

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

YEALINK (USA) NETWORK
TECHNOLOGY CO., LTD., AND
YEALINK NETWORK TECHNOLOGY
CO., LTD.,

Petitioner,

VS.

BARCO N.V.,

Patent Owner.

Case No.
IPR2025-00597

DEPOSITION OF KEVIN C. ALMERO, PH.D.

Santa Barbara, California

Friday, December 12, 2025

Stenographically Reported by:
JUSTYNE N. JOHNSON
RPR, CSR. No. 14301

Job No. 611499

Pages 1-71

1

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3 The Deposition of KEVIN C. ALMEROOTH, PH.D., was taken
4 on behalf of Patent Owner, at 1111 East Cabrillo
5 Boulevard, Santa Barbara, California, beginning at 9:06
6 a.m., Pacific time, on December 12, 2025, before JUSTYNE
7 JOHNSON, RPR, Certified Shorthand Reporter No. 14301.

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WITNESS

EXAMINATION

KEVIN C. ALMEROOTH, PH.D.

BY MR. ANDREWS.....7

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EXHIBITS PREVIOUSLY MARKED

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EXHIBIT 1001	United States Patent No. 11,966,346	9
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EXHIBIT 1002	Declaration of Kevin C. Almeroth, Ph.D., in support of petition for inter partes review of U.S. Patent No. 11,966,346	7
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INFORMATION TO BE SUPPLIED

20

(None)

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WITNESS INSTRUCTED NOT TO ANSWER

22

(None)

23

TRANSCRIPT REQUESTED TO BE MARKED

24

25

(None)

1 Santa Barbara, California

2 December 12, 2025 | 9:06 a.m.

3

4 THE STENOGRAPHER: Good morning. We are going on
5 the record at 9:06 a.m., on Friday, December 12, 2025, in
6 the matter of Yealink (USA) Technology Co., Ltd., et al.,
7 v. Barco N.V., Case Number IPR2025-00597. Today's
8 deposition is taking place at 1111 East Cabrillo Boulevard
9 in Santa Barbara, California.

10 My name is Justyne Johnson. I'm a California
11 certified shorthand reporter representing the firm Planet
12 Depos, and my certification number is 14301. The deponent
13 is Kevin C. Almeroth, Ph.D.

14 Counsel, can you please introduce yourselves.

15 MR. ANDREWS: Yes. This is Joshua Andrews for
16 patent owner Barco, and I'm joined today by Erik
17 Halverson.

18 MR. GREENLEAF: Kevin Greenleaf for Yealink,
19 Petitioner.

20 THE STENOGRAPHER: Dr. Almeroth, can you raise
21 your right hand, please?

22 ///

23 ///

24 ///

25 ///

1 KEVIN C. ALMEROOTH, PH.D.,
2 having first been sworn by the Certified Shorthand
3 Reporter, was examined and testified as follows:

4 THE WITNESS: Yes, ma'am, I do.

5 THE STENOGRAPHER: Go ahead, Counsel.

6

7 EXAMINATION

8 BY MR. ANDREWS:

9 Q Good morning.

10 A Good morning.

11 Q So I know -- I understand you're been deposed a
12 couple of times by my colleague, Erik Halverson.

13 A Yes, sir.

14 Q So the ground rules are going to be largely the
15 same. But by and large, I will try not to talk over you
16 when I'm asking any questions. And to the extent you want
17 to review any of the documents that we're going to be
18 talking about today, I've got copies to my left, and I'm
19 more than happy to pass them over. And I'll also pass
20 them over as I see them relevant as we're going through.

21 So first I'm going to pass you what's already
22 marked as Exhibit 1002.

23 A Thank you.

24 MR. GREENLEAF: Thank you.

25 ///

1 BY MR. ANDREWS:

2 Q Do you recognize this document?

3 A I do.

4 Q What is it?

5 A It is my declaration in the '597 IPR.

6 Q Great. And what patent does this IPR relate to?

7 A 11,966,346 colloquially known as the '346 patent.

8 Q And before we kind of dive in, is there anything
9 in this declaration that you'd like to change or address
10 before we get into the details?

11 A In reviewing it over the last couple of days, I
12 found a couple of typos. I don't specifically recall what
13 they were, but I didn't see anything as I was reading that
14 could be characterized as an incorrect explanation of my
15 opinion.

16 Q Okay. And when was the last time you reviewed
17 the declaration?

18 A This morning. Yesterday.

19 Q Great. And so I understand my colleague's gone
20 over your technical experience in the past. Is there
21 anything new that you'd like to bring to our attention as
22 relating to this matter at this time, or is it safe to say
23 we can rely on the previous discussion so we don't delve
24 into them here?

25 A I don't think there's anything new to add.

1 Q Great. And kind of in the same vein, there's a
2 lot of exhibits here that we've talked about in the past
3 related to other proceedings between these companies. To
4 avoid going over well-traveled ground, to the extent
5 possible, do you have anything relating to your opinions
6 today that wouldn't mean the opinions previously should
7 not be referred to?

8 A Not that I can think of. And considering past
9 testimony, I believe it would all be consistent with
10 opinions that are contained in this declaration.

11 Q Great. And I'm also -- I also understand you
12 have electronic versions on your laptop; correct?

13 A I do.

14 Q Yeah. And so to the extent you would prefer to
15 refer to the electronic versions instead of the hard copy
16 versions, that is perfectly all right.

17 So I'm going to hand you now a hard copy version
18 of Exhibit 1001 in this proceeding.

19 Okay. Do you recognize this document?

20 A I do.

21 Q What is it?

22 A It's the '346 patent, the patent at issue in this
23 IPR.

24 Q And so if I can direct you to paragraph 62 of
25 your declaration.

1 A Okay. I'm there.

2 Q So in paragraph 62, you provide a brief summary
3 of what is covered in this patent; correct?

4 A I believe this is really just the patent on the
5 purported invention.

6 Q Mm-hmm.

7 A And it's one paragraph.

8 Q Right. Yeah. So I understand it will be pretty
9 simplified.

10 And so you refer to this system as "directed to
11 connecting devices in a communication network and using a
12 device to host a unified communications" call, like other
13 systems; correct?

14 A I think that's generally correct. It seems like
15 you were paraphrasing the second sentence. I think the
16 second sentence is part of what I've said.

17 Q Okay. And so what does that mean generally, like
18 "hosting a unified communications call"?

19 A Right. So there isn't a lot of description of
20 what that means. And so I think in portions of the
21 report, I've gone through and pointed to what the patent
22 says about what that means and the fact that it points to
23 Skype as an example.

24 Q Mm-hmm.

25 A And so once you broaden it out to -- or at least

1 use Skype as an example, then it's all of the kind of
2 basic characteristics of what a Skype communication would
3 be --

4 Q Mm-hmm.

5 A -- which even in the timeframe that it's
6 referenced here, there were things like screensharing and
7 audio and video communication among multiple participants
8 connected over a network, which would potentially include
9 local and remote participants, including things -- like I
10 mentioned screensharing but also interfacing with other
11 kinds of external devices, like speakers or headphones or
12 microphones or things like that.

13 Q Great. And when we're talking about the unified
14 communications protocol, in the context of the '346
15 patent, what -- what's the unified communications protocol
16 hosted on?

17 A To my recollection...

18 Q And to the extent it's helpful to narrow the
19 field a little bit, I'm speaking more specifically about,
20 like, the claims of the '346 patent and, you know, some of
21 the kind of different limitations involved there.

22 A Well, all right. Starting with Claim 1, there's
23 the long wherein clause -- actually, it's even in the
24 processing device clause, so let me just sort of read
25 that. "Processing device having a memory, a second

1 display device, an operating system, a third-party
2 software for a Unified Communication call" and then it
3 goes on from there.

4 So it's the processing device that would have the
5 unified communication call third-party software.

6 Q Great. And what is a processing device?

7 A I don't think I've tried to come up with a
8 specific definition. There are certainly examples in the
9 '346 patent about what processing devices could be. I
10 think I've largely used as an example -- a PC as an
11 example of what a processing device would be.

12 Q Mm-hmm.

13 A But I don't recall that the '346 -- certainly in
14 the claim doesn't limit it to a particular type of device
15 or it just identifies requirements in the claim itself.
16 And then the specification identifies a variety of
17 possibilities -- non-limiting possibilities.

18 Q Mm-hmm. And another limitation in the claim is a
19 base unit. Do you have just a general idea of what a base
20 unit would be?

