Q. Would you please, sir --
12 A. Oh, sorry. Just give me one second. It's
13 loading.
14 Q. Ah.
15 A. Yep.
16 Q. Would you please read the link that is now
17 being displayed in the Chrome browser?
18 A. The URL you mean?
19 Q. I'm sorry, the URL, yes.
20 A. I don't know how the easiest way to do
21 this. Okay.
22 Web.archive.org/web/20030927003737/http://hauppauge.

1 com/. I think I got that right.
2 Q. I believe you did, too. And I apologize
3 to both you and the reporter for making you go
4 through this, but it's fairly important.
5 MR. PLUTA: And I object to the
6 introduction of this web page. Relevance, hearsay.
7 BY MR. HEINTZ:
8 Q. Now, Dr. Balakrishnan, you've testified
9 that you earlier attempted to find the manual labeled
10 Exhibit 1010 through the web archive website,
11 correct?
12 A. Yes. And I provide some examples of what
13 I tried in paragraph 99 of my report.
14 Q. Now, what I'd like you to do is hit
15 control P, which will be a print, and I'm going to
16 ask you to save this as a PDF to the desktop --
17 A. Okay.
18 Q. -- with a file name of EX 1065.
19 A. To the desktop, okay.
20 Q. .PDF.
21 A. Sorry, I'm not used to this touch pad.
22 Can you repeat that for me, please?

Q. Sure. EX --
A. EX --
Q. -- 1065 --
A. -- 1065.
Q. --.PDF. So you're going to save the screenshot, print the screen out and save it as Exhibit 1065.pdf onto the desktop.
A. Okay. I think I did it.
Q. Would you --
A. Yeah, I could check.
Q. Yes, please open up the PDF on the desktop and see that it matches what you're displaying now in the browser window.
MR. PLUTA: I think the record's clear, but I'll object to Exhibit 1065 on the grounds of relevance and hearsay, completeness.
(Exhibit No. 1065 was marked for identification.)
THE WITNESS: Okay. Looks like I did save the PDF, yep.
BY MR. HEINTZ:
Q. Okay.

A. Of that page.

Q. Does this appear to you -- if we go back to the browser now.

A. Okay.

Q. Does it appear to you that we're looking at the Hauppauge computer website at Hauppauge.com?

A. So I'm having trouble with this touch pad. It's not the same as what I'm used to.

Q. Yeah. Sorry.

A. I'm just trying to scroll down here. It appears to be a Hauppauge web page, yep, or an archived version of the Hauppauge web page.

Q. Correct. And is there an indication on that screen as to what date the archive was captured? If you look up in the upper right-hand corner.

MR. PLUTA: Objection, hearsay.

THE WITNESS: September -- are you talking about the September 27, 2003 date on the top? And there's a range there.

BY MR. HEINZ:

Q. Correct.

A. There's a couple of different ranges here.

1 On the left-hand side, it says 5 November 1996 to 27
2 March 2025 and on the right-hand side, it has -- on
3 the top right, it has August 2002, September 27, 2003
4 and then an arrow going to the November 2004 version.
5 Q. And the September 27th, 2003 date is the
6 one that's highlighted in the display in front of
7 you, correct?
8 A. You mean the date itself?
9 Q. The date itself, yes.
10 A. Yes, it appears to be.
11 Q. Now, in paragraph --
12 A. Do you want to look at it?
13 MR. PLUTA: Okay. Got it.
14 BY MR. HEINTZ:
15 Q. In paragraph 99 of your declaration, you
16 mentioned the dates August or September 2003,
17 correct?
18 A. Yes.
19 Q. So September 27th, 2003 would be a date in
20 August or September of 2003, correct?
21 A. Sure.
22 Q. Okay. Now, on the left-hand side of the

1 display in front of you, there are several boxes.
2 The fourth one down is labeled software updates.
3 Do you see that?
4 A. I do.
5 Q. And to the right of the box labeled
6 software updates, there's a description that reads,
7 "Product support and software updates. Product
8 support and software updates (the latest applications
9 and drivers technical notes plus beta test
10 versions)," correct?
11 A. Yes.
12 Q. Would you click the box labeled software
13 updates on the left-hand side of the screen, were you
14 able to navigate to a different page?
15 A. Yes, it's at a different page.
16 Q. I'd ask you to save this page again. So
17 do a control P, and print this page out as a PDF
18 saved to the desktop and this one will be labeled
19 Exhibit 1066.pdf. So EX 1066.pdf.
20 A. Okay.
21 MR. PLUTA: I'll object to the
22 introduction of this exhibit pursuant to relevance

1 and hearsay.
2 (Exhibit No. 1066 was marked for
3 identification.)
4 BY MR. HEINTZ:
5 Q. Were you able to create the second PDF on
6 the desktop?
7 A. It said it did. I'll check.
8 Q. And see that it matches what was displayed
9 to you by the browser.
10 A. Looks like it's the same page. I'm not
11 going to check every single word, but it should have
12 saved it correctly.
13 Q. Okay. Now, on this page, the date August
14 1, 2003 is highlighted in the upper right-hand
15 corner, correct?
16 A. That is correct.
17 Q. Now, near the top of the page, there's a
18 heading labeled Product Support and Software Updates.
19 Do you see that?
20 A. You mean the title? Yes.
21 Q. And below that, there is a type of a table
22 with three rows and generally three columns with a

one -- the middle row has one column that stretches -- one row that stretches across all three columns. Would that be a fair description?

A. Sure.

Q. Okay. In the upper left-hand corner, the first product there is listed, "WinTV-PCI boards including the WinTV-GO, Theater and DBX."

Do you see that?

A. Yes.

Q. And below that, there's a link that can be clicked that reads, "Product selector for software updates and utilities."

Do you see that?

A. Yes.

Q. Would you click on that link, please.

A. Okay.

Q. Have you navigated to another web page?

A. It has come to another web page.

Q. I ask you to again save that as a PDF to the desktop and label this file as EX 1067.pdf.

MR. PLUTA: Object to the introduction of Exhibit 1067, relevance, calls for hearsay.

(Exhibit No. 1067 was marked for identification.)

MR. HEINTZ: I do think in these proceedings, you're supposed to be limited to one-word objections and I believe the proper word is form.

MR. PLUTA: I disagree. I need to protect the record.

MR. HEINTZ: Okay.

MR. PLUTA: Objections pursuant to the Federal Rules of Evidence apply. My formal objections have been limited to form, but I will protect the record with respect to the Federal Rules of Evidence which include relevance and hearsay objections.

BY MR. HEINTZ:

Q. So Dr. Balakrishnan, were you able to save Exhibit 1067.PDF?

A. Yes.

Q. And do the contents of Exhibit 1067.PDF correspond to what you see in the browser window?

A. I think it just says -- let me

1 double-check something, actually. Give me a second.
2 I don't know what you want to save, but what I've
3 saved doesn't include the timeline on the top, just
4 so you know.
5 Q. Oh. Thank you for letting me know that.
6 A. So it's got -- so it's a little bit --
7 what it saved as a PDF is a little bit -- it's
8 actually different from what I see on the screen in
9 terms of it doesn't have the -- all the date -- the
10 date bar on the top is not saved.
11 Q. Thank you for calling my attention to
12 that. The date bar on the top in the browser window
13 is again August 1, 2003. That's been highlighted,
14 correct?
15 A. That's correct. And I think that comment
16 I just made, I think it applies to the other two
17 exhibits, too. I didn't notice that earlier.
18 Q. Thank you. I appreciate that. This page
19 near the top includes a header labeled WinTV PCI
20 Boards, correct?
21 A. The title, sure.
22 Q. And below that, it says, "Software update

1 product selector page." Do you see that?
2 A. Yes.
3 Q. On the left-hand side, there's a product
4 image of a card that can be plugged into what appears
5 to be a PCI bus. Does that appear correct to you?
6 A. I'm just reading the description. It says
7 choose your WinTV-PCI board. Both cards seem to
8 be -- there's two images on the screen. Both seem to
9 be PCI board cards at least based on the description.
10 Q. And the one on the left is labeled with
11 878 chip, correct?
12 A. That's correct.
13 Q. Below that image of the product with the
14 label 878 chip, there are several links including one
15 which reads, "Installation manual PDF."
16 Do you see that?
17 A. Yes.
18 Q. Would you click on installation manual
19 PDF?
20 A. Okay.
21 Q. What, if anything, do you see on the
22 screen after clicking installation manual PDF?

