

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,

v.

BARCO NV,
Patent Owner.

IPR2025-00598
Patent 11,966,347 B2

Before MEREDITH C. PETRAVICK, DAVID C. McKONE,
and FREDERICK C. LANEY, *Administrative Patent Judges*.

McKONE, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Yealink (USA) Network Technology Co., Ltd., and Yealink Network Technology Co., Ltd. (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–31 of U.S. Patent No. 11,966,347 B2 (Ex. 1001, “the ’347 patent”). Barco, N.V. (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 10, “Prelim. Resp.”). The Board instituted an *inter partes* review of the challenged claims pursuant to 35 U.S.C. § 314. Paper 12 (“Inst. Dec.”).

After institution, Patent Owner filed a Patent Owner Response (Paper 20, “PO Resp.”),¹ Petitioner filed a Reply (Paper 27, “Reply”), and Patent Owner filed a Sur-reply (Paper 35, “Sur-reply”).² The parties then presented oral arguments via a joint hearing with IPR2025-00597 (July 9, 2026), and the Board entered public and confidential transcripts into the record (Papers 43 (“Tr.”) and 42 (“Conf. Tr.”)).

For the reasons set forth in this Final Written Decision pursuant to 35 U.S.C. § 318(a), we determine that Petitioner has not demonstrated, by a preponderance of the evidence, that claims 1–31 are unpatentable.

II. BACKGROUND

A. Related Proceedings

The parties identify IPR2024-01436 (involving US 10,762,002), IPR2024-01437 (involving US 11,403,237), IPR2024-01438 (involving US 11,258,676), IPR2024-01439 (involving US 11,422,951), IPR2025-

¹ A redacted, public version of the Patent Owner Response is available at Paper 19.

² A redacted, public version of the Sur-reply is available at Paper 34.

00491 (involving US 10,684,972), and IPR2025-00597 (involving US 11,966,346) as related to this proceeding. Pet. 2; Paper 6, 1–2; Paper 28, 2. Patent Owner states that the '347 patent is not presently asserted in any matter. Paper 6, 1. However, Petitioner contends that the '347 patent is at issue in *Barco, Inc. v. Yealink (USA) Network Technology Co., Ltd.*, 2:2023-cv-521 (E.D. Tex.). Paper 28, 2.

B. The '347 Patent

The '347 patent relates to making functional devices available to participants of a meeting. Ex. 1001, 1:15–17. A functional device is a peripheral device connected to a base unit. *Id.* at 9:15–16. A functional device can be “a better camera that gives a wide . . . room view, a better microphone and better speakers.” *Id.* at 13:27–32. Figure 5 is reproduced below:

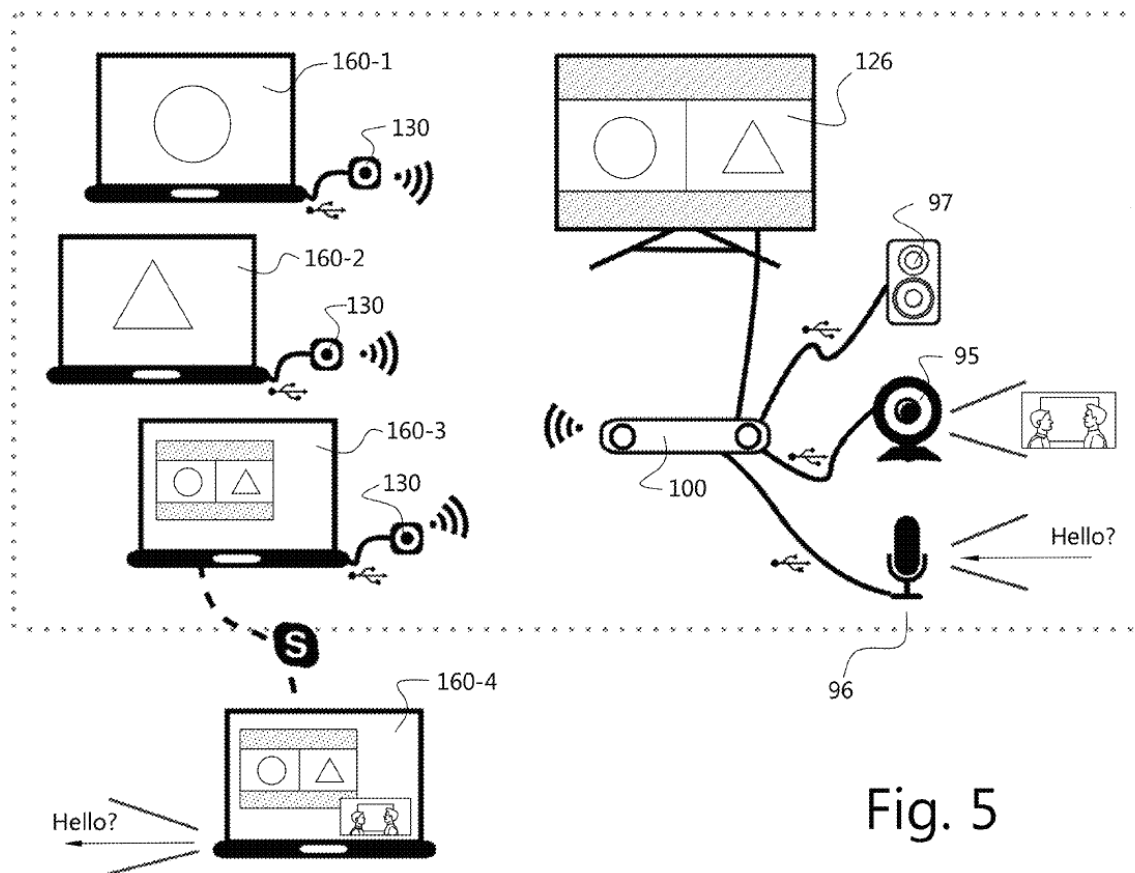


Fig. 5

Figure 5 is a drawing of an arrangement of processing devices as used in a meeting with a unified communication in progress. *Id.* at 5:53–55.

According to the '347 patent,

“Unified Communications system or tools” refers to audio or audio visual communications such as provided by “Skype™” or “Skype™ for business”. Such software can take over audio and/or visual data provided from a host processing device. Unified communication tool can be described as a collection of tools to do VOIP, (web) conferencing, shared whiteboarding, message exchange (e.g. chat), file transfer, or presence.

Id. at 8:12–19.

Configurable USB endpoints are configured when pairing first peripheral device 130 with base unit 100 or over a wireless connection between processing device 160 and base unit 100. *Id.* at 18:10–13.

Configured USB endpoints expose second peripheral devices (e.g., functional devices 91–93, shown in Fig. 1A), which can be interpreted as custom drivers, vendor specific drivers, or default OS drivers. *Id.* at 18:13–16.

Data for display on display 126 from a second peripheral device (functional devices 91–93) can flow into base unit 100 or can be captured in base unit 100, and can be interpreted, processed, enhanced, encoded, and/or encrypted using firmware of base unit 100 to generate processed data. *Id.* at 18:39–45. These processed data are sent to first peripheral device 130 through the wireless link. First peripheral device 130, if necessary, decodes, decrypts, processes, and/or interprets the data and makes them available through one or more USB endpoints of first peripheral device 130. *Id.* at 18:45–51. These data are then captured by the operating system of processing device 160 and made available through a custom or standard driver to either the host application or a 3rd party application running on processing device 160 or to other processing devices 160 of other participants of the meeting. *Id.* at 18:51–57.