21 A Again, there are examples in the specification of
22 what a base unit can be. The -- the claims pretty much
23 describe the requirements of a base unit.

24 Q Mm-hmm.

25 A So at least from a perspective of, say, Claim 1

1 of the '346, it describes what's required. And then
2 either in form, factor, or functionality, again, as long
3 as it meets the requirements of, say, the base unit as set
4 forth in Claim 1, it can have other characteristics to it.

5 Q Mm-hmm. And so what is your understanding of the
6 requirements of the base unit based on Claim 1, for
7 example?

8 A Okay. Let's see. Under the assumption that the
9 preamble is limiting, that would have the following
10 requirement. If it's not limiting, then it wouldn't be
11 present based on the preamble but might be in later
12 elements of the claim. You need to be part of the system.

13 There has to be a functional device connected to
14 or in a base unit. The base unit has to have a
15 transmitter. The base unit has to be connected to or in
16 the functional device, which as the second element
17 modestly overlaps with the preamble. The base unit has to
18 be capable of interacting with the processing device.

19 It also says it has to be "configured to have the
20 processing device interact directly with the base unit
21 over a wireless connection." So the base unit would be
22 part of that requirement, the base unit via the
23 transmitters configured to transmit data over the wireless
24 connection to the processing device.

25 Those seem to be the references to the base unit

1 in Claim 1.

2 Q Mm-hmm.

3 A I think I've got them all, but I'd have to look
4 through the claim to make sure that I didn't miss
5 something.

6 Q Yeah. I understand.

7 And so just a little while ago, you mentioned
8 that the processing device interacts directly with the
9 base unit over a wireless communication now -- or wireless
10 connection; right?

11 A Yes.

12 Q And if you --

13 A I see -- well, I was referencing the language in
14 the claim.

15 Q Yeah.

16 A But I see the language you're referencing.

17 Q Yep.

18 And so what does that mean? And more
19 specifically, I'm looking for kind of your understanding
20 of what "directly" means in this context.

21 A I don't recall that I've given any sort of
22 specific definition for "directly." My recollection is
23 where I've addressed it is really the idea of the
24 interaction between the processing device and the base
25 unit over that wireless connection. It says in the

1 "wherein the base unit" it describes some of the
2 requirements of what that wireless connection has to be
3 used for.

4 Q Mm-hmm.

5 A And then it also gets into the "wherein the
6 client software" element also talks about the kind of
7 communication that has to take place between the base unit
8 and the processing device.

9 And so there's sort of a proposed construction
10 for the presentation of the functional device to the
11 operating system of the processing device as a virtual
12 functional device. I think what -- the use of that term
13 in the claim also helps describe what the direct
14 interaction is between the base unit and the processing
15 device.

16 Q Right. So a moment ago, you referenced the
17 offered claim constructions. So it's my understanding
18 that you're applying these claim constructions in this
19 proceeding; right?

20 A I am generally. I believe there is also a
21 paragraph that says that these constructions -- or my
22 opinions would be the same -- at least the conclusions
23 under any reasonable interpretation of what those terms
24 could mean.

25 Q Right.

1 A And I can find it, if you want.

2 Q I think that's okay.

3 A Okay.

4 Q So when you have not identified a specific claim
5 construction, you generally applied the plain and ordinary
6 meaning of a term; right?

7 A Close. Plain and ordinary meaning of the term as
8 understood by a person of skill in the art as of the date
9 of the patent --

10 Q Right.

11 A -- or the invention.

12 Q And so as of the date -- the priority date of the
13 patent, what would the plain and ordinary meaning as
14 understood by a person of skill in the art be for the
15 limitation for "directly"?

16 A Again, I don't think I've come up with some sort
17 of plain and ordinary meaning and identified it in the
18 declaration. I think I've understood that term in the
19 context of the claim to mean what's required by the claim.
20 And given the requirements of the claim and how -- and the
21 use of that term in the claim, it's what I then apply to
22 see whether or not the prior art met it. I didn't have a
23 specific plain and ordinary meaning in --

24 Q Mm-hmm.

25 A -- mind.

1 Q So if a device were to interact indirectly, what
2 would that mean?

3 A That is an interesting hypothetical. The claim
4 term of -- sorry. The claim doesn't use the term
5 "indirectly," and so I don't know that I've given much
6 thought to the antithesis of what would be, for example,
7 outside of the scope of the claim and what "indirectly"
8 would mean in that context. So I would have to give that
9 some thought. I'm not sure what the patent would envision
10 as a scenario that would be indirect and not direct.

11 Q So when you -- did you drive here today?

12 A I did.

13 Q And so when you drove here, did you arrive
14 directly from where you stayed last night or did you take
15 a stop in between?

16 A Depends on how you would define "directly" in
17 that scenario.

18 Q Mm-hmm. And what do you mean by that?

19 A Well, so it's unclear to me what rubric or rules
20 or definition you would want me to apply for "directly."
21 Actually, this morning, I drove from my house, dropped off
22 my son to go to school, stopped and got gas. And so it's
23 unclear to me in the hypothe- -- well, for the reality but
24 applying the term "directly" whether or not those
25 activities would be within scope of how you're using that

1 term in the question.

2 Q So would you say stopping for coffee would mean
3 you drove directly here?

4 A It depends on your definition of "directly." I
5 mean, that term is used in the claims to talk about
6 interactions between the processing device and the base
7 unit. I'm not sure how to apply even the definition or
8 the understanding a person of skill in the art would have
9 as to what "directly" is to a real-world scenario like a
10 coffee shop and whether or not that would --

11 Q Mm-hmm?

12 A -- constitute an indirect route of travel or
13 direct route of travel.

14 Q Mm-hmm. And so based on the definition you used
15 in your declaration to apply the prior art to the claim
16 language, would you think of that as being directly?

17 A Well, my sense of how a person of skill in the
18 art would understand that term is that it would generally
19 be inclusive of the kinds of embodiments that are
20 described within the '346 patent. And so, you know, there
21 are examples of communication that happens. There's
22 figures that talk about what that communication could be,
23 descriptions of elements within the network that exist
24 between the base station and the processing device.

25 It would seem that a person of skill in the art

1 would understand that having that kind of network
2 infrastructure where -- that supports the communication
3 between the base station and the processing device would
4 be allowed in a network and still allow the network or the
5 communication to be characterized as being direct.

6 And so when I looked at the prior art, I looked
7 at whether or not the prior art had those kinds of similar
8 devices in their network between a base station -- or what
9 I believe a person of skill in the art would identify as a
10 base unit and then what I think a person of skill in the
11 art would identify as a processing device.

12 Q So you referenced elements within the network
13 between a base station and the processing device. What
14 elements are you thinking of there? Like, in -- you
15 don't -- it doesn't need to be exhaustive but, you know, a
16 couple of examples would be helpful.

17 A Sure. So examples I could think of would be
18 routers, switches, relays, gateways, firewalls, repeaters,
19 you know, basic networking elements that provide for the
20 flow of data. Access points is another example.

21 Q Mm-hmm. You also referenced embodiments of the
22 '346 patent. So just from your understanding, what do you
23 understand to be an embodiment in a patent generally, not
24 necessarily limited to the '346?

25 A My recollection is that there's generally

1 different ways of describing how to implement technology,
2 some of which will ultimately exist within claims. Some
3 cases, embodiments are meant to be additive to each other
4 in the sense of -- it will describe additional embodiments
5 that describe additional ways in which things can be
6 implemented in the context of a previous embodiment. So
7 maybe an embodiment would be something like an example.

8 Q Another element described in the '346 patent,
9 such as Claim 1, is a functional device. Do you know what
10 a functional device is?

11 A I believe there's a proposed construction for it
12 in the declaration. It's about page 48, so I think the
13 answer would be yes.

14 Q And so in this definition, you -- it says "A
15 second peripheral device connected in some way to a base
16 unit"; correct?

17 A I see that.

18 Q What is a peripheral device?

19 A Peripheral device, to my recollection, when I've
20 seen that term before in the context of Barco's patents,
21 usually it refers to something like a dongle. I think
22 that perennial example is kind of a USB device having
23 different components and characteristics that's connected
24 to the processing device. That's typically where the USB
25 happens. And then it's got either processing or storage

1 or software or other capabilities and then often a
2 wireless transceiver.