A. I see a PDF file has been loaded. Actually, it may not be. Is it a PDF file? Well, the link says WinTV-PCI.pdf with a bunch of other stuff in the URL, but there is another header saying WinTV version 47.QXD. I don't recognize that name. But otherwise, it looks like a PDF file with a bunch of pages of some kind of manual.

Q. All right. Would you do a print screen and capture that, please, and save that as Exhibit 1068?

MR. PLUTA: Object to the introduction of Exhibit 1068, relevance and hearsay.

(Exhibit No. 1068 was marked for identification.)

THE WITNESS: So that's what I got saved. It didn't really save it correctly.

BY MR. HEINTZ:

Q. Okay.

A. It's not saving all the frames. It's just --

Q. All right. Let's go back to the website. Are you able to look at the contents of the PDF file

that were downloaded?

A. I can scroll through it, yeah.

Q. I'd like you to scroll through it and compare that to what's been previously marked in hard copy as Exhibit 1010 and let me know if you believe there's any difference between what you just downloaded and the hard copy of Exhibit 1010.

And actually, before we even do that, let me ask you this. You have a URL that's identified on your screen corresponding to this PDF, is that correct?

A. On the screen? Yes.

Q. Does that correspond to the URL by which you were able to directly access Exhibit 1010 in your previous attempts as discussed in paragraph 99 of your declaration?

A. Paragraph 99? I was not able to access -- sorry, which --

Q. I thought you told me earlier that you were able to type in the link that corresponded to Exhibit 1010 and get to the PDF of the manual that's been labeled Exhibit 1010.

A. This paragraph 97. So, yeah, it's not in 99, but I guess that's the confusion.

Q. Oh, I apologize. Does the link in paragraph 97 match the link that you're currently displaying on the screen now?

A. Sorry. It's a long link.

Q. Yeah. Take your time.

A. It's slightly different. There is a colon in the link -- in the URL link in paragraph 97 of my report, it has a Hauppauge.com:80/. The link I'm seeing up here on the screen in front of me doesn't have that, so in that sense it is a different link.

Q. I see. Okay.

A. And that's the -- yeah, there's a bit of a difference in the URL.

Q. Okay. I'd like you to satisfy yourself that the document you were able to download via the web archive site right now matches what's been labeled and marked as Exhibit 1010, which again is what we've been talking about as the WinTV manual.

A. So how thoroughly do you want me to do the review? Because there's 85 pages here.

Q. Enough to satisfy yourself that it's the same document.

A. Okay.

Q. I'll represent to you that I believe that it is.

A. Okay.

Q. But you take as much time as you like.

A. Just having scrolled through and without reading every single line of each -- both documents, I would say it looks like it's the same document.

Q. All right.

A. Or close enough anyway.

Q. Thank you, Dr. Balakrishnan.

MR. HEINTZ: Rob, during the break, I got a couple of thumb drives. We'll take the screen captures off, we'll hand them to the reporter and hopefully she'll be able to email them around to us or give us the thumb drives back. I'll try to give you one.

MR. PLUTA: Okay.

BY MR. HEINTZ:

Q. All right. Dr. Balakrishnan, you can put

1 the computer aside, push it away from you now.
2 You're not going to need it any longer today.
3 A. Can I unplug it and get it out of the way
4 here?
5 Q. You can, certainly. Okay.
6 Dr. Balakrishnan, I'd like to go back to
7 your declaration which is Exhibit 2040.
8 A. Yep. Okay.
9 Q. And again, as we discussed earlier, this
10 is the exact same declaration substantively that was
11 submitted both in the 735 and 777 IPRs but for the
12 cover page.
13 A. Yes, that's correct. Yes.
14 Q. Okay. All right. So, sir, I'll ask you
15 to direct your attention --
16 A. Just, sorry, those are the two numbers for
17 the '815 patent?
18 Q. They are, yes.
19 A. Because I don't have those numbers
20 memorized.
21 Q. I'm sorry. I apologize. I forget that we
22 attorneys sometimes get a little caught up in our

1 little world.
2 All right. So I'd ask you to turn to
3 paragraph 155 of your declaration.
4 A. Okay.
5 Q. So the first sentence reads in part, "As
6 set forth above, Horn does not disclose video
7 information."
8 Do you see that?
9 A. Yes.
10 Q. I'll now ask you to direct your attention
11 to paragraph 153.
12 A. Okay.
13 Q. At the bottom of paragraph 153, on
14 physical page 98 of your declaration, it says again
15 in part, "As set forth above, Horn does not disclose
16 video information." And the information's on the top
17 of page 99, right?
18 A. Yes, yes.
19 Q. Okay. So I'd like you to pick up Horn,
20 which is again Exhibit 1005, and I'd like you to
21 direct your attention to column 12, lines 8 to 18.
22 And you can just read --

A. Eight to 18. Oh, column 12.
Q. Column 12, yes.
A. I was looking at 12.
Q. Lines 8 to 18.
A. Yes.
Q. Listed in this passage at column 12, lines 8 to 18, are a number of types of information that the MFS can process and organize, correct?
A. Yes.
Q. At line 13, one of the types of information is movies. Do you see that?
A. Yes.
Q. Is movies a form of video information?
A. I would say a movie, it could be a video, yes.
Q. So why are you saying in paragraphs 153 and 155 that Horn does not disclose video information?
A. Just let me read this more carefully. I think what I'm doing here is I'm referring to what Dr. Bederson cites and what he cites to did not, as far as I remember, talk about video information. I

1 think that's my focus here.
2 Q. So you referred in your answer to here.
3 What part of --
4 A. Sorry. I meant paragraph 153.
5 Q. Okay.
6 A. So he cites -- for example, he cites to
7 Horn at 2016 -- column 20, line 16. Let's see, get
8 to that. He talks about the collection and the
9 collection for images, I think, is what he was
10 focused on there or the citation is focused on. And
11 then 17, 18 to 45. Yeah, he's talking about
12 collections. He doesn't say anything about video.
13 So I think that was my focus, I was looking at what
14 Dr. Bederson was citing at -- citing to, and didn't
15 see any video information.
16 Q. Seeing the citation to movies in Horn at
17 column 12, line 13, do you have an understanding as
18 to whether movies could be one of the types of
19 information in Horn's collections?
20 A. So in column 12, it's talking about
21 different types of data. If you can point me to
22 something that says the collections include videos or

1 movies, that will be useful for me to better answer
2 that question.
3 Q. Do you think that the collections that are
4 disclosed in Horn are not inclusive of all of the
5 types of data that are listed in column 12, lines 8
6 to 18?
7 A. I'd have to look at the -- I don't see a
8 cite that Dr. Bederson provided that explicitly
9 includes video or movies, so that's what I was
10 rebutting.
11 Q. Do you have an opinion as to whether
12 Horn's collections can include, among other things,
13 movies?
14 A. I haven't seen a description of
15 collections including movies in Horn, but, again, if
16 you'd point me to something that has it, I'm happy to
17 look at that. In particular, when I look at the
18 section that Dr. Bederson cites to in column 20, he's
19 specifically discussing creating a collection in
20 column 20, line 15 and 16. It talks about images.
21 It doesn't say anything about movies. It goes on to
22 talk about images.

1 Q. So let's look at Dr. Bederson's
2 declaration which was marked as Exhibit 1003.
3 A. Okay.
4 Q. And let's look at paragraph 132.
5 A. Okay.
6 Q. Do you see in paragraph 132 that
7 Dr. Bederson discusses Horn and its use to create,
8 organize, transmit and store information of a variety
9 of types in the form of content data?
10 A. Yes.
11 Q. And then there's a citation to column 1,
12 lines 34 to 43.
13 A. Yes.
14 Q. Then Dr. Bederson goes on to say that the
15 patent's disclosed MFS system which comprises one or
16 more applications for organizing all types of text
17 and image information - from word processing
18 documents and spreadsheets; to web pages and
19 multimedia; to illustrations, images, movies, and
20 photographs; to contacts, notes, and appointments,"
21 and so on, citing Exhibit 1005 at column 12, lines 8
22 to 18, correct?

A. That's correct. I believe that's what we were looking at earlier when you brought me to column 12.

Q. Now, you mention that one of the examples of collections that Dr. Bederson refers to is a collection of images, is that right?