Data from the host application and/or 3rd party applications running on processing device 160 are sent to a USB endpoint of first peripheral device 130 through the system (standard generic) drivers and the USB port. *Id.* at 18:58–64. First peripheral device 130 receives these data via firmware of first peripheral device 130, which processes, enhances, encodes, and/or encrypts the data and sends them through the wireless link to the base unit 100, which receives the data via firmware. *Id.* at 18:64–19:2. Base unit 100 decrypts, processes, decodes, and/or enhances the data and forwards them to the appropriate functional device connected to base unit 100. *Id.* at 19:2–7.

Claim 1, reproduced below, is illustrative of the claimed subject matter (bracketed letters added to track the organization in the Petition):

1. [a] A method for connecting a processing device to a functional device, the functional device being connected to or in a base unit of a communications network, [b] the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, [c] further comprising: a first peripheral device being configured to be coupled to the processing device via a generic communications protocol, [d] the base unit having a transmitter and [e] the first peripheral device having a receiver and [f] at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the method further comprising:

[g] the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network,

[h] the functional device being configured for first video data to flow into the base unit or first video data is captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, [i] the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, [j] the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, [k] the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices,

[l] wherein third video data, received from the host application and/or from the 3rd party application running on the processing device, is sent to an endpoint of the first peripheral device via a standard generic driver, [m] the first peripheral device receiving the third video data and processing the third video data to form second processed video data, and

[n] wherein the base unit receives the second processed data, and decodes and/or enhances the second processed data and forwards it to a functional device which is connected or attached to the base unit through a serial connection.

C. Evidence

Petitioner relies on the references listed below (Pet. 3).

Reference		Date	Exhibit No.
Beel	US 2015/0169477 A1	June 18, 2015	1005
Dinka	US 8,369,498 B2	Feb. 5, 2013	1006
van de Laar	US 2016/0014172 A1	Jan. 14, 2016	1007
Kaplan	US 2010/0295994 A1	Nov. 25, 2010	1008
Christison	US 7,761,627 B2	July 20, 2010	1011

Petitioner also relies on alleged Applicant Admitted Prior Art (AAPA) to demonstrate how a skilled artisan would have understood the teachings of the prior art. Pet. 16 (citing Ex. 1001, 5:47–52, 8:4–9, 8:12–16, 8:65–9:12).

Petitioner also relies on the Declaration of Kevin C. Almeroth, Ph.D. (Ex. 1002) and the Reply Declaration of Dr. Almeroth (Ex. 1062).

Patent Owner relies on the Declaration of Michael C. Brogioli, Ph.D. (Ex. 2004).

D. The Asserted Grounds of Unpatentability

We instituted a trial under the following grounds (Inst. Dec. 7):

Claims Challenged	35 U.S.C. §	References
1–31	103 ³	Beel, Dinka
1–31	103	Beel, Dinka, Christison
1–31	103	van de Laar, Kaplan
1–31	103	van de Laar, Kaplan, Christison

III. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner, relying on the testimony of Dr. Almeroth and alleged admissions by Patent Owner in litigation, contends that a person of ordinary skill in the art would have had “a Master of Science (M.S.) degree in electrical engineering or computer science, and five years of work experience in a related field” and that “[a]dditional educational experience could substitute for some of the work experience.” Pet. 5 (citing Ex. 1002 ¶¶ 36–37). “Patent Owner does not dispute Petitioner’s proposed level of skill in the art (Petition, 5) at this time.” PO Resp. 6. On the complete record, we adopt Petitioner’s description of the level of ordinary skill in the art, as it is uncontested and is consistent with the technology described in the ’347 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the ’347 patent was filed after March 16, 2013, the effective date of the relevant amendment, the AIA version of § 103 applies.

B. Claim Construction

We construe a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Petitioner proposes constructions of several claim terms. Pet. 6–11. In the Preliminary Response, “Patent Owner accept[ed] the Petition’s claim construction.” Prelim. Resp. 6. However, in the Patent Owner Response, Patent Owner argues that “the claims of the ’347 Patent require no construction as they are valid under their plain and ordinary meaning.” PO Resp. 6.

Based on the complete record, we do not find it necessary to provide express claim constructions of any claim terms. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

C. Alleged Obviousness over Beel, Dinka, and (optionally) Christison

Petitioner contends that claims 1–31 would have been obvious over Beel, Dinka, and, optionally, Christison. Pet. 16–42.

A claim is unpatentable under 35 U.S.C. § 103 “if the differences between the claimed invention and the prior art are such that the claimed

invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” We resolve the question of obviousness on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

For the reasons explained below, Petitioner has not made a sufficient showing of obviousness.

1. Scope and Content of the Prior Art

a) Overview of Beel

Beel is directed to electronic tools for meetings. Ex. 1005 ¶ 1. Figure 1A, reproduced below, illustrates an example:

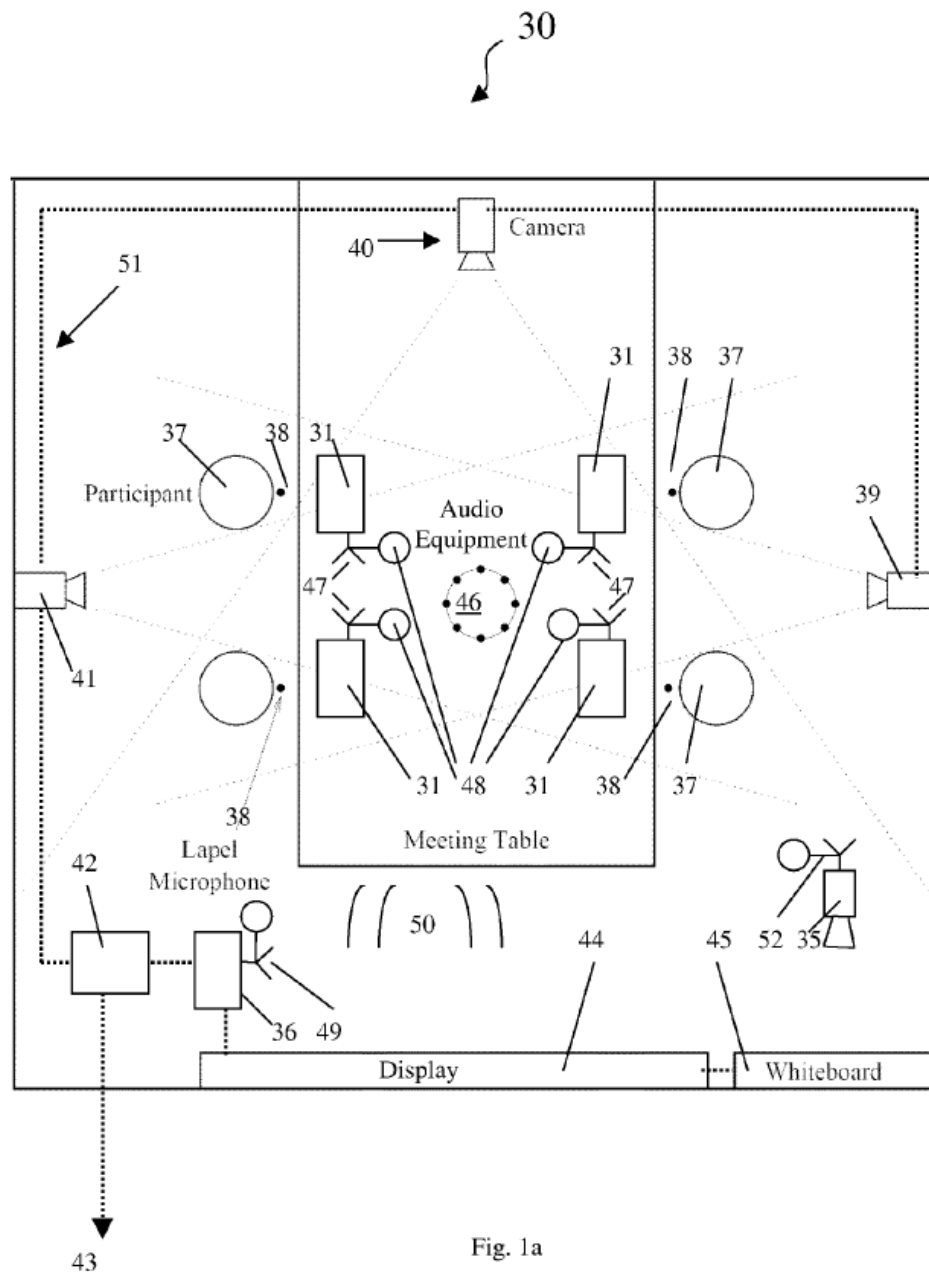


Fig. 1a

Figure 1A is a schematic drawing of meeting room 30 with a meeting table. *Id.* ¶¶ 96, 117. Participants 37 have processing devices 31 (e.g., laptop computers, tablets, PDAs), each with first connection unit 47 providing access to network 50 (e.g., a wireless network). *Id.* ¶ 117. Processing device 31 may have a client display, processing engine, memory, and

operating system. *Id.* ¶ 125. Connection unit 47 is coupled to input device 48. *Id.* ¶ 117. “The connection unit 47 be may integrated into a user processing device 31, e.g. as an internal peripheral device or may preferably be an external peripheral device comprising a connector adapted to couple to a port of a user processing device 31.” *Id.* ¶ 125. Base node 36 is connected to network 50 via connection unit 49. *Id.* ¶ 118. Base node 36 is coupled to display 44 (e.g., a projector and/or screen). *Id.* ¶ 119. Cameras 39, 40, 41, microphone 38, and loud speakers (not shown) are attached to base node 36, and their outputs can be stored digitally in base node 36. *Id.* ¶¶ 120–121.

In one example,

The peripheral device preferably acts as a composite device comprising for instance a (virtual) audio speaker device. However instead of operating like a speaker the audio is channeled over the communications network. The peripheral device can preferably capture the audio stream with a device driver, for instance a built in ALSA UAC1, and stream the audio to the base unit.

Id. ¶ 317.

b) Overview of Dinka

Dinka describes a television apparatus having an embedded processing apparatus for conducting voice or video calls via a packet-based network. Ex. 1006, 1:12–14. Figure 1 of Dinka, reproduced below, illustrates an example:

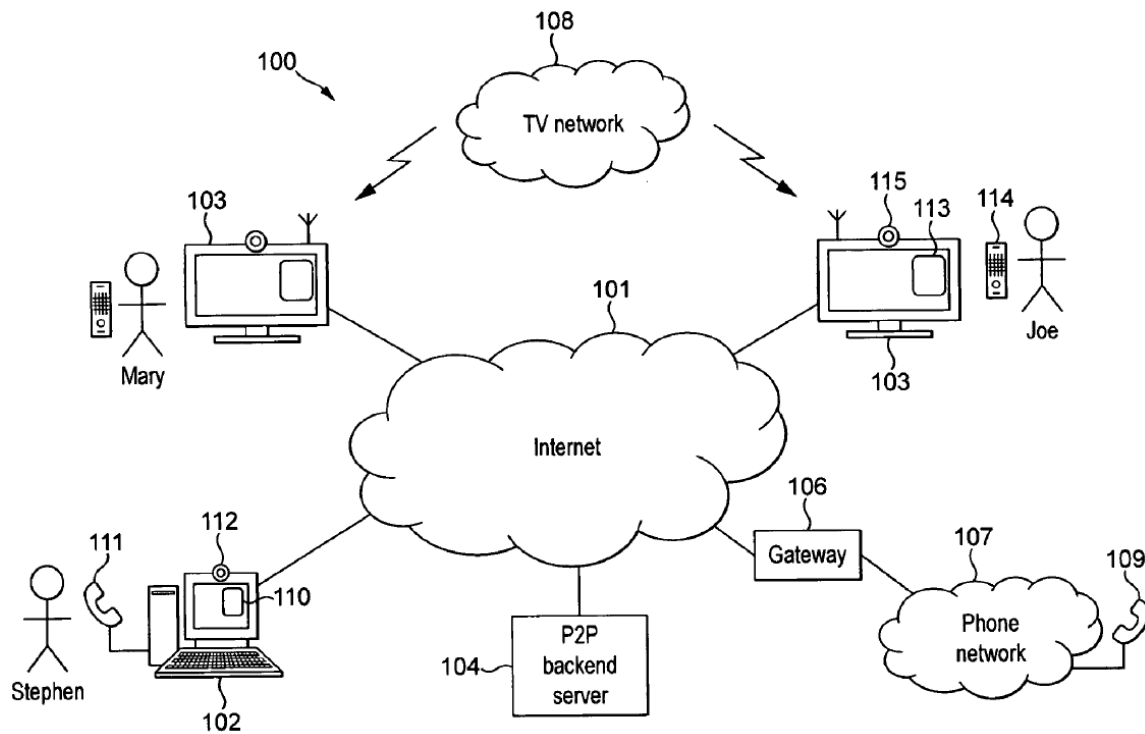


FIG. 1

Figure 1 is a schematic drawing of a communication system. *Id.* at 5:22–23.

Computer terminals 102 and televisions 103 are coupled to Internet 101. *Id.* at 5:45–49. Each computer terminal 102 includes client application 110, audio transceiver 111 (speaker and microphone), and webcam 112. *Id.* at 6:7–12. Each television 103 includes a processor and memory with communication client application 113, webcam 115, and an audio transceiver. *Id.* at 6:13–22. Television 103 is a dedicated television unit in that its primary purpose is as a television, and, at the same time it is provided with secondary embedded functionality such as voice-over-Internet Protocol (VoIP) calling. *Id.* at 7:17–21. Communication client applications 110 and 113 are peer-to-peer clients for setting up and conducting VoIP calls. *Id.* at 6:23–26.

c) Overview of Christison

Christison relates to improving the throughput of Certified Wireless Universal Serial Bus (WUSB) wire adapter systems. Ex. 1011, 1:20–23. Figure 10 of Christison, reproduced below, illustrates an example:

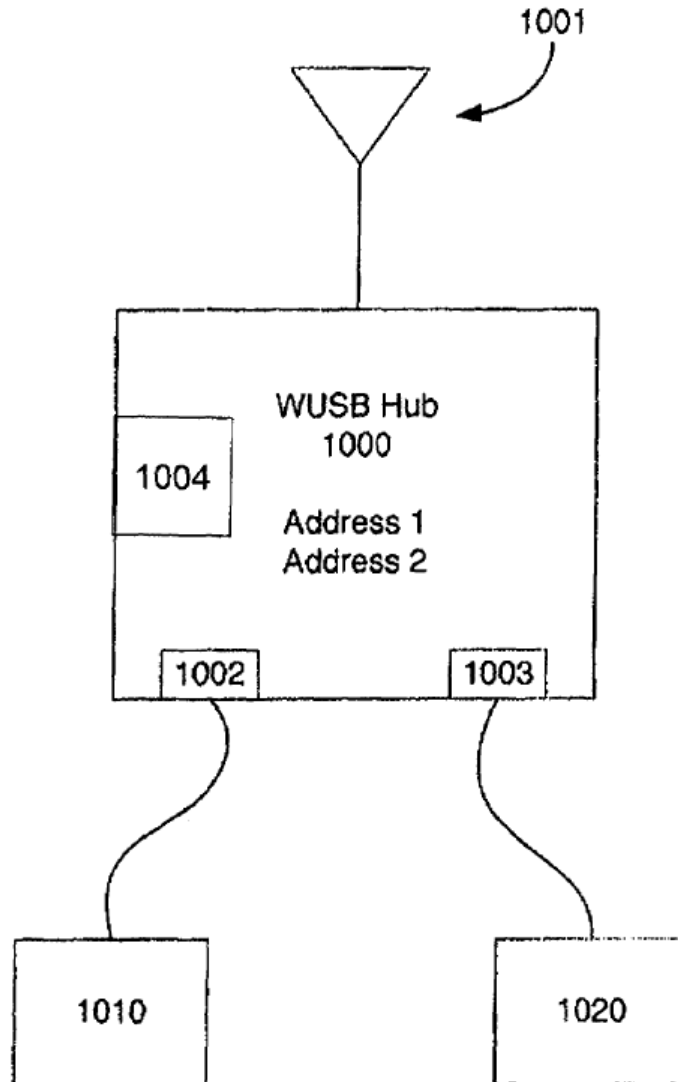


Fig. 10

Figure 10 is a block diagram of a WUSB. *Id.* at 2:52–53. Proxy WUSB Hub 1000 has wireless upstream port 1001 and one or more wired USB downstream ports 1002, 1003, wherein wired USB devices 1010, 1020 may

be plugged into the downstream wired USB ports. *Id.* at 6:20–24. Proxy WUSB Hub 1000 presents wired USB devices 1010, 1020 such that they appear to the host system as if they are “native” WUSB devices. *Id.* at 6:17–19, 6:24–26.

2. *Claims 1–31*

As to claim 1, Petitioner relies primarily on the teachings of Beel, citing Dinka for additional disclosure of a 3rd party application such as Skype (claim limitation 1[k]) and processing video signals using encoding and decoding (claim limitation 1[m]); and citing Christison as an alternative should Patent Owner make certain arguments as to claim limitation 1[f] (Patent Owner did not). Pet. 16–30. We find below that Petitioner does not show sufficiently that Beel teaches claim limitation 1[i]. First, we discuss other limitations of claim 1 for context.

a) Claim limitations 1[a]–1[h]

As to claim limitation 1[a], Petitioner contends that Beel’s processing devices 31 teach “a processing device”; cameras 39, 40, 41, microphones 38, and loudspeakers are “functional device[s]”; and base node 36 is a “base unit.” Pet. 18 (citing Ex. 1005 ¶¶ 40–41, 88, 93, 117–118, 120, 194–199, 225, 288, 310, 319–323, Figs. 1a, 1b; Ex. 1002 ¶ 106). Petitioner contends that processing device 31 has “a memory, a display and an operating system” and “hosts a host application,” as recited in claim limitation 1[b]. *Id.* at 19 (citing Ex. 1005 ¶¶ 41, 45, 51, 56, 59, 64, 68, 71, 94, 117, 125, 142, 196, 247–248, 310; Ex. 1002 ¶¶ 107–109).

Petitioner further contends that Beel describes “a first peripheral device being configured to be coupled to the processing device via a generic communications protocol,” as recited in claim limitation 1[c]. *See id.* at 19–20 (citing Ex. 1005 ¶¶ 54, 58, 125, 195, Fig. 10 (showing an external USB dongle); Ex. 1002 ¶¶ 110–112, 155). As to claim limitations 1[d] and 1[e], Petitioner argues that base node 36 has a transmitter (transceiver 63) and that dongle/connection unit 47 (shown in Fig. 1a) includes a receiver (transceiver 62). *Id.* at 20–21 (citing Ex. 1005 ¶¶ 113–114, 12, 125, 288; Ex. 1002 ¶¶ 128–129, 157).

As to “the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network,” as recited in claim limitation 1[g], Petitioner contends that Beel describes a peripheral device receiving media content from the base node over a network and causing the data to be displayed on a display of the processing device. *Id.* at 23–24 (citing Ex. 1005 ¶¶ 50, 56, 71, 75, 88–89, 93, 118–122, 126, 128, 298, 310–311; Ex. 1002 ¶¶ 121, 159).

Patent Owner argues that “Beel describes communications *from* the peripheral device *to* the base unit—not the reverse.” PO Resp. 14 (citing Ex. 1005 ¶¶ 122–123, 127–128, 208–212, 315–316; Ex. 2004 ¶¶ 102–103). Patent Owner argues that Beel’s paragraph 71 is ambiguous and that it actually describes software code, stored on the peripheral device, including a portion for receiving media content from the network for displaying on a display. *Id.* at 15 (citing Ex. 1005 ¶ 71; Ex. 2004 ¶ 105). Patent Owner argues that paragraph 71 does not specify which display the content is displayed on and, in context, it is the display attached to the base node. *Id.* at 15–16 (citing Ex. 1005 ¶¶ 75, 123, 135, 147–157; Ex. 2004 ¶ 106).

Paragraph 71 of Beel describes:

a peripheral device is provided for providing communication connectivity to a processing device which is provided with memory, a display and an operating system with at least one pre-installed generic driver the peripheral device comprising a memory in which executable software code is stored for execution on the processing device, said executable software code comprising:

. . .

a third software code portion for receiving media content from the network and for displaying the media content on the display in accordance with a set of rules; wherein the first software code portion is adapted to use the generic communication protocol for transferring the media content between the peripheral device and the processing device.

Ex. 1005 ¶ 71. Here, consistent with Petitioner's assertions (and contrary to Patent Owner's), Beel describes a processing device with a display, a peripheral device connected to the processing device, the peripheral device receiving media content from a network, and displaying the media content on the display of the processing device. Beel teaches that the sources of media content, e.g., cameras and microphones, are coupled to the base node, which is coupled to the processing device via the peripheral device and the network. *Id.* ¶¶ 119–120. Thus, we find that Beel teaches “the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network,” as recited in claim limitation 1[g].

Claim limitation 1[h] recites

the functional device being configured for first video data to flow into the base unit or first video data is captured in the base unit, the first video data being processed in the base unit to

generate the first processed video data, wherein the first processed video data is sent to the first peripheral device.

Petitioner contends that Beel describes that video data flows into, and is captured by, base node 36 from cameras 39, 40, 41 and whiteboard 45, that base node 36 processes the video data, and that base node 36 sends the processed video data to the peripheral device attached to processing device 31. Pet. 24–25 (citing Ex. 1005 ¶¶ 41, 71–72, 88, 119–120, 310, 315–323, Figs. 1a, 1b; Ex. 1002 ¶¶ 122–123, 160).

Patent Owner argues that Beel does not describe cameras 39, 40, 41 providing video data to the base node, processing those data in the base unit, and further sending those data to the processing device. PO Resp. 18–19 (citing Ex. 1005 ¶¶ 114, 116, 119–121; Ex. 2004 ¶ 112). Patent Owner again argues that paragraph 71 (and also paragraph 72) of Beel is ambiguous. *Id.* at 19 & n.2.