3 Q Mm-hmm. So you see here I have a wireless mouse
4 connected to my computer (indicating)?

5 A Yes.

6 Q Would -- do you generally think a wireless mouse
7 is an example of a peripheral device?

8 A So in describing for you what a peripheral device
9 was, it was largely based on what I had recalled. Depends
10 on the claim and what the requirements of the peripheral
11 device specifically are.

12 Q Mm-hmm.

13 A Let's see. Looking at Claim 1... I don't see
14 that it talks about a peripheral device. So I'm not sure
15 what set of requirements you ultimately want me to apply
16 in assessing whether or not your wireless mouse is a
17 peripheral device or not.

18 Q Yeah. And so the functional devices in
19 paragraph 83, I see -- and this is of your declaration --
20 I see that you note some of the ones referenced in claims.
21 So, for example, "a data capturing device, a microphone, a
22 speakerphone, a speaker, another display, a touchscreen, a
23 projector, a camera and video camera, and a webcam";
24 correct?

25 A I see that.

1 Q And so these are examples of a functional device;
2 right?

3 A They are.

4 Q And so in Claim 1, I see a first display device;
5 correct?

6 A Yes.

7 Q And then in the next limitation, "at least one
8 functional device connected to or in the base unit";
9 correct?

10 A I see that.

11 Q Could the functional device be the first display
12 or would it have to be a separate element?

13 A Just looking at the claim, it would seem like a
14 display could be a functional device. In fact, 83 says
15 another display -- sorry, my paragraph 83 --

16 Q Mm-hmm.

17 A -- says "another display," in quoting from
18 Claim 7. It would seem like, though, under basic claim
19 principles that you couldn't point to a first display
20 needing both a first display and the one -- at least one
21 functional device that if you are going to have to meet
22 the claim, you would need a display and at least one
23 functional device, which could be a second display.

24 Sitting here now, it doesn't seem like you could
25 meet the first two elements with just a single display.

1 But I'd have to give some more thought to the
2 hypothetical, ultimately. But that seems like it would be
3 right.

4 Q Mm-hmm.

5 Great. And so another element is client
6 software -- "a client software"; correct?

7 A I see that.

8 Q Yeah. And so I think it's first mentioned, I
9 think, line 14 of column 26. Lead -- leads into 15.

10 A Okay.

11 Q Right?

12 A I see that.

13 Q Yeah. And the following limitation is one
14 executed on the pros -- or, I guess, the paragraphs get a
15 little bit complicated, but "wherein [sic] executed on the
16 processing device is configured to have the processing
17 device interact directly with the base unit"?

18 A Okay. I think I'm following where you're
19 reading.

20 Q Yeah. And so "when executed on the processing
21 device," is that referring to the client software or some
22 other elements?

23 A Could you repeat the question?

24 Q Yeah. That's probably a good idea.

25 So for the "when executed on the processing

1 device" to perform the function which is to have the
2 processing device interact directly with the base unit, is
3 it the client software being executed that provides that
4 function?

5 A It seems to be referring to the collection of
6 elements there. So something has to be executed on the
7 processing device, and it's configured to have the
8 processing device interact directly with the base unit
9 over a wireless connection. To affect that functionality,
10 you would need the client software and the driver to be
11 executing and then that would be executing in the context
12 of the third-party software that would be supporting the
13 unified communication call.

14 And sorry. One last -- and even in the context
15 of supporting the functionality of having the processing
16 device interact directly with the base unit over a
17 wireless connection, the operating system would also have
18 to be executed or would have to be executing in order for
19 that functionality to happen or even for that
20 functionality to be configured to happen.

21 Q And so for the collection of elements that are,
22 quote, "executed," unquote, on the processing device,
23 you've identified the third-party software, the operating
24 system, a driver, and a client software; right?

25 A That's what I've identified would typically be

1 executing. Ultimately, with respect to whether or not all
2 of those need to be executed in order to meet the element
3 of the claim, that, I think, I would ultimately have to
4 give some thought to.

5 Q Mm-hmm.

6 A But I could envision in a typical scenario,
7 especially as contemplated by the prior art, where there
8 would be aspects of the operating system that were
9 executing whatever the meeting software was, whether it
10 was Skype or not, would be executing, the driver would be
11 running and then additional client software under the
12 umbrella of those things. And then additional software
13 all would be executing to support the configured-to aspect
14 of the remainder of the claim.

15 Q Can an operating system be configured to have the
16 processing device interact directly with the base unit
17 over a wireless connection?

18 A It's a bit of a vague question. If you're asking
19 a hypothetical as to whether or not it by itself would be
20 sufficient to meet the requirements of the claim, that
21 would seem to be the less likely scenario as compared to
22 the use of additional software to facilitate or perform
23 that functionality. But certainly aspects of the
24 operating system would be involved.

25 I mean, in some cases, I think Windows, as an

1 example of an operating system, ships with Skype or other
2 software to do unified communications. I wouldn't
3 consider it to be part of the operating system. But
4 depending on how you drew the box, the answer might be yes
5 or no.

6 Q Mm-hmm.

7 Can a second display device be executed on the
8 processor?

9 MR. GREENLEAF: Objection. Vague.

10 THE WITNESS: I'm not sure what that refers to.

11 BY MR. ANDREWS:

12 Q Right. So this limitation, which spans from
13 26:12, to 26:17, includes a list of different elements
14 relating to the processing device; correct?

15 A Not sure I'd characterize it that way, but I
16 certainly see the element you're referring to.

17 Q Right. And so the limitation reads, "The
18 processing device having a memory, a second display device
19 and operating system, a third-party software for a unified
20 communication call, a driver and a client software";
21 correct?

22 A That's what it says. I think you read it
23 correctly.

24 Q And then it states "when executed on the
25 processing device"?

1 A I see that.

2 Q And so I'm just trying to understand, with
3 respect to the "when executed" aspect, what elements you
4 view as being executed on the processing device to perform
5 the then function recited later in the limitation, which
6 I'm happy to read if there's any confusion there.

7 A I'm not sure if your question is asking about
8 what the scope of the claim is or what I've identified in
9 the context of the prior art. I can certainly I -- go
10 through the declaration that specifically addresses what
11 I've identified in the context of the prior art for the
12 two base grounds. And there, I would have identified
13 aspects of what meets each of the items in the list. My
14 recollection is generally all of the things on the list
15 that could be executed would be executing to support the
16 configured functionality as it's identified in the
17 element.

18 If you're asking more generically about the claim
19 language and its requirements, I don't recall taking a
20 specific position as to what the metes and bounds of what
21 the claim would require would be or are. I think I've
22 more looked at whether or not the prior art describes or
23 teaches something that would be within scope of that
24 element.

25 Q Mm-hmm.

1 So if a processing device executed a third-party
2 software to interact directly with the base unit over a
3 wireless connection, would that fall within the scope of
4 the claim limitation? So -- and I'll clarify further that
5 it's the unified -- or the third-party software and not a
6 client software.

7 A I understand the hypothetical. But I think the
8 short answer is I would have to give it some thought. I
9 think the prior art discloses specific functionality and
10 what's operating. Posing a hypothetical that sounds like
11 it's different than what I mapped in the grounds of the
12 declaration is something I'd have to give some thought to.

13 Q Okay.

14 All right. So I'm going to hand you something --
15 well, I won't even force you at all. I'm handing you
16 Exhibit 1005 in this proceeding. I think we've
17 colloquially been referring to this as Beel?

18 A Yes, sir.

19 Q And you rely on Beel in this proceeding; correct?

20 A I do.

21 Q It's referenced with respect to your first
22 ground; correct?

23 A It is.

24 Q Was -- did you review the prosecution history of
25 the '346 patent in preparing your declaration?

1 A I believe I did.

2 Q And was Beel referenced during prosecution of the
3 '346 patent?

4 A I don't recall if it was or not.

5 Q Do you still have the '346 patent handy?

6 A I do have it handy.

7 Q So if you flip to page 2, you see it's number 56
8 but "references cited."

9 A I see that.

10 Q Do you see if Beel is one of those references
11 listed?

12 A It does look like it's referenced.

13 Q And you see next to its reference, there's a
14 little asterisk; right?

15 A Yes.

16 Q And do you see where else that asterisk shows up
17 on the -- on this page?

18 A I do.

19 Q What does it say at the -- where it's -- the
20 asterisk shows up on the bottom right-hand side?

21 A "As cited by examiner."

22 Q So do you have an understanding of what that
23 means generally?

24 A Generally it means the reference was cited by the
25 examiner.

1 Q During the prosecution of the patent?

2 A It would have been during the prosecution.

3 Q Okay. And so can you turn to paragraph 101 of
4 your declaration? The page number for that is page 60.

5 A I'm there.

6 Q Can you just review that paragraph and let me
7 know once you finished?

8 A Okay.

9 Q And so you identify that "like the '346 patent,
10 Beel discloses systems and methods for wirelessly
11 transmitting media content between an electronic device,
12 or multiple devices, and one or more" --

13 MR. HALVERSON: Slow down.

14 BY MR. ANDREWS:

15 Q -- "display devices, specifically, by using
16 peripheral devices connected to the electronic devices and
17 a base node"; correct?