A. That's correct. That's in column 20, lines 16 onwards that he cites to and that I just reread again.

Q. And images is one of the types of information that's listed in column 12, lines 8 to 18, right?

A. Yes.

Q. And also listed there is movies as we discussed, right?

A. Sure.

Q. And movies is a form of video, right?

A. Movie, sure. I think so, yeah.

Q. Okay. Let's take a look at Horn at column 2, lines 51 to 65.

A. I'm sorry, what lines again in column 2?

Q. Lines 51 through 65.

A. Give me a moment to --
Q. Certainly.
A. Okay.
Q. All right. Generally, what's your understanding of what's being discussed in that passage?
A. It's basically talking about how files that might need to be put in different groupings. There are problems with if you put them in two different groups and if you update the file in one group, then it doesn't -- you have to update it in the other group.
Alternatively, you've got to do a shortcut of what they call an alias file. It must be created and placed in those folders. And then it talks about these approaches involve tedious, repetitive, manual effort to create and manage that becomes exponentially more difficult as the number of groupings and cross-references increase. So it's basically pointing out issues with managing, putting files in multiple groups.
Q. And there are two ways discussed in that

1 passage to do that. The first way is to make
2 separate copies of the data to be included in both
3 groups, correct?
4 A. Sure.
5 Q. And then the second way is to use what's
6 referred to here as a shortcut or alias file,
7 correct?
8 A. Yes.
9 Q. And what's your understanding of what a
10 shortcut is?
11 A. I think at that time frame, it is simply
12 a -- what's the word? Maybe I'll use the word
13 symbolic link, a link to a piece of a file.
14 Q. Would it be fair to describe a shortcut as
15 a type of pointer?
16 A. I think that's -- sure. I'm okay with
17 that. A pointer in the computer science sense of
18 things and not a physical pointer.
19 Q. Okay. Do you agree that pointers were
20 well-known in the computer science arts at the time
21 of the Horn patent's filing on July 16th, 2003?
22 A. Yes.

Q. I'm going to ask you to take a look at Dr. Bederson's declaration again. That's 1003. And I'll ask you to go to paragraph 25.

A. Twenty-five?

Q. Twenty-five, yes, sir.

A. Okay.

Q. In paragraph 25, Dr. Bederson discusses shortcuts that were included in the Explorer program of Windows 95. Do you see that?

A. Well, the Explorer file browser? Yes.

Q. Do you understand whether or not the types of shortcuts or alias files discussed in Horn are the same kinds of shortcuts that were present as early as Windows 95 as discussed by Dr. Bederson in paragraph 25?

A. I'm not sure they're implemented the exact same way, but the concept would have been the same, you would think, yeah.

Q. If you look at Dr. Bederson's paragraph 26, you see there an example of the Windows Explorer and it's figure 14. Do you see that figure in paragraph 26?

A. I do, but it's a little blurry. Sorry. I've got to look up here a bit. Yeah, I can sort of make it out, yeah.

Q. And in the figure 14, there are a number of icons on the right-hand side, correct?

A. Yep.

Q. And those icons correspond to the folder that's highlighted on the left that reads, "Long file name directory." It's a little blurry, but are you able to make that out?

A. I see long and something directory. I'm sure the file name is --

Q. Good to --

A. Yeah, I think it's fair. That's fine. I don't see an issue with that.

Q. So Explorer was a program that allowed you to see the contents of different folders stored on the computer in which Explorer was running, correct?

A. Sure.

Q. And so if you highlighted a folder such as long file name directory on the left, you would get a display of icons that corresponded to the contents of

1 the folder on the right, correct?
2 A. In this particular example, yes.
3 Q. And in this particular example of figure
4 14, there is one file labeled shortcut to MS-DOS
5 based application. That's the second row, far right.
6 Do you see that?
7 A. Yes.
8 Q. Okay. Windows 95 shortcuts weren't
9 limited to referring to application programs. They
10 could refer to data files such as images or even
11 files with movies stored in them or other types of
12 video, correct?
13 MR. PLUTA: Object to form.
14 THE WITNESS: So you mean the concept of a
15 shortcut in Windows? Yes. But not that particular
16 one.
17 BY MR. HEINTZ:
18 Q. Correct.
19 A. The example is pointing to MS-DOS based
20 application.
21 Q. Right. In other words, Windows 95 gave
22 you the ability to set up a shortcut to a video file

1 if you chose to do so, correct?
2 A. In theory, yes.
3 Q. Now, Dr. Bederson also says that in
4 Windows 95 -- and again, this is in paragraph 26
5 below figure 14. Dr. Bederson says, in the last full
6 sentence of that paragraph, "For instance, Windows 95
7 included the ability to display the content of a file
8 as an image thumbnail instead of a generic icon
9 within Windows Explorer."
10 Do you see that?
11 A. I see that, yes.
12 Q. And you didn't address this in your expert
13 declaration, but do you have any reason to disagree
14 with what Dr. Bederson says?
15 A. That -- you mean, what he says in terms of
16 Windows 95 including the ability to change the
17 thumbnail? Is that basically the question?
18 Q. Correct, to put a thumbnail in place of
19 the --
20 A. Generic --
21 Q. -- generic icon.
22 A. I'm just hesitating because I don't recall

1 exactly the time frame, like when Windows allowed you
2 to do that, like replace generic with non-generic.
3 But he's saying it is and he cites -- actually, he
4 caveats it with a little footnote. It's off by
5 default. You had to do a bunch of stuff in the
6 registry to make it allowed.
7 So I'd have to investigate this for that
8 time frame. I know subsequent versions of Windows
9 that do allow this. And the question of whether it
10 was available on that 95 version, it probably did,
11 but I haven't independently verified that. But I see
12 no reason to disagree with it, although I will note
13 this doesn't -- even he says it's not something that
14 was default.
15 Q. Fair enough. So back to figure 14 in
16 paragraph 26 of Dr. Bederson's declaration, would you
17 agree with me, Dr. Balakrishnan, that if the user
18 selected and chose to delete the shortcut to MS-DOS
19 based application shown in that figure, that the
20 underlying file to which that shortcut pointed would
21 not be deleted?
22 A. I think typically that would be true. I

1 don't know exactly in that particular implementation
2 whether -- I know there was some implementations of
3 Windows at some point in time where it would ask you
4 if you wanted to keep the original file or not, and
5 it gave you the choice of saying, no, get rid of the
6 file as well as the shortcuts.
7 With that caveat, I would say I think if
8 you deleted the shortcut, typically you would not
9 delete the underlying file. But it may have given
10 you the option to do that as well.
11 Q. All right, sir. Let's go to paragraph 42
12 of your declaration again.
13 A. Forty-two. Okay. I'm there.
14 Q. Actually, let me rephrase that. Let's
15 start with paragraph 41 of your declaration that's on
16 the same page.
17 A. Yep.
18 Q. Okay. It says there that you've provided
19 a construction of a term in claims 16 and 21,
20 correct?
21 A. Yes, claim 16 and 21.
22 Q. And the term you've construed reads, "In

1 response to the selection of the first user profile,
2 the display displays a second user interface for a
3 user to select desired video information to be
4 reproduced from among the first video information,"
5 correct? That's the term you're providing a
6 construction for?
7 A. Yes, that's correct.
8 Q. And your construction of that term is, "In
9 response to the selection of the first user profile,
10 the display displays a new second user dedicated
11 screen for a user to select desired video information
12 to be reproduced from among the first video
13 information."
14 Do you see that?
15 A. I do.
16 Q. Can you explain what you mean by a new
17 second user dedicated screen in your construction?
18 A. What I mean by that is it's a second
19 screen that's different from the first screen, to
20 allow the user to do the things that it's supposed to
21 do.
22 Q. So if I understand correctly, there's a

first screen that the user is being presented on whatever device the program is running. And when the user selects a first user profile from that screen, that entire screen vanishes and it's replaced by an entirely different screen that has no content from the first screen that was displayed, correct?

MR. PLUTA: Object to form.

THE WITNESS: So I'm not sure that the entire screen vanishes. You have a description there that's something along the lines of entire screen vanishes. I'm not sure I completely agree with that, but it's certainly the new screen has to be a different screen to -- if the old screen was underneath and a little bit of it is still visible, that may still be included. My point is that the other one doesn't necessarily have to completely vanish.

BY MR. HEINTZ:

Q. Yeah. I want to understand then what you mean by a new screen, right? If the first screen from which the user display -- sorry. Let me rephrase that.