Beel describes sources of video data, including whiteboard 45 and cameras 39, 40, 41, coupled to base node 36. Ex. 1005 ¶¶ 119–120. Base node 36 is described as “a processing device, e.g. a host computer adapted to receive user selected arbitrary media content.” *Id.* ¶ 123. Beel describes that data from optional equipment coupled to base node 36 “can be used to transfer audio, e.g. to the processing devices.” *Id.* ¶ 120. Although audio is mentioned specifically, we read this as an example, and understand from Beel’s description that other optional equipment, e.g., cameras, would supply video data to be transferred via base node 36 to the processing devices. *Id.* Also, as explained above, paragraph 71 of Beel is not ambiguous, and describes sending media content from the base node to the first peripheral device for display on a display of the processing device. We find that this media content would include the video data transferred from

cameras 39, 40, 41 to base node 36. *Id.* ¶¶ 71, 119–120. Thus, we find that Beel teaches claim limitation 1[h].

b) Claim limitation 1[i]

Claim limitation 1[i] recites “the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data.” Petitioner argues that Beel describes the peripheral device processing the first processed video, claiming to quote paragraph 322 of Beel: “Beel describes the ‘*first processed video data*’ can be processed: data is ‘On the peripheral device 32 the video packets are received, . . . unpacked in an unpacker 25, decoded in a decoder 26 and then inserted into a suitable composition such as an OpenGL based composition in the compositor 29 for display.’” Pet. 25 (purporting to quote Ex. 1005 ¶ 322 (alteration by Petitioner); citing Ex. 1002 ¶ 124). Dr. Almeroth repeats this argument in his testimony, including the quote purporting to be from paragraph 322 of Beel and the alteration to that quote. Ex. 1002 ¶ 124.

Beel actually discloses the following:

[0321] *On the peripheral device 32 the video packets are received* at the corresponding plug and play port, e.g. the USB port 11, read by the Human Interface Driver (HID) interface handler 13, unpacked to remove HID protocol headers in an unpacker 20 and then transmitted to the communications network by a transmitter 21. The network can be wireless for example WiFi or LiFi network.

[0322] Having been routed over a communications network to the base unit 33, the incoming stream is read from the communications interface such as a WiFi access point 22, *unpacked in an unpacker 25, decoded in a decoder 26 and then inserted into a suitable composition such as an OpenGL based*

composition in the compositor 29 for display on a central display device.

Ex. 1005 ¶¶ 321–322 (emphasis added to portions quoted by Petitioner). Patent Owner notes that “[t]he Petition mistakenly cites to ¶ 322 of Beel but quotes ¶ 321.” PO Resp. 20 n.3. However, it appears that Petitioner has grafted together a portion of paragraph 321 that introduces peripheral device 32 with a portion of paragraph 322, which discusses features of base unit 33. However, this grafting has been done in such a way as to convey (incorrectly) that peripheral device 32, not base unit 33, includes unpacker 25, decoder 26, and compositor 29 that process the first processed video data received by the first peripheral device to generate second video data. Dr. Almeroth’s testimony, which copies Petitioner’s incorrectly altered quotation to paragraph 322 of Beel, is unreliable as to this claim limitation and is entitled to no weight.⁴ Thus, Petitioner has no expert testimony on which to rely for this claim limitation.

As the full quotation to paragraphs 321 and 322 makes clear, Beel’s peripheral device 32 does not perform the unpacking, decoding, and compositing that Petitioner asserts is the processing of the first processed video data. This is further shown in Beel’s Figure 11, reproduced below:

⁴ Although we do not speculate as to whether Dr. Almeroth’s testimony is intentionally misleading, or whether he simply did not review his testimony carefully, the conclusion would be the same: the testimony lacks credibility and cannot be relied upon.

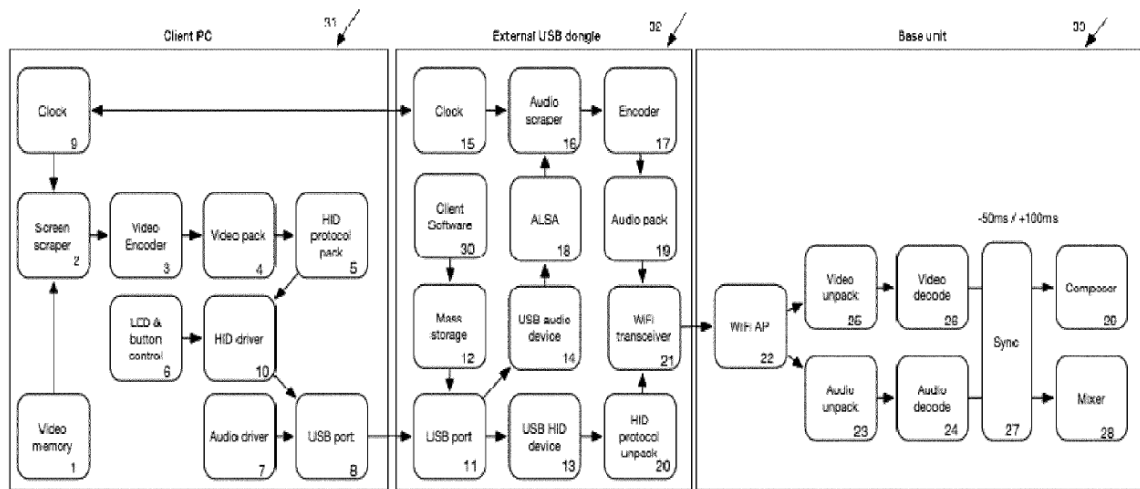


FIG. 11

Figure 11 of Beel is a schematic representation of a communications system for presentations in which audio has been integrated. Ex. 1005 ¶ 104. Figure 11 clearly shows that unpacker 25, decoder 26, and compositor 29 are part of base unit 33, not External USB dongle (peripheral) 32. Thus,

Petitioner's citation to Beel's paragraph 322 does not show that Beel teaches limitation 1[i].⁵

Petitioner also cites to Beel's paragraph 72, providing no more explanation than a parenthetical, "e.g., tenth video code, 'eleventh code for providing a means for receiving, decrypting and decoding,' twelfth video code." Pet. 25. However, in context, it is clear that the tenth and eleventh code described in Beel's paragraph 72 is executed on the processing device, not the peripheral device. Ex. 1005 ¶ 71 ("the peripheral device comprising a memory in which executable software code is stored *for execution on the processing device*, said executable software code comprising:") (emphasis

⁵ At the oral argument, when challenged on its reliance on paragraph 322, Petitioner argued that paragraph 321 of Beel teaches this limitation. Tr. 22:26–23:24. Petitioner did not make this argument in the Petition and, instead, raised it for the first time during oral argument; thus, it will not be considered. *See Dell Inc. v. Accelaron, LLC*, 884 F.3d 1364, 1369 (Fed. Cir. 2018) ("Unless it chose to exercise its waiver authority under 37 C.F.R. § 42.5(b), the Board was obligated to dismiss Dell's untimely argument given that the untimely argument in this case was raised for the first time during oral argument."). Even if we were to consider this new argument, it would not be persuasive. As Patent Owner observes (PO Resp. 20), any processing performed by peripheral device 32 in paragraph 321 is on data received from the processing device and destined for the base station via the network, rather than data flowing in the direction of the first processed video data of claim 1.

added)). Thus, paragraph 72 of Beel also does not support Petitioner's contention that Beel teaches claim limitation 1[i].⁶

Indeed, for claims 3 and 14, Petitioner argues that the "tenth code" described in Beel's paragraph 72 evidences processing first video data on the base station. Pet. 31 (citing Ex. 1005 ¶ 72; Ex. 1002 ¶¶ 139, 168). This directly contradicts Petitioner's argument for claim limitation 1[i] that the "tenth code" evidences processing first video data on the peripheral device. *Id.* at 25. This also is another inconsistency in Dr. Almeroth's testimony, further undermining its reliability and supporting our decision to give no weight to his testimony as to claim limitation 1[i]. Ex. 1002 ¶¶ 124, 139 (both of which simply copy Petitioner's inconsistent arguments).