18 A That's most of the first sentence.

19 Q Yeah. And so what does that mean?

20 A I'm not sure if you're asking about the "like the
21 '346 patent" or the description that follows.

22 Q So I'll clarify. With respect -- what is the
23 "using peripheral devices" here with respect to Beel?

24 A So Beel talks about peripheral devices.

25 Q Mm-hmm.

1 A And, again, I think colloquially we've been
2 calling them dongles.

3 Q Mm-hmm.

4 A And so he talks about those as a way of
5 connecting electronic devices like processing devices to a
6 base node --

7 Q Mm-hmm.

8 A -- or to a display directly.

9 Q And it's your opinion that that is like the '346
10 patent; correct?

11 A You've taken a portion out of the sentence and
12 asked if that is like the '346 patent. The sentence is
13 actually that they are similar across the characterization
14 of the full first sentence. I don't recall if the '346
15 patent uses the term "peripheral device." It seems like
16 in the '346 patent -- actually, let me just look because
17 the figure on the face of the patent has a label 130. And
18 my recollection is... a peripheral device. So the
19 specification of the '346 patent certainly mentions
20 peripheral devices.

21 Q And is that peripheral device -- you noted
22 number 130 in the title figure, which I believe is also
23 figure 5. So is that peripheral device referenced in, for
24 example, Claim 1?

25 A When I looked earlier, I didn't see it referenced

1 specifically.

2 Q Mm-hmm.

3 A But if you want, I can do a word search just to
4 confirm.

5 Q That's okay.

6 And earlier, you referenced embodiments; correct?
7 That word is -- that's used by patent attorneys; right?

8 A It is. I recall you asking questions about
9 embodiments.

10 Q Yeah.

11 A And patent attorneys do use the word.

12 Q So scanning through Beel, does Beel refer to
13 different embodiments?

14 A I suspect it does. Actually, I know it does.

15 Q And do you rely on any particular embodiments in
16 your declaration? Any particular embodiments of Beel,
17 that is.

18 A I think it's a pretty straightforward matching
19 exercise between the citations that I've identified in
20 Beel and whether or not they fall under particular
21 portions of the specification that are identified as
22 different embodiments. I did take particular care to make
23 sure that the way that Beel described those embodiments is
24 something that could be used to reference the same kind of
25 system.

1 So just picking one, the eighth embodiment just
2 described a scenario where you have multiple base nodes.
3 So you could envision a system of Beel where you either
4 have multiple base nodes or you don't, and so the system,
5 if it had multiple base nodes, would also include the
6 additional information of eighth embodiment.

7 It's not my recollection that any of the
8 embodiments that provide headings over the sections I've
9 referenced in my declaration suggest that the aspects of
10 the embodiments are exclusive of each other.

11 Q And so to paraphrase, it is not your opinion that
12 any of the embodiments of Beel are incompatible with one
13 another?

14 A No. That's not what I just described.

15 Q And so some of the embodiments in Beel refer to a
16 peripheral device or sometimes a -- I think they call it a
17 connection unit; correct?

18 A I don't recall. If you want to point me to --

19 Q Yeah.

20 A -- I can confirm. Otherwise, it's just -- the
21 reference can speak for itself.

22 Actually, I see paragraph 195. It says, "The
23 connection unit is a physical device in the form of an
24 external peripheral device (shown in the drawings as a
25 dongle)." So it seems like there is a fairly close

1 relationship between those terms.

2 Q Mm-hmm.

3 So in paragraph 195, it refers to a plug-and-play
4 interface such as a USB interface; right?

5 A I'm getting there. One sec.

6 Q Mm-hmm.

7 A Sorry. 195?

8 Q Yeah. In -- sorry. And that's in Beel, not in
9 your declaration.

10 A Ah.

11 Q Yeah. You had just referenced 195 for Beel.

12 A Oh, sorry.

13 Q No worries.

14 A Oh. Okay. Yep.

15 Q Mm-hmm.

16 A I'm back there.

17 And sorry. What was your question?

18 Q So on paragraph 195, it talks about "the
19 connection unit is a physical device" and it says -- down
20 the page, it says, in this same paragraph, "it is a
21 plug-and-play interface such as a USB interface."

22 A I see that.

23 Q So what is a plug-and-play interface?

24 A Typically, a plug-and-play interface is one where
25 you have what this paragraph calls an external peripheral

1 device or a dongle that you can plug into a USB port and,
2 in short order, be able to use that device.

3 Q And so on page 14 of Beel -- so in -- looking
4 specifically at paragraph 247.

5 A I'm there.

6 Q What does the last second -- or the last sentence
7 of paragraph 247 say?

8 A "In this case, no plug-and-play port such as a
9 USB port is required on the client operating device."

10 Q Okay. And so could a connection unit be
11 connected to the client operating device if there's no USB
12 port?

13 A So your question asks "could it." It's unclear
14 if your question is could it and still be consistent with
15 the disclosures of Beel? Could it and still be operable?
16 Could it -- I'm not sure what the "could it" is supposed
17 to be asking --

18 Q Mm-hmm.

19 A -- about.

20 Q That's okay. We can move on.

21 So returning back to your declaration --

22 A Okay.

23 Q -- paragraphs 115 to 119 provide -- there -- it's
24 just your "rationale to combine" section.

25 A Yes.

1 Q And at... and so in paragraph 119, you refer to
2 USB protocols.

3 A Yes.

4 Q And so what are USB protocols?

5 A USB protocols would include protocols that rely
6 on or are part of what are required to provide the
7 functionality identified within the USB standard.

8 Q And what does "USB" stand for?

9 A Universal serial bus.

10 Q Okay. What is a bus generally in the context of
11 USB, not schools?

12 A In the context of USB, I don't remember what the
13 standard says, if anything, about why it uses that term as
14 opposed to some other term. I mean, generally, in a
15 computer sense of a bus allows different components or
16 devices within a computer to be connected and to
17 communicate over each other -- with each other.

18 Q Mm-hmm. Okay. And a bus, is that normally like
19 a hardware component, a software component, or something
20 kind of in between? Meaning using both.

21 A It's unclear from your question whether it's
22 referring to how USB uses the term "bus" or whether or not
23 you've broadened the scope of the way that the term "bus"
24 is used within computing.

25 Q Mm-hmm. So how about in just the broad context

1 of computing?

2 A Sitting here now, typically a bus would refer to
3 hardware.

4 Q And so that --

5 (Simultaneous cross talk.)

6 THE WITNESS: Sorry.

7 BY MR. ANDREWS:

8 Q Oh, go on.

9 A But it really depends on the context whether or
10 not there's some implication that software is also part of
11 what's necessary to make a bus operate.

12 Q Mm-hmm. And so is that any different than in the
13 context of USB?

14 A At that level of specificity, yeah, I think I'd
15 have to take a look at the USB standard to see what it
16 says. I mean, USB is a standard generally, I believe has
17 hardware requirements as well as at least functional
18 requirements that typically would be implemented within
19 software. But it depends on what aspect of USB you're
20 asking about, whether or not it would be hardware,
21 software, or a combination of the two, either in terms of
22 how it would be implemented or how it's conceptualized
23 within the standard.

24 Q So generally speaking, USB relies on hardware
25 that's then their functionalities realized by software

1 oftentimes?

2 (Stenographer clarification.)

3 THE WITNESS: Your question's a little vague when
4 you say "USB." I think my last answer is probably a more
5 accurate articulation in my mind in the sense that, again,
6 there are aspects of the USB standard that are hardware.
7 There's likely some aspects of USB that would principally
8 be implemented in software, would run on hardware, but I
9 don't recall the USB standard limiting those functions to
10 be performed in software.

11 So maybe you could create a hardware-only version
12 of at least some aspects of the USB standard, potentially
13 the whole thing depending on what someone is trying to do.