1 If the first screen that includes the
2 display of user profiles occupies one half of the
3 display that's presented to the user, okay? And then
4 the user clicks one of those first user profiles, are
5 you saying that your construction would allow a
6 second user interface screen to be displayed below
7 the first user interface screen? Or does it require
8 a new screen in which the old -- the first screen
9 from which the user profile was selected is no longer
10 visible? I'm trying to understand what you mean by a
11 new second user dedicated screen.
12 MR. PLUTA: Object to form.
13 THE WITNESS: I think it needs to be a
14 second -- let me make sure I've got that terminology
15 correct. The second -- a new second user dedicated
16 screen, in other words, a second screen that is
17 different, that is separate from the first user
18 interface.
19 So, for example, if I look at figures 6
20 and 7 that I pulled out from the patent and I cite on
21 page 15 of my declaration there, you can see the
22 second -- there's a screen labeled mother on figure 6

1 and another one labeled father on figure 7. The two
2 screens are different in that I see different data
3 and in the father screen, I don't see the mother
4 screen. However, there's some aspects of the mother
5 screen that I would say potentially remain in, for
6 example, the tab portion on the top left of figure --
7 so if you look at figure 6 in the tabbed -- well, I'm
8 calling it the tabbed portion of this -- there's --
9 what is this word -- trapezoidal boxes on the top
10 left corner.
11 In figure 6, you see two of them and then
12 the big one saying mother and then there's three of
13 them on the right, smaller trapezoids. I think
14 trapezoids are the right geometry for that. And then
15 in figure 7, when it goes to the new screen, which is
16 the father screen -- sorry, the screen labeled
17 father, there are three of those little trapezoids on
18 the left instead of two. So the one -- the third one
19 was the remnants of what is on the mother screen in
20 figure 6. So to that extent, that little bit of the
21 mother screen remains. It's not completely
22 disappearing.

1 So I don't think the construction
2 necessarily precludes having some of the earlier
3 screen remaining, but the new screen needs to be a
4 new screen and not the same screen of the original
5 one.
6 Q. Now, in your opinion, are figures 6 and 7
7 both examples of new second user dedicated screens or
8 is one the first screen from which the user profile
9 is selected and the other a new second user dedicated
10 screen?
11 A. I think they're both user -- they're both
12 new user dedicated screens. One is corresponding to
13 one user profile and the other one is corresponding
14 to another user profile.
15 Q. Okay. And so each one of those are new
16 dedicated user screens?
17 A. For -- corresponding to a particular
18 profile.
19 Q. So where is the screen from which I select
20 the user profile? So let's go to --
21 A. Do you have the patent, a copy of the
22 actual patent?

Q. I do, yes. So I'll hand the witness what's been previously marked as Exhibit 1001 which is the '815 Yoshida patent.

A. Okay.

(Exhibit No. 1001 was identified for the record.)

BY MR. HEINTZ:

Q. So let me try to put this into some context for you, Dr. Balakrishnan. Let's turn to claim 21.

A. Okay.

Q. Okay? And this is at column 13 of Exhibit 1001.

A. Column 13?

Q. Thirteen, yes, claim 21.

A. Okay.

Q. Are you with me?

A. Yes.

Q. The second limitation in the claim reads, "A display displaying a first user interface."

Do you see that?

A. Yep.

Q. And then that first user interface is for a user to select a user profile from among a plurality of user profiles. Do you see that?

A. Yes.

Q. And then later in the claim, there's a wherein limitation which is the fourth one down. This is at column 13, line 23, I think it is, "Wherein in response to the selection of the first user profile, the display displays a second user interface for a user to select desired video information to be reproduced from among the first video information."

Do you see that?

A. Yes.

Q. So what this claim seems to contemplate is there's going to be a first user interface from which a user profile will be selected, then there will be a second user interface displayed on the screen which will correspond to the user profile that was selected from the first user interface. Is that your understanding?

A. Yes. So like mother and father, for

1 example.
2 Q. Yes. And in your construction on
3 paragraph 41, you're construing the language in the
4 wherein clause that starts at line 23 of claim 1 that
5 reads, "In response to the selection of the first
6 user profile," right?
7 A. Yes.
8 Q. So the way the claim is written, I've got
9 to select a user profile and when I select a user
10 profile, in response to that selection, a new -- a
11 second user interface is going to be displayed. And
12 under your construction, that second user interface
13 has got to be a new second user dedicated screen,
14 right?
15 A. Yes.
16 Q. So what do you mean by dedicated screen?
17 Can there be any remnant of the first user interface
18 displayed on that new second user dedicated screen
19 under your construction?
20 A. So if I may use the examples in figures 6
21 and 7 to illustrate.
22 Q. Sure.

A. If you look at figure 6, for example, which is an example of a second -- get the terminology correct here -- a second user dedicated screen, the way I would draw the box is the screen that has -- how do I explain this using a pen?

Q. If you would like to mark up what's in front of you, I'll be happy to hand you a pencil or you could use your pen.

A. Sure. Maybe I'll do this.

Q. Okay.

A. (Witness drawing.) So if you see what I've done is I see -- in this box is my dedicated user screen. I would not consider this portion to be -- right? So that's for other stuff. And this one, same thing. This dedicated user screen I would consider to be this. I'm not drawing the straight line straight, but you get my point. And all of this stuff.

So if you're asking me about remnants, these could be remnants of the back. So they could be stuff at the back. And I guess what I'm not saying -- what I'm trying to be clear is the screen

is not necessarily the entire LCD display or CRT display. It's the data screen, the logical screen.

Q. Aha. Okay.

A. Does that make sense?

Q. It does. So I'm going to ask that we write Exhibit 1069 on the bottom of the page that you just annotated by pencil.

A. 1069.

(Exhibit No. 1069 was marked for identification.)

MR. HEINTZ: Thank you, sir. And Rob, we'll make a copy of this and enter this into the record.

BY MR. HEINTZ:

Q. So if I understand correctly, your construction in paragraph 41 of your declaration that talks about a new second user dedicated screen, that dedicated screen can be a part of what's shown on the display and your construction does not exclude the display of other things on that screen beyond the second user dedicated screen, is that correct?

A. So what screen there? You need to be

1 careful, I think. Maybe I'll use the word "display"
2 to mean the physical display of all the pixels on the
3 thing.
4 Q. Okay.
5 A. And the word "screen" here is a logical
6 screen, a second dedicated logical screen which may
7 not -- it could encompass the entire -- all of the
8 pixels of the display, but it may not.
9 Q. So --
10 A. Maybe another word is a window maybe.
11 Q. Okay.
12 A. Maybe. I don't want to introduce more
13 terms into this than I have to, but --
14 Q. So --
15 A. The only -- if you're looking at figure 6
16 and 7, it cannot be the entire display because of
17 those tabby things at the top, you know, that I've
18 already talked about.
19 Q. Okay. So claim 1 of the '815 patent
20 refers to both a first user interface and a second
21 user interface, correct?
22 A. Yep.

Q. And I think you've testified that portions of figures 6 and 7 of the '815 patent as reproduced on page 15 of your declaration, portions of those correspond to the second user interface, correct?

A. Yes.

Q. Do any portions of those screens correspond to the first user interface of claim 1?

A. They might. But I'm not saying -- I think it doesn't preclude some of them -- some of the background being -- if you ask me does it exactly? I don't know. It doesn't say that, but it doesn't preclude.

Q. If we're not sure if any parts of figures 6 and 7 correspond to the first user interface, can you show me where in the '815 patent there's a disclosure of the first user interface that's recited in claim 21?

A. I would say if you look at what I cite to you, which is column 6, lines 19 to 41 which is referring to figure 6, among other things, it's saying how -- figure 6, figure 7 and figure 4 and 5 -- how the user can select different screens and

that's by clicking on the different tabs at the top saying mother, father or clicking on the icons.

Like if I click 402 -- if I click 402 on figure 4, it says -- it indicates program information number 1 and play list information number 1 respectively. So that -- the tags, they -- not tags -- tabs on the top -- I think you know what I mean -- the tabs, those trapezoidal things on the top. All of the icons within the screen would be the first interface that then generates the next screen or the next tab screen, so I can switch between mother or father or go from 402 to something else.

Q. Okay. So let me try to follow along with that answer as we look back here. You talked about "if you look at what I cite." So where are you creating these citations?

A. I'm sorry. I'm looking at paragraph 42 of my report.

Q. Okay.

A. And I cite to, as an example, the patent at column 6, lines 19 to 41. And I think I excerpt that cite at the bottom as well, that paragraph.

Q. All right.

A. And that shows how you get to figures 5 and 6 by clicking on those tabs. You get a different second screen depending on which tab you picked.

Q. So are those tabs then what's referred to in the '815 patent in claim 21 as the first user interface?

A. I think that could be one instance of a first user interface. Another instance could be when I click on an icon within. Like, for example, in 402 in figure 4, it could get me to another screen, if indeed that was referencing a collection.