In sum, Petitioner has not shown that Beel teaches claim limitation 1[i]. Petitioner does not contend that either Dinka or Christison teaches this limitation. Accordingly, Petitioner has not met its burden to prove, by a preponderance of the evidence, that Beel, Dinka, and (optionally) Christison teaches each limitation of claim 1.

Because we find that Petitioner has not shown that Beel, Dinka, and (optionally) Christison teach claim limitation 1[i], we need not discuss the

⁶ We note that the Reply also includes an incorrectly altered quotation from Beel. Specifically, Petitioner purports to quote Beel's paragraph 71 as stating "Beel's peripheral device 'receiving media content from the network and [processing it] for display,'" and represents that Beel describes the peripheral device as processing media content for display. Reply 6–7 (quoting Ex. 1005 ¶ 71 (alteration by Petitioner)). In fact, paragraph 71 reads "a third software code portion for receiving media content from the network and for displaying the media content on the display in accordance with a set of rules." As explained above, the code described in paragraph 71, including the "third code," is "for execution on the processing device," not the peripheral device.

parties' respective arguments as to claim limitations 1[f] and 1[j]–1[n].
Pet. 21–23, 25–30; PO Resp. 20–23.

c) Claims 2–31

Independent claims 12, 23, and 27 each recite “the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data,” which is the same as in limitation 1[i] of claim 1 discussed above. Petitioner includes its analysis of claim 12 along with claim 1. Pet. 18. Petitioner does not argue claims 23 and 27 separately and, instead, refers to its analysis of claims 1 and 12 for claims 23 and 27. *Id.* at 37–42. For the reasons given for claim 1, Petitioner has not met its burden to prove, by a preponderance of the evidence, that Beel, Dinka, and (optionally) Christison teach each limitation of claims 12, 23, and 27.

Claims 2–11 depend, directly or indirectly, from claim 1. Claims 13–22 depend, directly or indirectly, from claim 12. Claims 23–26 depend from claim 23. Claims 28–31 depend, directly or indirectly, from claim 27. Petitioner's additional arguments and evidence for the dependent claims do not remedy the deficiency in its showing for the independent claims. *Id.* at 30–37, 40, 42. Thus, Petitioner has not met its burden to prove, by a preponderance of the evidence, that Beel, Dinka, and (optionally) Christison teach each limitation of claims 2–11, 13–22, 23–26, and 28–31.

3. *Conclusion of Obviousness*

As detailed above, we find that Beel, Dinka, and, optionally, Christison do not teach each limitation of claims 1–31. We have considered

Patent Owner’s objective indicia of nonobviousness (PO Resp. 54–71) and it does not change our conclusion, as noted in Section III.E, below. Upon consideration of all the evidence, we conclude that Petitioner has not proved by a preponderance of the evidence that claims 1–31 would have been obvious over Beel and Dinka, or over Beel, Dinka, and Christison.

*D. Alleged Obviousness over van de Laar, Kaplan, and
(Optionally) Christison*

Petitioner contends that claims 1–31 would have been obvious over van de Laar, Kaplan, and, optionally, Christison. Pet. 42–71.

Petitioner has not made a sufficient showing of obviousness for this ground.

1. Scope and Content of the Prior Art

a) Overview of van de Laar

Van de Laar describes a host device in wireless communication with multiple “dockee” devices and coupled to at least one peripheral for rendering audio or video data. Ex. 1007 ¶ 1. Figure 1 of van de Laar, reproduced below, illustrates an example:

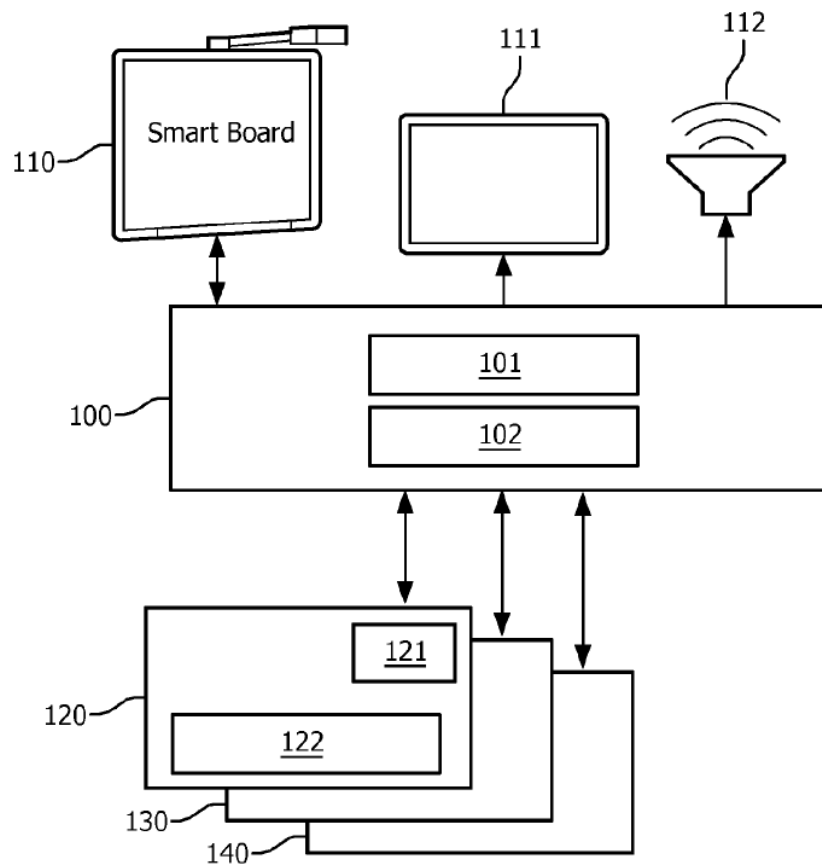


FIG. 1

Figure 1 is a block diagram of a wireless docking system. *Id.* ¶ 65.

Host device 100 is coupled to several peripherals, including smartboard 110, display screen 111, and loudspeaker system 112 for rendering audio or video data (AV data). *Id.* ¶ 74. Host device 100 wirelessly communicates with dockee devices 120, 130, 140. *Id.* Dockee devices can be mobile phones, laptops, or tablet computers. *Id.* Dockee device 120 includes dockee communication unit 121 to accommodate wireless communication with host 110. *Id.* ¶ 76. “The system enables multiple dockee devices (such as smartphones, laptops, tablets) to be simultaneously docked to a wireless docking host (WDH) which is

connected to a set of peripherals (such as display, mouse, shared local storage, lights/blinds controls, internet connection).” *Id.* ¶ 82.

Van de Laar describes two types of dockee devices, primary dockee device 120 and secondary dockee device 130. *Id.* ¶ 77. According to van de Laar,

The primary and secondary dockee devices are different in that different access is established to at least one peripheral, so different sets of access rights and peripheral functions are assigned to each of said first and second dockees. In particular, to the primary dockee device, control is provided over the at least one peripheral for determining the AV data to be rendered. To the secondary dockee device, the AV data to be rendered via the at least one peripheral is additionally transferred so as to enable monitoring the AV output data locally at the secondary dockee, e.g. rendering video on the display of the dockee device.