14 BY MR. ANDREWS:

15 Q And so in this section of your declaration,
16 you're opining on the rationale to combine "Beel in view
17 of Dinka in view of applicant-admitted prior art and
18 optionally in view of Christison."

19 I'm just reading the headline on page 67 for full
20 disclosure.

21 A I appreciate that that's the title. My
22 recollection is that that's the ground.

23 Q Mm-hmm. And I understand you also provide a
24 similar combination in the '972 IPR proceeding?

25 A I'm not sure what that --

1 Q The '972 patent, more specifically, which is
2 another one of Barco's patents. And I understand there's
3 a lot of numbers, so this might be a little bit confusing.

4 A Sorry. For the '972 patent?

5 Q Yes. So if helpful, I can share the declaration
6 you offered in the '972 patent?

7 A Sure. Oh, the -- okay. I know which one you're
8 talking about.

9 Q Okay. Would you still like to see the
10 declaration?

11 A Sure.

12 MR. GREENLEAF: Does anybody need a break?

13 MR. ANDREWS: We're good.

14 THE STENOGRAPHER: (Nodded head in the
15 affirmative.)

16 MR. GREENLEAF: Justyne is nodding.

17 MR. ANDREWS: Hmm?

18 MR. GREENLEAF: Justyne is nodding.

19 MR. ANDREWS: Perfect. We can do a quick break.

20 THE STENOGRAPHER: Off the record at 10:12 a.m.

21 (Off the record.)

22 THE STENOGRAPHER: Back on the record at
23 10:25 a.m.

24 BY MR. ANDREWS:

25 Q Great. So can you flip back to the claims of the

1 '346 patent?

2 A I am there.

3 Q And so we've been over this morning, but feel
4 free to review, if you would like. Claim 1 does not
5 recite a peripheral device; correct?

6 A The recollection of what I remember is -- let me
7 start over. My recollection from earlier is that when I
8 looked through it, I did not see the term "peripheral
9 device" as an explicit requirement of Claim 1.

10 Q And can you just confirm right now that you still
11 don't see that requirement?

12 A Oh, all right. I'm going to pull up the patent
13 and search for it 'cause there's enough words that who
14 knows if I... just pulling up a clean version of the '346
15 patent. "Peripheral." Doesn't look like it's in Claim 1.

16 Q Great. And is it in Claim 2?

17 A I do not see it in Claim 2. And doesn't look
18 like it's in any claim actually. At least not in the
19 words [sic] "peripheral" and assuming my OCR is correct.

20 Q And that was also for Claims 11 to 22?

21 A Yes.

22 Q And returning back to Claim 1, we discussed
23 earlier this morning the limitation that says "the
24 processing device interact directly with the base unit."

25 A I see that.

1 Q Does a processing device interacting via a
2 peripheral device to the base unit fall within the scope
3 of this limitation?

4 A I don't see any reason why it wouldn't. Having a
5 peripheral device in the path, especially given the
6 functionality of a peripheral device, including the fact
7 that it would have the wireless transceiver, would
8 certainly be something that could be in the path and still
9 meet the requirements of being directly.

10 And I don't see anything in the claim or in the
11 specification that would suggest explicitly or implicitly
12 that having a peripheral device, like a dongle, being in
13 the path would render the path not being direct. In fact,
14 I think there's some disclosure where that dongle could be
15 integrated into the processing device. So in examples
16 like that, it would be an example where it's direct for
17 additional reasons as well.

18 Q In your declaration, can you move to paragraph
19 140? That's on page 80.

20 A I am there.

21 Q On -- in paragraph 140, you have block text that
22 refers to an audio-out device. Do you see that?

23 A I see the block text.

24 Q What is an audio-out device?

25 A Typically, it's a device that can receive audio

1 and output it. It can output it so that it can be heard
2 aurally. I suspect it could also output it to a device
3 that could output it aurally. So, for example, it could
4 be a speaker or it could be to a combination processor,
5 speaker so that it could decode digital audio and be able
6 to play it. Those are at least two examples that come to
7 mind.

8 Q How does an audio-out device compare to an
9 audio-in device?

10 A Well, I wouldn't necessarily say that they are
11 mutually exclusive since you can have things that both
12 receive an output audio. But as an example, a microphone
13 might be an audio-in device. A tablet that can receive
14 audio or has a microphone in it could be characterized as
15 an audio-in device.

16 I mean, basically -- again, something that can
17 receive audio and deliver it, you could think of classes
18 of devices where it's the thing that senses signals in the
19 air and what we would hear, like a microphone, or could
20 potentially be some sort of device that sources audio to
21 other devices. And so it's the source of the audio, the
22 input of the audio.

23 And, again, you could have devices that do both
24 audio in and audio out.

25 Q Would a speakerphone be an example of an audio-in

1 and audio-out device?

2 A Typically, I think it would be as long as the
3 speakerphone includes some sort of audio in. I suppose
4 just a speakerphone could just be an output device. But,
5 typically, most speaker phones have audio input as well.

6 Q On page 85 -- well, can you turn to page 85 and
7 more specifically paragraph 148.

8 A I'm there.

9 Q Claim 3 recites a simulated video camera;
10 correct?

11 A It does.

12 Q And in paragraph 148, you identify pre-installed
13 generic drivers?

14 A That's part of what I identified.

15 Q Do you recall what pre-installed generic drivers
16 are often used to communicate to cameras?

17 A Your timeframe isn't specific. When you say
18 "often used," it depends on the situation. A variety of
19 drivers can be used. USB is a good example. There's
20 other drivers that can be used for data communication,
21 especially when you're trying to simulate a video camera
22 to the operating system.

23 So it wouldn't necessarily, as the claim
24 indicates, have to be a real video camera, but could be
25 simulated such that you could draw data from a file and

1 simulate it as coming out from a video camera. And so the
2 idea -- 148 is -- of the client software that's referenced
3 here includes pre-installed generic drivers that can be
4 used for a variety of functions.

5 And I think actually in the last deposition, we
6 talked about different classes of devices that could be
7 supported via pre-installed USB drivers.

8 Q And a video camera is an example of a device that
9 can be supported by pre-installed generic USB drivers?

10 A Yes. Not only video cameras, lots of different
11 kinds of devices, even simulated video cameras.

12 Q So in answering that question, you distinguish
13 between video cameras and simulated video cameras. What
14 does that distinction mean to you?

15 A I'm not sure that I distinguished between them or
16 offered an opinion that they can't be overlapping in some
17 respect. But I can think of examples of where you have
18 sort of a real video camera and a video camera that would
19 appear to the operating system like a video camera and
20 that creates some flexibility in what the actual source of
21 the video is.

22 Q And when you say "like a real video camera," do
23 you mean that the real video camera's not actually
24 appearing to the device?

25 A I understand you're asking about a previous

1 answer. But in providing more context to that answer,
2 it's unclear whether you're asking about a scenario that
3 would be sufficient to meet Claim 3 or what's possible
4 generically speaking and outside of any limitation of
5 Claim 3.

6 Q So I'm going to hand you Exhibit 1006 in this
7 proceeding. Do you recognize Exhibit 1006?

8 A I do.

9 Q What is it?

10 A It's the '498 patent generally referred to as
11 Dinka.

12 Q And looking just on the first page of Dinka,
13 there is the abstract, which references a media appliance.
14 Do you have an understanding of what that media appliance
15 is?

16 A Generally speaking.

17 Q Is it a television set?

18 A I don't think it's limited to a television set.
19 In fact, there's disclosures in the specification that
20 identify television sets as an example but also personal
21 computers as an example as well.

22 Q Do you know where that example is in the
23 specification of Dinka?

24 A Sure. Figure 1 and then the references to
25 devices like 103 and then there's a device 102. And so in

1 column 5, when it talks about the detailed description of
2 the preferred embodiment, it starts in at figure 1. And
3 it shows that you can have connected to the network a
4 plurality of computer terminals 102, a plurality of
5 television sets 103. And those are consistent with what's
6 shown in the figure.

7 I'm sorry. That's around column 5 around line 42
8 is where the description of figure 1 starts. And beyond
9 103, there's also discussions of what a computer terminal
10 102 could be in column 6 about line 7.