Q. You think clicking on 402 is going to get you to one of the screens such as figures 5, 6 or 7?

A. Maybe not 402. That's programs. Maybe if you look at the play list, like 502, for example.

Q. So if I click on icon 502 in figure 5, you think that might take me to figure 4, figure 6 and figure 7?

A. It could take me to another play list. It may not be figure 6, but it's a play list.

Q. Will it take you to somewhere where you

can select a user profile as discussed in claim 21 of the '815 for the first user interface?

A. Well, if I pick a tag that takes me to a different profile that's, say, mother, then it is selecting a different profile.

Q. And again, the tabs, you're talking about those trapezoidal elements?

A. As an example, yes.

Q. Sure. Okay. So under that construction, the first user interface is on the same physical screen as the second user interface?

A. Well, ultimately it's all on the same physical screen. We aren't talking about multiple physical displays. We're talking about one physical screen and then the virtual screens get replaced. So they're all on the same physical display, sure.

Q. And they're all on the same virtual display, too, right?

A. No, because the tabs are different. They can be different portions of a physical display.

Q. So under this interpretation, then, the support for the first user interface of claim 21 are

1 those trapezoidal tabs that are displayed in all of
2 figures 4, 5, 6 and 7?
3 A. As an example, yes.
4 Q. As an example, okay. Is there any other
5 example in the '815 patent of this first user
6 interface that's recited in claim 21?
7 A. I think as I said earlier, if you look at
8 figure 5, if I clicked on one of those icons, the
9 tabbing on the top was one example I gave. Another
10 example I'm reading is if I click on one of the
11 icons, it could take me to a different play list,
12 like a 502 play list or a 503 play list. And if I
13 look at the bottom of figure 1 which talks about the
14 management, it talks about play list unified
15 information and user-defined unified information, so
16 the play list could be for a particular user, for
17 example. That's the way I read it.
18 So if you're talking about what is the
19 first interface, it could be the tabs, it could be
20 the individual icons within a screen that is linked
21 to another user profile, for example. So I see at
22 least two ways in doing the first user interface.

1 But ultimately when I click on that, it would lead to
2 another screen, another virtual screen for that
3 particular user or for that particular user profile.
4 Q. All right. So I want to make sure I
5 understand correctly. So you talked about a play
6 list from figure 5, correct?
7 A. As an example.
8 Q. As an example. So, for instance, if I
9 click on play list 503 in figure 5, what screen will
10 be shown to the user in response to that?
11 A. It should take me to a screen that is for
12 play list number 503. And if that play list happened
13 to be a user-created play list or basically user
14 profile, that would be a user profile play list. If
15 it wasn't, then it would be some other play list.
16 Q. Is the screen that's going to be displayed
17 to the user when 503 is clicked described in the '815
18 patent anywhere?
19 A. Specifically?
20 Q. Specifically, generally, anything.
21 A. Okay. Let me just see here. What I would
22 say is in paragraph -- column 6, line 10 -- line 9,

1 the 503 is a thumbnail indicating play list
2 information number 2. 502 is a play list information
3 number 1. "In the same way as the above-described
4 case, the user moves a cursor on the screen to a
5 desired thumbnail and conducts selection and
6 determination by using a remote controller," and then
7 the user can reproduce arbitrary play lists.
8 So it's basically, by the way, displaying
9 switching from all program to all play list can be
10 implemented, for example, movement of the cursor and
11 tag character positions conducted, and my
12 understanding of that phrase is the -- are those --
13 what was I calling tabs before and the patent is
14 using the word "tag."
15 So, yes, it doesn't say 503 leads to
16 screen number X. I don't see that explicitly called
17 out in the patent. But certainly one of skill in the
18 art reading this would expect that to be what is
19 happening given the disclosure of clicking on things.
20 Q. So again, looking at column 6, starting at
21 lines 9 or 10?
22 A. Actually, starting at line 5.

1 Q. Starting at line 5. So this is the
2 description in figure 5?
3 A. Five and then flowing onto figure 6.
4 Q. So I would have thought that a person of
5 skill in the art reading that description in figure 5
6 would have understood that if I clicked on play list
7 503, what would happen is the system would start
8 reproducing whatever was on that play list, whether
9 it be an image, a song or a movie, whatever it might
10 be, that's what I would see. I didn't think I'd see
11 a screen where I'd start getting a bunch of user
12 profiles to start selecting from.
13 A. I think both interpretations are
14 reasonable by my read. What you just said absolutely
15 as well, if you clicked on it and it just goes to
16 playing 10 songs, sure.
17 Q. Or 10 movies.
18 A. Sure.
19 Q. Okay. All right. Is there anything else
20 you think in the '815 patent that discloses this
21 first user interface for a user to select a user
22 profile from among a plurality of user profiles as

1 recited in claim 21?
2 A. In terms of a figure? I don't have one
3 here. I think I've already talked about the tabs.
4 We've got that. I would leave it at that.
5 Q. And they're not just, you know, a figure,
6 but is there something in the written text of the
7 '815 patent that explains what is meant by this first
8 user interface for a user to select a user profile
9 from among a plurality of user profiles?
10 A. Well, you're asking me a general question,
11 so I'd have to go through the description again
12 because I always have those two examples in mind. I
13 wasn't looking at an exhaustive list.
14 Q. Okay.
15 A. Do you want me to spend the time going
16 through?
17 Q. Well, how about this.
18 A. I've given you two examples.
19 Q. Do you cite anything else in your expert
20 report as support?
21 A. I don't think so. That's the easiest way
22 to answer that.

Q. Okay. That was a no, nothing further?

A. I believe so, yeah. I'm not sure what the question was at this point.

Q. I was just asking you whether there was anything else that you would describe in your report as support for this, and you said no, I think.

A. I believe that's correct. And I stand corrected if there was something else in the report.

Q. All right.

A. I rely on the report as the ultimate -- I don't have it memorized.

Q. All right.

MR. HEINTZ: So I apologize to you both. I've lost track of how long we've been going. I know it's 11:43. Why don't we go off the record.

(Whereupon, at 11:43 a.m., the deposition in the above-entitled matter was recessed, to reconvene at 12:35 p.m., this same day.)

1 AFTERNOON SESSION
2 (12:35 p.m.)
3 EXAMINATION BY COUNSEL FOR PETITIONERS (RESUMED)
4 BY MR. HEINTZ:
5 Q. Welcome back, Dr. Balakrishnan. I'll ask
6 you to go to paragraph 45 of your declaration which
7 has been marked as Exhibit 2040. Just let me know
8 when you're there, sir.
9 A. Yeah, I'm there.
10 Q. So in paragraph 45, you discuss the
11 District Court litigation and the District Court's
12 construction of the term "the processor generates a
13 group of video information based on user preferences
14 determined by the user selections of the video
15 information," correct?
16 A. Yes, that is correct.
17 Q. And under the District Court's
18 construction of that term, the claimed group of video
19 information can include only video that has
20 previously been selected by a user, only video
21 information that has not previously been selected by
22 a user or a combination of the two, is that correct?

A. Well, it doesn't say combination of the two, but -- it's a longer phraseology, but that's essentially what it means.

Q. Correct. I paraphrased it. But we agree that's basically what the construction means, right?

A. Yes, I think so.

Q. And you described this limitation in paragraph 47 of your declaration as referring to generating a recommendation video list, correct?

A. Yeah, I think that's fine. Sorry. I was reading earlier on and, yeah, you're right.

Q. And just to be clear, I'm referring to the phrase "recommendation video list" that appears at the bottom of page 17 of your declaration.

A. Yes.

Q. So what is a recommendation video list as you're using that term?

A. I would say it's a list of recommended videos, to again paraphrase that. Or a list of -- you know, maybe a list of video information based on preferences of a user. It's a list of videos to be recommended based on some criteria.

Q. And which entity is making the recommendations?

A. I'm sorry, which --

Q. Which entity is making the recommendations? And please feel free to refer to the '815 patent and claim 21 or claim 24 if you like.

A. Just give me one second. I'm just going to reread what was said on the briefing as well on page 18 if you don't mind. And you said, sorry, which claims, 21?

Q. It's claim 21 and claim 24 which depends from claim 21. I think those two claims together include the limitations that might be relevant to these questions.

A. So maybe I'm not understanding the question. You said which entity. The entity -- the thing that generates is the processor, the claim term itself states a processor generates. Am I misunderstanding the question?