Id. “Primary dockee devices will have direct access to the peripheral functions offered by the WDH, whereas the secondary dockee devices will be connected to the WDH to enable monitoring selected AV data. Hence the dockee devices docked as secondary dockee are able to monitor output (e.g. merged display output) of the primary devices to the peripherals.” *Id.* ¶ 82.

Van de Laar describes a “benefit” of the system, i.e., “it allows primary dockees to be able to present content using the peripherals connected to a WDH, such as a large screen and a USB presentation remote control, and that other people in the meeting/lecture room can connect to the presenter and to each other for all kinds of coll[a]b[o]ration and interaction purposes.” *Id.* ¶ 94.

b) Overview of Kaplan

Kaplan is directed to transmitting video footage from a source to a display device. Ex. 1008 ¶ 5. Figure 2 of Kaplan, reproduced below, illustrates an example:

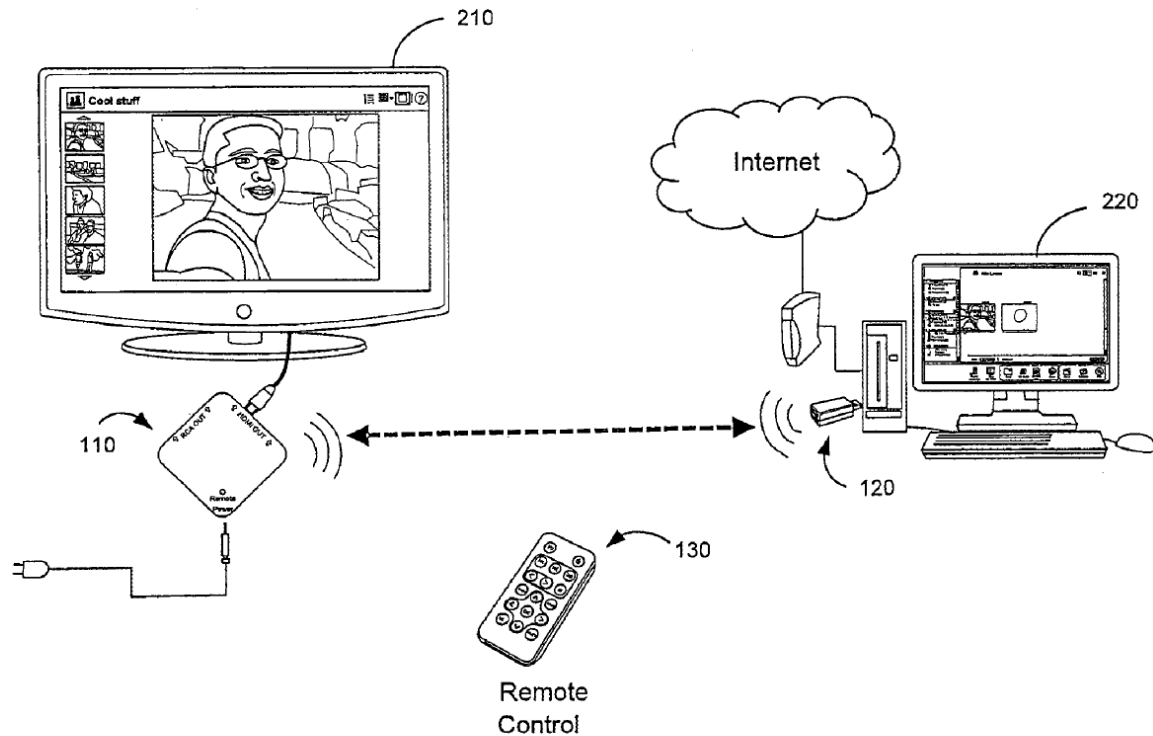


FIG. 2

Figure 2 is a drawing of a communications system. *Id.* ¶ 11. Receiver 110 is connected to display device 210, e.g., a television or video display monitor, via an HDMI cable carrying audio and video data. *Id.* ¶ 21. Remote control 130 communicates with receiver 110 to control playback of video footage on display device 210. *Id.* ¶ 19. Display device 210 can show a user interface generated either by receiver 110, transmitter 120, computer 220, or a combination of these components. *Id.* ¶ 26. Transmitter 120 (which can be a transceiver) is connected to computer 220 via a USB connector. *Id.* ¶ 45, Fig. 4. In one example, “if video content is stored on the computer 220 at a resolution of 480p, up-scaling could be performed on

the receiver 110 to provide a 720p signal for display on the display device 210 (e.g., the television).” *Id.* ¶ 32. Or, “if the television can display 1080p video content and the content provided by the HDMI connection is 720p, then the television can upscale the content to 1080p for display.” *Id.*

2. Claims 1–31

a) Claim 1: preamble and processing device

Limitation 1[a] of claim 1 recites “[a] method for connecting a processing device to a functional device, the functional device being connected to or in a base unit of a communications network.” Petitioner contends that van de Laar’s dockee devices are processing devices and that van de Laar’s WDH is a base unit. Pet. 44–45 (citing Ex. 1007 ¶¶ 54, 62, 73–74, 82, 92–94, 97, 106, 119, 124, 128; Ex. 1002 ¶¶ 218–219, 259).

Petitioner cites Kaplan to show additional details of a dockee device that correspond to the processing device recited in claim limitation 1[b], i.e., “the processing device having a memory, a display and an operating system,” and van de Laar to show “wherein the processing device hosts a host application.” *Id.* at 45–46. Specifically, Petitioner points to Kaplan’s computer 220 to show a processing device, the computer’s display to show “a display,” and description of Windows® to show an operating system. *Id.* at 45 (citing Ex. 1008 ¶¶ 47–49, 59, Fig. 2; Ex. 1002 ¶¶ 220, 260). Petitioner points to van de Laar’s description of an application running locally to a dockee device to show a host application. *Id.* at 45–46 (citing Ex. 1007 ¶¶ 53–54, 58–60, 73–74, 81, 93, 121–128, 164; Ex. 1002 ¶¶ 221, 260). Petitioner further points to van de Laar’s description of Skype to show

that van de Laar’s dockee devices can run applications for bidirectional communication. *Id.* at 46 (citing Ex. 1007 ¶ 128).

Dr. Almeroth testifies that a skilled artisan “would have understood that Van de Laar’s system could leverage Kaplan’s known technique of using a standard operating system and data transformations to improve a similar device in the same way” and that “modify[ing] the transmission system of Kaplan with Van de Laar’s WDH . . . would improve the useability of the system to connect multiple wireless devices to access and use connected functional devices in a unified communication call.” Ex. 1002 ¶ 215. Dr. Almeroth opines that Petitioner’s combination would “result in the use of Skype or similar prior art unified communication software as a known technique for improving similar devices,” “creat[ing] the predictable result of using a unified communication system (such as Skype) wherein the system could utilize one or more connected functional devices’ capabilities.” *Id.* ¶ 216.

b) Claim 1: peripheral device

As to “a first peripheral device being configured to be coupled to the processing device via a generic communications protocol,” as recited in claim limitation 1[c], Petitioner contends that van de Laar’s dockee device 120 has dockee communication unit 121 for wireless communication with a host. Pet. 46 (citing Ex. 1007 ¶ 76). Citing to Kaplan, Petitioner contends that “[t]he peripheral device can be coupled via ‘the Universal Serial Bus (USB) standard,’ as an example.” *Id.* (citing Ex. 1008 ¶¶ 17, 45, 58; Ex. 1002 ¶ 222). Dr. Almeroth testifies that USB is a generic communications protocol. Ex. 1002 ¶ 222.