11 Q And I'm now handing you Exhibit 1011.

12 Do you recognize this exhibit?

13 A I do.

14 Q What is it?

15 A It's -- Christison is the way it's generally
16 referenced. It's patent 7,761,627.

17 Q And do you see on the first page of Christison,
18 there's a diagram?

19 A Yes.

20 Q And a bigger version of that diagram is depicted
21 on figure 4, which is page 6. Do you see that?

22 A I do.

23 Q And figure 4 identifies a host number 400. Do
24 you know what the host is?

25 A Generally, the term "host" is one that's used in

1 the USB spec. I'd have to check Christison to see what it
2 says about host 400. But my recollection is it is
3 something along those lines. It's described -- if you
4 were to search through the document, the reference to 400
5 shows up quite a few times.

6 Q And what is -- I see the figure also has HWA 410.
7 Do you know what "HWA 410" is?

8 A Host wire adapter.

9 Q Would an example of a host be a computer?

10 A Your question seems somewhat incomplete. It
11 seems like you're asking me if an example of what could be
12 the host be a computer, and it would be sufficient to at
13 least support the capabilities of what would be
14 characterized as the device in figure 4. It -- the
15 question almost seems to be getting at the question of
16 what would -- what could be used to implement the host and
17 probably the other components as shown in figure 4.

18 Generically speaking, "computer" is a pretty
19 broad term, but I could envision a computer as being
20 something you could use to implement some or most of the
21 functionality or all of the functionality in figure 4.

22 Q Would a "laptop" be a better term?

23 A It still doesn't identify the particular context.
24 But I don't see a reason why a laptop isn't something that
25 could be used until the context of Christison's invention

1 and disclosures.

2 Q And --

3 A I -- oh, sorry. I don't recall what it
4 specifically said about the types of devices that would be
5 sufficient to meet the requirements. I could either look
6 or just defer to what Christison says.

7 Q That's okay.

8 And the host, is that wirelessly or wired --
9 scratch that.

10 Is the host connected through a wire to the HWA,
11 which is labeled as 410? And looking at column 3, at the
12 paragraph starting on page -- or on line 58 might be
13 helpful.

14 A Yeah. And I see that. And it's part of what we
15 had been talking about earlier. It says that "figure 4
16 shows a system incorporating Device Wire Adapters and a
17 Host Wire Adapter to provide wireless USB functionality to
18 legacy wired USB devices."

19 Certainly it says that. I don't know that the
20 teachings of Christison would be limited to that
21 particular configuration of components or the use of a
22 wired connection.

23 I thought somewhere above that it had suggested
24 that it could also be done wirelessly. I think that's the
25 paragraph that starts around line 48 of column 3.

1 Q I'm going to pass you Exhibit 1007.

2 Do you recognize this exhibit?

3 A I do.

4 Q What is it?

5 A It's the patent application from the lead
6 inventor, Van De Laar, and it's one of the references used
7 in the second ground.

8 Q I'm also going to grab you the Exhibit 1008 just
9 so you have it handy. Here.

10 I gave you two. Apologies. Thanks.

11 And do you recognize this exhibit?

12 A Yes. This is Kaplan -- the patent application
13 generally referred to as Kaplan in this IPR and the
14 declaration.

15 Q And looking at Kaplan, Kaplan includes a hardware
16 transmitter or peripheral used to communicate wirelessly;
17 correct?

18 A It sounds like you're referencing, like, 120,
19 which is shown as a wireless transmitter in figure 1 but
20 also shows up in figure 2. If that's what you're
21 referring to, then that's something that I see in Kaplan.

22 Q And so on page 62 of your declaration, at
23 paragraph 106 -- let you turn to there.

24 A Okay.

25 All right. I've got it.

1 Q Oh, great. Sorry. What page is that?

2 A 62, 106 -- paragraph 106.

3 Q Here, the declaration refers to Kaplan as having
4 capabilities to wirelessly connect to a display device via
5 a USB transmitter 120?

6 A I see that.

7 Q And so that's the same transmitter you just
8 referred to; correct?

9 A It is the same transmitter.

10 Q And so the host processing device communicates
11 over the USB protocol to the transmitter; correct?

12 A Could you repeat the question?

13 Q The host processing device or the laptop used in
14 Kaplan as an example would communicate to the USB
15 transmitter using a driver?

16 A There -- whatever the processing device is --
17 it's 220 in Kaplan -- would communicate basically through
18 the transmitter. But given that it's a USB transmitter,
19 there would be a driver involved in communicating through
20 that transmitter.

21 Q And because it's a USB transmitter, it would use
22 USB-based drivers?

23 A The question is a little bit vague, but it would
24 almost certainly use drivers for a USB device. Or -- and
25 that's a bit of an equally vague statement. There are

1 different drivers that could be used, pre-installed
2 generic drivers, to communicate via that transmitter
3 depending on how the system was configured. I think
4 Kaplan has some disclosures of some options, and then, in
5 part, there's also the ability to use other aspects from
6 Christison.

7 Q So in the context of a wireless system, for
8 example, a Bluetooth peripheral device, would that
9 communicate using the same drivers or different drivers?

10 A Depends on how it was implemented. I could
11 envision a person of skill in the art, given some fairly
12 high-level guidance, like what you suggested in your
13 hypothetical, could use the same kinds of drivers or could
14 use different drivers, depending on how the system was
15 implemented and what specific functionality was desired.

16 You mentioned Bluetooth. That -- the Bluetooth
17 aspect would be a protocol that would be used for the
18 communications network. Whether that were Bluetooth or
19 Wi-Fi, it could use different drivers -- or sorry, it
20 could use the same drivers. Or, again, depending on the
21 way the system was implemented, it could mount the USB
22 device using different device drivers.

23 Q So Bluetooth communications and Wi-Fi
24 communications could be achieved through using the same
25 drivers?

1 A In a general sense, yes. There isn't really any
2 restriction on the type of drivers that would be used for
3 Bluetooth versus wireless. So I could envision a scenario
4 where Bluetooth and Wi-Fi are both supported and they both
5 use the same driver. I could also envision a system where
6 different transmission protocols could use different
7 drivers, different applications across the different data
8 link layer protocols could use different drivers. They
9 could use the same drivers.

10 It's within the knowledge of a person of skill in
11 the art to apply the USB standard and the different
12 categories or classes of device types and use
13 corresponding drivers depending on the needs of the
14 application, the needs of the media, the type of network
15 and the advantages and disadvantages of any of those
16 decisions would be something that would be known to a
17 person of skill in the art in large part because the USB
18 standard is fairly widely known, and its details would
19 have been known by a person of skill in the art, which is
20 also, in part, why I added Christison as an optional,
21 additional reference.

22 Q So in that last answer, you referenced the needs
23 of the media might impact what type of driver --

24 A Yes.

25 Q -- you would use.

1 What do you mean by that?

2 A Well, at one level, data being transmitted across
3 the network at least to the network treats it as ones and
4 zeros and then encoded in whatever transmission media for
5 delivery. But at another level, audio can be treated
6 differently, say, at the transport or application layers.

7 Same thing for video. Different drivers can be
8 used for different media types, and then there's
9 corresponding functionality that would be specific to
10 audio and video, at least as you get -- when you get into
11 the transport and application layers. And some of this
12 comes full circle to requirements in the claim language
13 around simulations and translations and requirements of
14 the claim that are addressed in the declaration...

15 And is also consistent with past testimony where
16 the datalink or physical or network layers where I said
17 that data is data across the network. But when you get
18 into the transport and application layers, it's handled
19 specifically as to the type of data that it is.

20 Q So why don't we put Kaplan aside, and we'll -- I
21 handed you Van De Laar --

22 A Yes.

23 Q -- just a minute ago.

24 So Van De Laar refers to the term "dockee" or
25 "dockee device"; right?

1 A Yes.

2 Q Had you heard that term before reading
3 Van De Laar?

4 A It was not unfamiliar to me.

5 Q Hm. In what context had you heard of the word
6 "dockee" before?

7 A I don't specifically recall the context.

8 Q What is a "dockee"?

9 A I'm going to do a quick search through Van De
10 Laar to figure out the first time it uses "dockee."
11 'Cause to my recollection, it's -- it gave a pretty decent
12 example. Let me move beyond the abstract.

13 So in the background of the invention, column 1,
14 at paragraph 6, about four lines down, it says, "The
15 wireless docking station may be a wireless docking host
16 that enables a mobile device (called dockee) to access to
17 a set of peripherals locally attached through a wire or
18 wirelessly connected to the host device." And then it has
19 some examples in parentheses, and then it says, "through a
20 set of message exchange protocols over a wireless link."