Q. No, sir, I don't think you are.

A. Okay.

Q. So claim 21 specifies that the

1 processor -- and let me rephrase this. Are you
2 talking about claim 24?
3 A. Well, claim 24 I believe, if I'm not
4 mistaken, is the actual claim term or contains the
5 actual claim term, yeah.
6 Q. That's right. So claim 24 says the
7 processor generates a list of video information based
8 on preferences of a user determined by a user
9 selections of thumbnails from the first or second
10 group of thumbnails, right?
11 A. That's what the claim term says, yes.
12 Q. Okay.
13 A. And the construction says -- construction
14 omits the word "processor" and says generating, et
15 cetera, et cetera, as is clear in the chart.
16 Q. I'm going to hand to Dr. Balakrishnan
17 what's been previously marked as Exhibit 1064.
18 A. Thank you.
19 (Exhibit No. 1064 was identified for
20 the record.)
21 BY MR. HEINTZ:
22 Q. And I'll represent to you, sir, Exhibit

1 1064 is the as-filed application for the parent of
2 the '815 patent.
3 And I'll ask you, sir, if you can identify
4 where in this disclosure of Exhibit 1064 there is any
5 support for a processor that creates a recommendation
6 list that includes videos that have never been
7 selected by a user.
8 MR. PLUTA: Object to form, relevance.
9 THE WITNESS: I'm going to have to go
10 through this. Is that okay?
11 BY MR. HEINTZ:
12 Q. Yes. Take as much time as you need, sir.
13 A. Okay. And you said videos that are not
14 selected by a user, correct?
15 Q. Correct.
16 A. In the second part of the construction
17 basically.
18 Q. Let's put a little bit more context on
19 this so we're both clear what we're talking about.
20 So this recommendation list as discussed in your
21 declaration, would that include something along the
22 lines that the processor notices the user, for

1 instance, watched a Star Trek movie, a Star Wars
2 movie, maybe the movie Interstellar and, based on
3 those videos that have been selected by the user, the
4 processor determines that the user might be
5 interested in watching the Martian movie and so
6 includes the Martian on a recommendations list.
7 The Martian in this example would be a
8 video that has never previously been selected by the
9 user. The processor is making a determination that
10 the user may be interested in the Martian and is
11 displaying that on the recommendations list. Is that
12 what you understand is within the scope of claim 24?
13 A. I would say given the claim construction
14 provided by the Court, I would say, yes, that would
15 be included in the scope of claim 24.
16 Q. Perfect. And so what I'm asking you to do
17 is look at the priority application for the '815
18 patent and see if there's any support anywhere in
19 that application for the functionality I just
20 described, that the processor is going to make up
21 this recommendations list which will include a video
22 that the user has never selected.

A. Okay. I think I understand your question better. Thank you for the clarification.

Q. Yes. My pleasure.

A. May I ask for the claim construction order from the District Court that I cite to here?

Q. You certainly can. Let the record reflect that I'm handing to Dr. Balakrishnan what's been previously marked as Exhibit 2033.

A. Thank you.

(Exhibit No. 2033 was identified for the record.)

BY MR. HEINZ:

Q. Sir, I believe that's the order you requested.

A. Thank you. So mapping back from the actual patent to the previous one, so paragraph 32 of Exhibit 1064, at the end of it, it says -- and actually, I cite this in my paragraph -- sorry -- yes, my paragraph 48 of my report which is referring to similar language in the patent itself. But in any case, paragraph 32 of Exhibit 1064, at the end it states, "When a plurality of users use a single

1 recorded medium, it becomes possible to manage
2 reproduced contents that meet respective users'
3 tastes by using one user-defined unified information"
4 -- I think it's a missing a word there. I think it
5 should be "for every user."
6 And the saying "meets respective user
7 tastes" indicates to me that the user could have --
8 in your example, I think you said Star Trek, Star
9 Wars and something along those lines. The content
10 could be meeting that taste, if somebody likes
11 star-type movies, and include that. So this is one
12 example in that the user may not have explicitly
13 selected a particular piece of content, but has a
14 criteria, a particular taste that could be used to
15 satisfy a selection as one example.
16 The other example in the patent is the
17 notion of user frequency. Let me find that. As an
18 example, paragraph 50 of Exhibit 1064, and this again
19 I cite the equivalent text in my report referring to
20 the patent, it talks about where the number of play
21 lists become very large or the play list that is high
22 in the user's frequency, so the frequency of use can

1 also impact the selection.
2 So I think these are examples where it
3 contemplates showing things that is not explicitly
4 selected by the user. And I'll stop there. And
5 there may be others, but I don't see it right
6 offhand.
7 Q. All right. So let's go to the first
8 passage you identified, which is I believe the last
9 sentence of paragraph 32 of Exhibit 1064, correct?
10 A. Yes. I think that's correct, yes.
11 Q. And that reads, "For example, when a
12 plurality of users use a single recording medium, it
13 becomes possible to manage reproduced contents that
14 meet respective users' tastes by using one
15 user-defined unified information." We believed the
16 word is "for every user." That's what you
17 identified, correct?
18 A. As one example, yes.
19 Q. Now, that passage refers to user-defined
20 unified information, correct?
21 A. As a criteria, yes.
22 Q. Well, it's not a criteria.

A. It's a user-defined.
Q. Let me --
A. Sorry.
Q. Let me finish my question, please. What the passage says is, "One user-defined unified information for every user."
A. That is what it says.
Q. And what is unified information? Is that what we saw in figure 1 of the '815 patent or in this application?
A. Sure, some user-defined information.
Q. Okay. So a user-defined unified information is not unified information that includes a list selected by the processor rather than the user, is it, Dr. Balakrishnan?
MR. PLUTA: Object to the form.
THE WITNESS: I'm not sure I completely understand the question. The user-defined information is a piece of data that the user might define. And the entirety of that sentence in that paragraph 32, it's talking about meeting the user's tastes, using that user-defined information.

1 And I think my point I'm trying to make is
2 if the processor meets the user's tastes using that
3 information, it does not -- and selects a bunch of
4 videos meeting that information by -- and the taste
5 of that user as defined by that information, it
6 doesn't mean the user is actually selecting the
7 particular videos that are being -- or the list of
8 videos that are being generated by the processor.
9 So I think just because a piece of
10 information about the user is being used by the
11 processor doesn't mean the user is selecting those
12 videos. And if I look at the construction,
13 construction distinguishes between video that has
14 been previously selected by the user and then video
15 that's not been selected by the user and/or the
16 combination of the two.
17 So for the case where it's not explicitly
18 selected by the user, it does not preclude the
19 processor using some user-related information to
20 generate videos that satisfy the taste of the user
21 based on some user information, but the user did not
22 select them per se. And that's the way I read this.

1 Q. So the passage refers to one user-defined
2 unified information for every user, correct?
3 A. Yep.
4 Q. So I'll ask you to turn to figure 1 of
5 Exhibit 1064.
6 A. Okay.
7 Q. Figure 1 shows a management level 1 at the
8 bottom, correct?
9 A. Yes.
10 Q. And there is a box labeled user-defined
11 unified information number 1, correct?
12 A. Yes.
13 Q. And also a user-defined unified
14 information number 2 and then an ellipses and then
15 user-defined unified information number M, correct?
16 A. Yes.
17 Q. Is it your understanding that there is one
18 user-defined unified information for every user?
19 A. Are you saying only one or --
20 Q. That's what I'm saying.
21 A. Only one.
22 Q. User-defined unified information, number

1, means the one user-defined unified information file for user 1. Similarly, in figure 1, the user-defined unified information number 2 refers to a unified information file specific for user 2. Is that your understanding of what's meant in this figure?

A. Right. Thank you. Sorry, I tried to interrupt you which is bad on my part.

No, that could be one understanding, but I think an alternative understanding is that each of those boxes, user-defined information number 1 to M could be a piece of user-defined unified information for the same user, but there's information number 1. Let's call the user A could have information number 1 and information number 2 and information number 3. User B could have information number 4 and 5. And another user C could have information number 7.

So I think both interpretations are possible given my read of this patent, at least the patent which I think mirrors pretty much this priority application.

Q. Okay. Just so our record is clear, you

1 used slightly different terminology. So do I
2 understand your answer to mean that user-defined
3 unified information number 1 and user-defined unified
4 information number 2 could be two different files
5 referring to the same single user under your
6 interpretation of the patent?
7 A. I would say it doesn't have to be a file.
8 It's a set of data that one interpretation is, yes,
9 it could be each of those, number 1 and number 2.
10 Could be two different sets of data for the same
11 user. Another interpretation is -- which I think is
12 what you were alluding to earlier, which is each one
13 of those is all the information for only one user and
14 there is no other information for that user and then
15 user-defined information number 2 would be for a
16 second user, number 3 would be for a third user. So
17 I think both interpretations are plausible.
18 Q. Okay. You also identified in your answer
19 the passage of the priority application Exhibit 1064
20 at paragraph 50, correct?
21 A. Let's make sure I got the number right.
22 Yeah. Make sure that's the place. Yes, I think

that's correct.

Q. And in paragraph 48 of your report, you're referring to the sentence in this paragraph 50 of Exhibit 1064 that reads, "In the case where the number of play lists has become very large, a play list that is high in user's use frequency can be displayed in the first place in the GUI view," correct?

A. Yes.

Q. And you think that gives support for the idea that a play list is going to have videos in it that were never selected by a user but which the processor has selected as a recommended video.

Do I understand that correctly?

A. Yes, because if the user could -- when I read this, the user has done a bunch -- or watched a bunch of stuff and it may not be something they have selected for inclusion in a list per se as per the claim term. However, because they have watched it before, even though they didn't explicitly say, put this in my watch list, by the fact that they've seen it before, the system could infer that, hey, they've

1 seen it before or clicked on it before and that
2 frequency of looking at it could impact whether it
3 automatically gets included in an automatically
4 generated list even though the user may not have
5 actually selected it per se.
6 Q. You used the pronoun "it" quite a bit,
7 including, "Even though a user may not have actually
8 selected it per se."
9 A. The video.
10 Q. The video. But this sentence is talking
11 about play lists, not individual videos, isn't that
12 right, Dr. Balakrishnan?
13 A. Sure. But it's introducing the notion of
14 use frequency as a criteria. Yes, I agree that it is
15 part of play lists. It isn't talking about it in the
16 context of play lists, but one reading the patent I
17 think would say, okay, this patent is contemplating
18 the use of use frequency as a criteria, right?
19 So I agree that this is -- explicitly just
20 reading that, it's talking about play lists, but the
21 notion -- it's introducing the notion of frequency as
22 criteria that is now known to someone reading this

1 patent.
2 Q. And this sentence isn't discussing the
3 content of any play list, but rather is discussing
4 the positioning of a play list in a user's folder or
5 GUI view, isn't that correct, Dr. Balakrishnan?
6 A. Sure. It's ordering --
7 Q. Ordering of --
8 A. -- of how quickly -- sorry. How high up
9 on the recommendation it is.
10 Q. Ordering of play lists, right?
11 A. In this particular example, sure.
12 Q. So if we go to figure 6.
13 A. Yes.
14 Q. This is the mother folder, correct?
15 A. Yes.
16 Q. And 502 is one play list in the mother
17 folder, correct?
18 A. Yes.
19 Q. So let's pretend for a minute that we had
20 a lot of play lists in the mother's folder, correct?
21 A. Sure.
22 Q. If the mother were using play list 502

1 often, if the user were selecting play list 502
2 often, doesn't this passage basically say that 502 is
3 going to appear in the upper leftmost corner of the
4 mother folder rather than somewhere down in the lower
5 right hand where maybe you can't even see it on the
6 screen?
7 MR. PLUTA: Object to form.
8 THE WITNESS: I think that's one
9 interpretation that it is -- it's bubbling up the
10 play list to the top of the list.
11 BY MR. HEINTZ:
12 Q. Right.
13 A. Sure.
14 Q. So it's the position of the play list, not
15 the content. And it's based on user selections of
16 the play list, not the processor thinking that maybe
17 that will be the play list the user wants to watch,
18 right?
19 A. No, I think the -- what I'm relying on --
20 why I cite that is because the notion of frequency as
21 a criteria has been introduced and I don't see why
22 that could not also be included as a criteria in how

1 a processor might select something for inclusion or
2 not inclusion in a list.
3 Q. And the frequency is how often the user
4 has selected that play list, right?
5 A. Sure.
6 Q. Okay.
7 A. Frequency of use, yes. But they may not
8 have selected that play list or all the content
9 within the play list for inclusion in a particular
10 recommendation list.
11 Q. Isn't the recommendation -- withdraw the
12 question.
13 Okay. Is there anywhere else in Exhibit
14 1064 where you find any support for this concept of a
15 processor making up a recommendation list that
16 includes videos that a user has never selected?
17 A. So I don't want to go beyond the scope of
18 my report, so I'm going to stick with what I've got
19 there.
20 Q. That's fine. Thank you, sir.
21 Let's go back to your declaration and look
22 at paragraph 38, if you wouldn't mind.

A. Okay.
Q. Now, in this section of your report, I notice that you did not address the District Court's construction of character, is that right?
A. I don't believe that came up. You said the word "character," right? I think it was --
Q. Yes, character.
A. I have the construction.
Q. Yes, it's Exhibit 2033. You'll have the District Court's claim construction. That's it.
A. I'm going to quickly see it again.
Q. Yeah, I'll help you.
A. Sure.
Q. You can go to page 31 and there you'll see the Court lists terms that it's construed with constructions, and character is the second.
A. Right.
Q. Okay? And I noticed in your report you talked about certain terms the Court had construed, but you never mention anything about character. I'm wondering why that was.
MR. PLUTA: Object to form. Lack of

1 relevance.
2 THE WITNESS: I don't think I saw it
3 necessary to address it based on what I was rebutting
4 of Dr. Bederson's at that time.
5 BY MR. HEINTZ:
6 Q. Character is one of the terms of claim 21,
7 correct?
8 A. Sure, yes. Of course, yeah.
9 Q. So did you use any construction of
10 character in your analysis of claim 21?
11 A. In claim 21, the word "character" came up
12 in rebutting Dr. Bederson here. Let me see where I
13 talk about claim 21. I don't recall, to be honest.
14 So I'd have to go through this whole thing to
15 figure -- unless you want to point me to a spot
16 where --
17 Q. Just give me a minute.
18 A. It's not something I remember doing either
19 way.
20 Q. So let's go to your paragraph 42.
21 Forty-two is a long paragraph, so I'm going to ask
22 you to direct your attention to page 15 of your

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1 report.
2 A. Oh, there we go.
3 Q. And do you see under figures 6 and 7, you
4 have a paragraph there and you have a sentence that
5 reads, "This new screen displays user-specific
6 information as further evidenced by the claim's
7 requirement that the second interface includes a
8 character identifying the user associated with the
9 selected user profile."
10 Do you see that?
11 A. Yes.
12 Q. So what construction, if any, of character
13 did you use in your analysis of this paragraph?
14 A. Well, I would have used the plain and
15 ordinary meaning and I think that corresponds to what
16 the Court construed as well. So I didn't give it any
17 more or less meaning to it.
18 Q. So you believe the Court's construction of
19 character on page 31 of Exhibit 2033 is the plain and
20 ordinary meaning, is that correct?
21 A. Let me just double-check if I have
22 anything else to say that corresponds to what I would

1 think is the plain and ordinary meaning. Give me a
2 minute.
3 Q. If you're looking for the Court's
4 discussion of character --
5 A. Yes.
6 Q. -- you'll find it on page 10 and 11.
7 A. Thank you. Yeah, I think I'm okay with
8 the discussion of the Court and I'm fine with it.
9 Q. So you think the Court's construction is
10 the plain and ordinary meaning, correct?
11 A. The way I would think about it, yeah. It
12 talks about a unit of information. That I think
13 captures a lot of things including --
14 Q. Okay. So I'm going to ask you to turn to
15 page 11 of Exhibit 2033.
16 A. That's the claim construction order?
17 Q. Yes, the document you have in your hands.
18 A. Okay.
19 Q. So in claim 11, you see the Court supplied
20 a construction of the limitation that reads,
21 "Receiving first video information including second
22 video information that is encrypted."

1 Do you see that?
2 A. Yes.
3 Q. And if you look, Maxell was requesting a
4 construction that was the plain and ordinary meaning.
5 A. Yes.
6 Q. Whereas Samsung requested a construction
7 which was the plain and ordinary meaning, which is
8 the second video is in encrypted form at the time it
9 is received.
10 A. Yes.
11 Q. Do you see that?
12 A. Yes.
13 Q. Now, if you turn to the back of the
14 Court's construction, again on page 31, you will see
15 that the Court's construction is "the second video
16 information is in encrypted form at the time it is
17 received."
18 Do you see that?
19 A. Yes.
20 Q. So in your expert declaration, you offered
21 an opinion that this term was supported in various
22 priority applications. Do you recall that?

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A. Yes. I'm trying to find it. I think it's in the priority date discussion. Do you want to point me to it?

Q. I'll get you there in a moment.

A. Okay.

Q. But I notice I think -- I didn't see in the claim construction section of your report, starting at paragraph 35, claim 12, I didn't see any discussion of which construction of this limitation involving encryption you applied. Can you tell me which construction you applied?