21 So generally, the dockee are, as examples, mobile
22 devices, but generally, they're the types of devices that
23 can be connected to a wireless docking host. And then the
24 specification goes on to describe additional sort of
25 hardware aspects of the dockee's functional

1 characteristics, requirements, or at least capabilities;
2 and then in the context of Van De Laar how those dockees
3 can be connected to the wireless docking host, and then
4 ultimately together as a system what functionality those
5 dockees can have in the overall system.

6 There's also the concept of primary and secondary
7 dockee devices. And I think in the declaration, it points
8 to primary dockees as -- give me one second.

9 Paragraph 227 of the declaration.

10 And this is citing to paragraphs in Van De Laar,
11 but it talks about "primary dockee devices will have
12 direct access to the peripheral functions offered by the
13 WDH." And then... secondary dockees are devices that can
14 view data from a peripheral device. And I think in the
15 context of Van De Laar, when it talks about these devices,
16 they can be operating as primary dockees, secondary
17 dockees, or both together.

18 Q And -- so circling back to what a dockee is, just
19 generally in the context of Van De Laar, a dockee is a
20 mobile device with some type of wireless transmitter, be
21 it Wi-Fi or Bluetooth?

22 A My recollection was, yes, to the wireless.

23 Q Hm.

24 A My recollection was also that examples were Wi-Fi
25 and Bluetooth but not limited to those two. In terms of

1 them being characterized as mobile devices, that might
2 have been the case. But I don't know that they would be
3 limited to mobile devices under some specific definition
4 of a mobile device. In other words, I don't see a reason
5 why a dockee couldn't be a PC, for example, or something
6 that's not truly mobile but could still interface with a
7 wireless docking host.

8 MR. ANDREWS: Do we want to take another, like,
9 ten-minute break?

10 MR. GREENLEAF: Sure.

11 MR. ANDREWS: That good?

12 THE WITNESS: Yeah.

13 THE STENOGRAPHER: Off the record at 11:13 a.m.

14 (Off the record.)

15 THE STENOGRAPHER: Back on the record at
16 11:19 a.m.

17 BY MR. ANDREWS:

18 Q So just before the break, you mentioned a primary
19 dockee and a secondary dockee.

20 A Yes. Something the board was quite interested
21 in.

22 Q Are there any differences between a primary
23 dockee and a secondary dockee?

24 A There are slight differences in what they are
25 performing in a given instance. But in terms of the role

1 that they would have in the combination, they can be both
2 at the same time.

3 Q So what is the slight differences in the way they
4 can perform in a given instance?

5 A So the way that I would think of it is,
6 especially in the context of a combination like Van De
7 Laar and Kaplan, is where you have some sort of group
8 meeting. And the primary dockees would be responsible for
9 controlling one of the per -- functional devices and then
10 potentially receiving data from other conference
11 participants acting as -- also as a primary dockee and a
12 secondary dockee.

13 So if we were in a video conference and using
14 something like Skype and each of us had a video camera and
15 a microphone that was on, we would be primary dockees for
16 our two local devices, like a video camera and a
17 microphone, and then secondary because we would be
18 receiving video and audio from other participants in the
19 group meeting.

20 And so each of the participants or at least their
21 processing devices would be acting as a primary dockee for
22 some sources and a secondary dockee for other sources.

23 Q And so in your view, they can be -- scratch that.

24 A primary dockee can be -- apologies.

25 Starting over, the -- a dockee device can be both

1 a primary dockee and a secondary dockee at the same time?

2 A In the context of the combination, I think that
3 they would be. And so it's with respect to what
4 functional devices they would be controlling. So you
5 could have a device -- a processing device that is
6 controlling functional devices. And so it would -- that
7 device would be a primary dockee for those functional
8 devices and a secondary dockee for other functional
9 devices in the system.

10 Q And can you identify what paragraphs of your
11 declaration describe this?

12 A I can try. But in part, I'm providing that
13 response to your question and in the context of my
14 understanding as to what the patent owner said in its
15 preliminary response and what the board said in its
16 institution decision. But I think that opinion as I've
17 just described is consistent with how I set forth the
18 analysis in the declaration. I guess, ultimately, it will
19 depend on what the patent owner says in their response and
20 how I can address that in the reply.

21 But if we start -- let me see. Actually, before
22 I say much more and just ramble while I'm looking, give me
23 a second to look, and then I'll try to point you to some
24 specific paragraphs.

25 And I'm going to pull up the declaration and go

1 to the beginning of the ground to just search for
2 "dockee."

3 Dockee's mentioned even in the beginning in its
4 discussion of Van De Laar generally. I think the
5 structure of the declaration, as you get into the analysis
6 of the element-by-element here, talks generally about
7 dockees and that happens starting at about paragraph 189
8 on page 102 of the declaration. It talks about what
9 dockees are, and it doesn't limit a dockee to being a
10 primary or a secondary. It's more a description of what a
11 dockee does regardless of whether or not some aspect of it
12 is taking a primary or a secondary role. And so 189 is
13 talking about dockees generally.

14 196 does the same thing in the first part and
15 then it talks about aspects of a secondary dockee towards
16 the end of page 106, again paragraph 196, and talks about
17 functionality that's specific to a secondary dockee in its
18 role of being able to receive content. But as I
19 described, I don't believe dockees generally are limited
20 to either primary or secondary.

21 So I think that the basis for the opinion is
22 probably scattered in a few different paragraphs where it
23 references what dockees are, but understanding what the
24 PTAB said in its institution decision, that's in part the
25 basis for responding to the questions as you've asked

1 them.

2 Q And is there any specific disclosure in
3 Van De Laar of a dockee being a primary dockee and a
4 secondary dockee at the same time?

5 A I will have to look. I don't recall that being
6 an issue that I needed to address in the context of this
7 declaration. Understanding that it may now become an
8 issue, it's something I would probably go and look for.
9 But I haven't done it yet, and I don't have a particular
10 cite in mind that I could point you to at this point. I
11 would still have to go and look.

12 Q And --

13 A Actually, hold on. Let me...

14 Paragraph 169 is potentially useful in
15 understanding that even under the assumption that primary
16 and secondary dockees are different functional units that
17 they could be combined together and would not deviate from
18 the scope of what the embodiments were intended to
19 disclose or what the invention was intended to disclose.

20 But I'd have to look. I mean, that's -- one
21 place where it usually shows up is in the last few
22 paragraphs before the claims, but there might be something
23 more specific that would be responsive to your question.

24 Q And so what is your understanding of the phrase
25 "functional units"?

1 A If you're asking about in the context of 169,
2 functional units generally are some sort of logical
3 conceptualization of functionality. It's a fairly broad
4 term, and so it really just means you could have different
5 functions and that those could be encompassed within
6 different physical units, for example.

7 So as an example, I think Van De Laar's generally
8 describing functionality and attributed those to
9 particular terms, like a dockee or a WDH, but then
10 recognizing that functionality can be either broken down
11 or combined and still stay within the spirit of the
12 invention in the disclosures.

13 Q Now, Van De Laar mentions Skype; correct?

14 A I believe it does.

15 Q I'm seeing Skype mentioned at paragraph 128 of
16 Van De Laar.

17 A I see it too.

18 Q Do you see any other instances of Skype being
19 referenced in Van De Laar? And feel free to use your
20 computer.

21 A And I assume the question is perform a search for
22 Van De Laar --

23 Q Yeah.

24 A -- in Van De Laar for the term "Skype" and report
25 the results to you.

1 Q Yeah. You can do it by hand. It just might not
2 be as fun.

3 A It appears to show up one time -- at least the
4 word "Skype."

5 Q And to your knowledge, are there any other
6 equivalent applications referred to in Van De Laar?

7 A I don't recall specifically whether or not it
8 does. The other examples in 128 are either services or
9 protocols or something more generic. It does reference
10 "or other streaming mechanism," so that could certainly
11 identify other applications at the time.

12 The paragraph 119 mentions "AirPlay," mentions
13 "mirror cast," mentions "media streaming." AirPlay is a
14 specific application, so is Miracast, how they can also be
15 referred to as services. So it seems like there should be
16 other portions of the specification that mention
17 applications as well.

18 Q Okay. And returning back to paragraph 128, what
19 devices are communicating between each other with Skype?

20 A I would say that they are generally dockees, and
21 they can include both primary dockee functionality in the
22 sense that the primary dockees are providing output to the
23 WDH or could be secondary dockees if they are receiving
24 output from the WDH. And in the context of Skype, a
25 dockee could be both a primary and secondary

1 simultaneously.