A. Well, if I didn't talk about it, I would have -- yeah, I don't believe I talk about it in the claim construction section. But I do talk about it in my priority section, so I just want to make sure --

Q. Okay.

A. So I think I apply either construction works for what's in the prior art -- sorry, not the prior art. The priority applications. So I didn't really have to pay too much attention to that because I think either way, it applies. So either the plain

1 and ordinary meaning where -- I think the main
2 argument between the two parties seems to be -- let's
3 get that -- seems to be -- do I have the right stuff
4 here?
5 Here we go. It's at the time it is
6 received, whether it's already encrypted or not
7 already encrypted, seems to be the -- if there is any
8 dispute, seems to be the dispute. And I think the
9 priority application contemplates both.
10 Q. Well, let's get back to the question.
11 Which construction did you apply in your analysis?
12 A. I think I could apply either one and it
13 would be fine.
14 Q. Okay.
15 A. That's my answer. I didn't pick one or
16 the other because I didn't have to.
17 Q. Do you understand that the Court rejected
18 Maxell's construction that allows the encryption to
19 occur after the information is received?
20 MR. PLUTA: Object to form.
21 THE WITNESS: Let me get back to that.
22 Can you remind me where that section was? I know we

1 just looked at it.
2 BY MR. HEINTZ:
3 Q. That's perfectly fine. It's on page 11
4 and it goes on to page 12. And it may be worth your
5 while to take your time to read that entire
6 discussion by the Court.
7 A. Sure. Right. It says already encrypted
8 or not. Okay. I've read it.
9 Q. Okay. So my question still stands. Which
10 construction of that term did you apply in your
11 analysis of the '815 patent's priority date that
12 starts at page 24, paragraph 63 of your declaration?
13 A. I think my answer is I could apply either
14 construction and I'd still land at the same answer,
15 that the priority application support either.
16 Q. Sure. So I understand you're telling me
17 now that you could have applied either one.
18 A. Yes.
19 Q. What I'm asking you is which one did you
20 apply when you performed your analysis in the
21 declaration?
22 A. And I think --

MR. PLUTA: Object to form.

THE WITNESS: I'm answering that it doesn't matter which one I could have applied because either one ends in the same place for this particular analysis. So I didn't have to pick or choose one, is my point.

BY MR. HEINTZ:

Q. All right. You saw, when you looked at 2033, that there had been a clear dispute between the parties about the meaning of that term, yet you chose not to address the construction in your report despite addressing other sections from the Court's claim construction. Why did you make that choice, Dr. Balakrishnan?

MR. PLUTA: Object to form.

THE WITNESS: I didn't have to make the choice because as I just testified a minute ago, when looking at this encryption issue with regards to the priority application, it did not matter. Since it didn't matter, I didn't see the need to address that dispute.

BY MR. HEINTZ:

1 Q. Well, let's see if it matters.
2 A. Sure.
3 Q. Let's go to paragraph 35 of your
4 declaration.
5 A. Thirty-five. Okay.
6 Q. I'm sorry. I got myself confused. Let's
7 go to page 24, paragraph 63.
8 A. That's where I thought it would be, yes.
9 Q. My apologies.
10 A. No worries.
11 Q. So in paragraph 63, this term that we've
12 been discussing about receiving second video
13 information that is encrypted has been labeled as
14 term 1, correct?
15 A. That's correct.
16 Q. And then in paragraph 65, you begin your
17 analysis where you purport to demonstrate where term
18 1 is disclosed in the priority application, right?
19 A. Yes. So the encryption limitation.
20 Q. And in your analysis, you're discussing
21 what are elements of figure 3 of the '815 patent,
22 right?

1 A. Yes.
2 Q. Or its priority application.
3 A. Well, the priority, but yes, figure 3.
4 Q. So to make this easy for you, I'd suggest
5 we take a look at the '815 patent, figure 3, so you
6 can have two separate sheets of paper when you go
7 through this, all right?
8 A. All right.
9 Q. So in paragraph 65, you purport to show
10 that figure 3 provides support for term 1, correct?
11 A. Yes.
12 Q. And you understand that in Exhibit 2033,
13 the Court's claim construction, the Court concluded
14 that figure 3 does not provide support for the
15 encryption limitation as construed by Samsung rather
16 than as construed by Maxell, do you not,
17 Dr. Balakrishnan?
18 A. Right. So in the Court's claim
19 construction, it states -- I'm reading from page 12
20 of Exhibit 2033. It says, "At the hearing, Maxell
21 pointed to figure 3 of the patent as support for its
22 position that the encryption could happen later."

Q. Right.

A. And the Court disagreed with that and I think fails to show, blah, blah, blah, right?

Q. The Court disagreed with it?

A. Yes. But figure 3 does say that it gets data -- anyway, I'll stop there. That answers your question, your most direct question.

Q. So you relied on figure 3 --

A. Yes.

Q. -- as purported support for term 1, correct?

A. Yes.

Q. And that's exactly the opposite of what the Court concluded, that figure 3 does not provide support for claim 1 because figure 3 only discloses encrypting the information after it's received and the Court has rejected that construction, right?

MR. PLUTA: Object to form.

THE WITNESS: The Court -- I think the Court has considered Maxell's argument. From what I'm reading in the claim construction order, Maxell pointed to figure 3 at that time to support the

1 position that the encryption could happen later. And
2 the Court said, no, it didn't agree with that and
3 said the encryption had to happen as the data is
4 received, point of receipt.
5 But I'm looking at this and I'm saying the
6 digital broadcast portion of the data coming in would
7 be receiving encrypted video information because
8 digital broadcast is known -- could be encrypted in
9 the first place as known by people in the art. And I
10 think I talk about this later on.
11 So I think the -- yes, I'm relying on
12 figure 3, but relying on it in a slightly different
13 way from the argument that Maxell was trying to make
14 to get the different construction.
15 BY MR. HEINTZ:
16 Q. Well, as I look at paragraph 65, you
17 appear to be looking at figure 3 and tracing how the
18 data is processed. And in paragraph 65, one of the
19 first things you point out is 331 is an encryption
20 circuit for encrypting recorded data, right?
21 A. Yes. So just because it encrypts data
22 within the circuitry doesn't mean the original data

1 wasn't encrypted in the first place.
2 Q. Why would the system be encrypting the
3 data again if it's already received in encrypted
4 form?
5 A. We do that all the time. My hard drive,
6 for example, is encrypted and I receive all kind of
7 data that's already encrypted that gets encrypted
8 again.
9 Q. So the presence of encryption circuit 331
10 does not provide any support for the idea that the
11 data is received in encrypted form, does it?
12 A. It's silent on that.
13 Q. It's silent.
14 A. Yes.
15 Q. It provides no more. Then why are you
16 using that to show purported support for term 1 in
17 the priority application?
18 A. Well, because it says, "During recording,
19 a signal transmitted by digital broadcast," et
20 cetera, et cetera. I'm also relying on that. And I
21 go on to talk about the broadcast is generally
22 encrypted and I go and talk about this in paragraph

68, and I keep going.

And then even Dr. Bederson -- I think I cite to testimony from Dr. Bederson. There was a -- I've got to find it, but I think he agreed in a deposition or something or maybe in his declaration that the incoming data could have been encrypted in the first place.

Q. So what, if anything, in figure 3 supports the term 1 as construed by the Court, meaning that the data must be in encrypted form when it's received?

A. I think it doesn't say it has to be, but it doesn't preclude it being encrypted when it's received. That's my point.

Q. Just doesn't say one way or another, does it?

A. I think that's fair except for the fact that it's digital broadcast data and I've shown examples of why that would have been understood to have been -- could have been encrypted data.

Q. Could have been, but not necessarily was, right?

A. That is correct.

Q. Dr. Balakrishnan, we've taken a number of breaks throughout the day including lunch breaks. At any time during any of those breaks, did you discuss any of the subject of this testimony with any other person, whether by electronic or oral or any other means?

A. No.

MR. HEINTZ: No further questions.

THE WITNESS: Okay.

MR. PLUTA: I might have some. I'm going to need a little break.

MR. HEINTZ: Okay.

(Recess.)

MR. PLUTA: I have no questions.

(Whereupon, at 1:53 p.m., the taking of the instant deposition ceased.)

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My commission expires: 7/14/2026

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Notice Date: Friday, 11. April 2025

Attention: Ravin Balakrishnan, Ph.D.

Re:Samsung Patent Appeals
Deposition of Ravin Balakrishnan, Ph.D. (4/1/2025)

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