2 In fact, the expectation would be in many or most
3 Skype scenarios, each of the devices running Skype would
4 be both a primary and secondary dockee at the same time.

5 Q And so what language in paragraph 128 do you
6 recognize as identifying dockee-to-dockee communication
7 over Skype?

8 A Narrowing the scope of the analysis to 128 alone
9 is a fairly artificial assumption to make. But in the
10 context of 128 alone, it at least talks about primary
11 dockees as the source of a variety of different types of
12 media.

13 One of the examples here is of audio. But
14 obviously in the context of the protocols identified here,
15 it would also include things like screensharing and video.
16 It's described as going to the WDH when it says, "the WDH
17 may enable primary dockees to provide output to the WDH
18 and/or its audio peripherals through an audio stream
19 between the dockee and the WDH."

20 So this really implies or references,
21 specifically, communication from a primary dockee to a
22 WDH. The example of the sync for material sent to the WDH
23 is devices within a room that people in the room can hear,
24 especially in the context of audio peripheral. So it
25 would be things like speakers for audio or a display for

1 video, but in part recognizing that Skype can have
2 multiple participants in it and which they can all source
3 their own varied streams of content.

4 It would make sense where you could have Skype
5 with remote participants and also used in a conference
6 setting so where one of the participants is not, say, a
7 single person at their computer, but Skype in a room so
8 that the output would be on, say, speakers or via a
9 projector screen as opposed to just speakers on a laptop
10 or through headphones to an individual or video through a
11 display.

12 My recollection is I relied on other paragraphs
13 from Van De Laar to support the idea that the scenario
14 contemplated in paragraph 128 was only part of the full
15 disclosure of Van De Laar.

16 Q Can you identify any of those other paragraphs
17 you cite to with respect to the Skype communication in Van
18 De Laar?

19 A Sure. My recollection is it's generally talking
20 about citations to secondary dockees and the idea that
21 secondary dockees can also be synced for content and the
22 idea that on a dockee generally is something that a person
23 of skill in the art would recognize that you could run
24 Skype on.

25 And so that comes in paragraphs like in the

1 rationale to combine sections where it discloses paragraph
2 183 that talks about data sources and data syncs and then
3 in 184 -- or, sorry, 183 links that to Skype in terms of
4 using Skype for unified conferencing call.

5 In part, that really relies on a person of skill
6 in the art's understanding of what Skype is since Van De
7 Laar references Skype specifically. This ultimately comes
8 full circle with Kaplan in terms of what the processing
9 devices are in Kaplan as they would be integrated into a
10 combination of Kaplan and Van De Laar.

11 So let me see what else is in these paragraphs as
12 I look through them. 184 would be relevant.

13 And, gosh, when you get into paragraphs starting
14 at 188 where it starts talking about the disclosures of
15 Van De Laar and Kaplan, both in terms of the architecture
16 and then what the capabilities of those devices would be,
17 particularly in the context of some sort of meeting or
18 electronic meeting or group communication or
19 collaboration. That's really what a lot of the rest of
20 the declaration is for Claim 1.

21 Q And so when you reference paragraph 184 and 188,
22 is that paragraphs of your declaration or paragraphs of
23 Van De Laar?

24 A Declaration.

25 Q And so is there any specific paragraphs in Van De

1 Laar you can identify relating to this?

2 A Sorry to -- what's the "this"?

3 Q Yeah. Relating to the Skype communications
4 between dockees that we've been discussing.

5 A Hm. Yeah. So, I mean, it's going to be the set
6 of paragraphs that set forth what the functionality of a
7 dockee is. The role of Skype within Van De Laar is really
8 as a recognized mechanism to provide both the underlying
9 communication protocols, the call set-up protocols, the
10 software and its ability to control virtual, functional
11 devices, and provide that content in both directions,
12 outputting it to a display, taking it as input from a
13 microphone, output to a speaker, input from a camera.

14 And so Skype is really just the platform to
15 enable that. I think the way Van De Laar is set up is it
16 describes the platform and its mechanics as one available
17 piece of software that can provide the kind of
18 functionality -- or support the kind of functionality
19 that's described in Van De Laar.

20 But beyond that, in terms of the architecture of
21 having the dockees connect through the WDH is really what
22 Van De Laar is focused on. So it doesn't link them up
23 specifically or explicitly as it walks through what the
24 components of Van De Laar are, but it links them by saying
25 within the context of this architecture, Skype can be used

1 to perform the various functions of how media is
2 generated, how it's encoded, decoded, encrypted, and then
3 transferred to other dockees or other recipients in the
4 system.

5 So I don't see a paragraph that specifically
6 references Skype explicitly, but it is describing
7 conceptually what the components are, what their functions
8 are, and then you would use a platform like Skype to -- as
9 an example and in the real world of what you would use to
10 implement those functions or support those functions.

11 Q Now, Van De Laar also refers to something called
12 "mirror cast"; correct?

13 A It does.

14 Q What is "mirror cast"?

15 A So it comes in different flavors, but generally
16 what mirror cast would allow someone to do is to take data
17 on the screen or the display or what was intended for the
18 display and to package it up as a video feed and provide
19 it to one or more recipients.

20 The mechanics of how devices would coordinate and
21 synchronize and requested responses for how multiple
22 devices would coordinate so that one device could see the
23 screen of another would be part of the mirror cast either
24 as it's defined in a particular application or more
25 generally in terms of a protocol.

1 Q Is mirror cast a communication protocol or a
2 software application?

3 A It can be both, and it is both in some instances.
4 So you could call it an application, and the application
5 would include the prot- -- would include a protocol. I
6 don't recall if there's some standard for mirror cast
7 that's published as a protocol specification, or it could
8 just be the protocol itself independent of an application
9 that could be built on the protocol to use the protocol to
10 accomplish what the protocol was at least intended to
11 accomplish.

12 So, for example, in paragraph 119, it refers to
13 mirror cast as a protocol. But some of the items in the
14 list also have associated applications with them. Like,
15 AirPlay is another good example. It identifies it as a
16 protocol, but I think "Air Play" is also the name of an
17 application.

18 Q So would it be fair to say that it's a protocol
19 that's sometimes packaged as an application?

20 A Close. I think it's -- there are elements of it
21 that you could call a protocol, and there are instances
22 where applications have been given the same name as the
23 protocol.

24 Q And do those applications -- well, are those
25 applications designed to serve the same function as the

1 wireless communication protocol?

2 A Not necessarily. In some cases, it's apples to
3 oranges. The protocol is really just the rules for
4 communication. The application wouldn't -- would be an
5 instantiation of those rules as well as, say, user
6 interface, for example. So you could envision
7 incorporating things like mirror cast or AirPlay as
8 protocols to be used in an application like, say, Skype.
9 Or they could be their own separate applications or they
10 could be separate applications that could be linked to a
11 platform or a software like Skype.

12 So I could envision in something like Skype where
13 I wanted to do screensharing and it could use mirror cast
14 or it could use some other protocol or it could spawn an
15 application that implements mirror cast. In other words,
16 the functional blocks as well as how they're specifically
17 implemented are fairly modular in the sense that you have
18 the underlying communication protocol and mechanisms, and
19 then you have the mechanisms for the software applications
20 that would provide an interface to the user.

21 And so using the underlying protocols to
22 accomplish the goals of the protocol or what it was
23 designed for in the context of one or more applications is
24 something that would have been well understood to a person
25 of skill in the art at the time of the '346 patent.

1 MR. ANDREWS: Great. Thanks. Nothing more.
2 That will be all.

3 THE WITNESS: Thank you.

4 MR. GREENLEAF: No questions.

5 THE STENOGRAPHER: Off the record at 11:51 a.m.

6 (Time noted 11:51 a.m.)

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CERTIFICATE OF REPORTER

I, JUSTYNE N. JOHNSON, do hereby certify that the witness in the foregoing deposition was by me duly affirmed to tell the truth, the whole truth, and nothing but the truth in the within-entitled cause; that said deposition was taken at the time and place therein stated; that the testimony of said witness was reported by me and was thereafter transcribed under my direction and supervision; that the foregoing is a full, complete and true record of said testimony; that the witness was given an opportunity to read and, if necessary, correct said deposition and to subscribe the same.

I further certify that I am not of counsel or attorney for any of the parties in the foregoing deposition and caption named, or in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 12th day of December, 2025.

Justyne Johnson

JUSTYNE N. JOHNSON, CSR NO. 14301

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