As to limitation 1[e], “the first peripheral device having a receiver,” Petitioner cites to van de Laar’s description of dockee communication unit 121 configured to accommodate wireless communication. Pet. 46–47 (citing Ex. 1007, claim 1; Ex. 1002 ¶ 224). Petitioner further cites Kaplan to show a USB dongle that includes a receiver. *Id.* at 47–48 (citing Ex. 1008 ¶¶ 16–17, 19, 45, 58, Fig. 2; Ex. 1002 ¶¶ 225–226).

Patent Owner argues that “[t]he Petition does not articulate what transmission path (the peripheral device transmitter of Kaplan or integrated transmitter of Van de Laar) is used to communicate between the claimed devices, seemingly cherry picking teachings without regard to the distinct teachings of the two references,” and that “it is unclear how Kaplan’s system would be modified by Van de Laar’s system, if at all.” PO Resp. 33 (citing Ex. 2004 ¶¶ 124, 144–155).

We agree with Patent Owner that the Petition does not clearly state how Petitioner proposes combining van de Laar and Kaplan. Instead, Petitioner argues that “[t]he [person of ordinary skill in the art] would have been motivated to modify the receiver and data transmission system of Kaplan to with [sic] Van de Laar’s WDH to improve usability and connect multiple wireless devices and access and use the functional device(s) in a unified communications.” Pet. 43 (citing Ex. 1007 ¶ 128; Ex. 1008 ¶¶ 32, 44–49; Ex. 1002 ¶ 215).

However, in the Institution Decision, we interpreted Petitioner’s combination to be that the transceiver performing the function of van de Laar’s communication unit 121 would have been implemented as a standard

USB peripheral device, a dongle, as in Kaplan. Inst. Dec. 34.⁷ This is most consistent with Petitioner’s statements such as “sending ‘*first video data . . . into the base unit*’ (e.g., ‘A/V stream’ sent to wireless docking host (WDH)), which is processed and sent to the ‘*first peripheral device*’ (e.g., communication unit 121 connected to the dockees),” in mapping claim limitation 1[h]. Pet. 51; *see also id.* at 53 (“*the first peripheral device* [e.g., ‘communication unit’]” for limitation 1[i]), 56 (“*the first peripheral device* (e.g., ‘communication unit 121)’” for limitation 1[m]). Petitioner has since confirmed that “[t]he combination is clear: Kaplan’s USB peripheral implements Van de Laar’s communication unit. . . . A [person of ordinary skill in the art] would use Kaplan’s USB peripheral to implement Van de Laar’s wireless communication function, applying a known technique to yield predictable results.” Reply 14–15.

c) Processing by the first peripheral device

The Reply has clarified how Petitioner proposes combining van de Laar and Kaplan to show a first peripheral device. The identified peripheral device, however, does not perform the processing functions ascribed to the first peripheral device by claim 1.

For example, claim limitation 1[i] recites “the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data.” For this limitation,

⁷ Patent Owner argued in the Preliminary Response, at 30–35, that van de Laar’s communication unit 121 is not a peripheral device and that Petitioner otherwise failed to identify a peripheral device in the combination of van de Laar and Kaplan.

Petitioner quotes from paragraph 56 of van de Laar, which describes a secondary dockee having read access and being able to receive AV data as rendered by a peripheral (a “functional device,” not the “first peripheral device” recited in claim 1). Pet. 53. Petitioner also cites to paragraphs 93 and 115 of van de Laar, which discuss functions of the primary and secondary dockees and the WDH, but say nothing about van de Laar’s communication unit 121. Petitioner does not cite Kaplan for this limitation. Dr. Almeroth repeats the arguments in the Petition and adds “[p]rocessing the first processed video data’ for rendering requires decoding the data and preparing it for transmission to a display as ‘second video data.’” Ex. 1002 ¶ 235. Dr. Almeroth neither discusses van de Laar’s communication unit 121 nor identifies the basis for his testimony. Thus, this testimony lacks credibility as to this limitation and is entitled to little weight.

Patent Owner argues that “the Petition merely concludes that the communication unit 121 shares content, but provides no evidence that the communication unit 121 processes the video data,” and that Petitioner does not allege any processing of AV data beyond that provided by the WDH. PO Resp. 40–41 (citing Ex. 1007 ¶¶ 56, 93, 115, 124–126; Ex. 2004 ¶¶ 127).

Claim limitation 1[m] recites “the first peripheral device receiving the third video data and processing the third video data to form second processed video data.” As to this limitation, Petitioner cites to paragraphs 124–126 of van de Laar and calls out “WFM packets,” but provides no other explanation. Pet. 56–57. Dr. Almeroth’s testimony repeats the citations in the Petition without adding any explanation. Ex. 1002 ¶ 242.

Patent Owner argues that Petitioner does not show that the first peripheral device processes the third video data and, instead, relies on

interpreting and decoding performed by the WDH. PO Resp. 46–47 (citing Ex. 1007 ¶ 126; Ex. 2004 ¶¶ 130, 178–179).

Patent Owner’s arguments for both limitations 1[i] and 1[m] are similar: Although limitations 1[i] and 1[m] require processing by the first peripheral device, Petitioner does not identify any processing performed by communication unit 121 (mapped to the first peripheral device) but, instead, identifies (if anything) processing performed by the WDH (mapped to the base unit). *Id.* at 40–41, 46–47.

We agree with Patent Owner. The Petition does not present any evidence that van de Laar’s communication unit 121 processes either “the first processed video data received by the first peripheral device” or “the third video data.” Paragraph 56 does not discuss van de Laar’s communication unit 121. Instead, it describes functionality provided by the WDH host device, such as scaling and transcoding data before those data are provided to dockee devices.

Paragraph 93 describes the different access rights a primary or secondary dockee might be assigned with respect to a functional device. Paragraph 115 describes the WDH providing an AV stream from functional devices to a dockee. Paragraphs 124–126 describe the communication structure of a wireless docking system, but do not attribute any function to communication unit 121; instead, any processing is by the WDH. For example, “the WDH may scale the audio/video data to constrain bandwidth.” Ex. 1007 ¶ 126.

In the Reply, Petitioner argues that Patent Owner mischaracterizes van de Laar’s data flow and, instead, the WDH forwards WFM packets in broadcast mode to secondary dockees. Reply 17–18 (citing Ex. 1007 ¶ 126;

Ex. 1062 ¶ 66). In this scenario, Petitioner argues, communication unit 121 functions as a WFM sink, and receives and process WFM packets.

Id. (citing Ex. 1007 ¶¶ 124–126; Ex. 1062 ¶ 66). Petitioner argues that packet generation happens at the WDH while packet reception and processing happen at communication unit 121. *Id.* (citing Ex. 1062 ¶¶ 65–66). Dr. Almeroth expands on this in his testimony to purportedly “clarify the technical data flow in the proposed combination”:

In the combination, when a user runs Skype on the processing device: (1) video data from the Skype application (“third video data”) is sent through the peripheral device to the WDH using standard protocols like Wi-Fi Miracast; (2) the peripheral device processes this data to form “second processed video data” by encoding it for wireless transmission (“WFM packets”); and (3) the WDH receives this processed data, decodes/enhances it, and forwards it to functional devices like displays.

Ex. 1062 ¶ 66 (citing Ex. 1007 ¶¶ 59, 73, 123, 126, 128).

Petitioner did not explain this theory in the Petition or present evidence to support it, nor is it responsive to the Patent Owner Response. Thus, it is forfeited. *See* 37 C.F.R. § 42.23(b) (“A reply may only respond to arguments raised in the corresponding opposition, patent owner preliminary response, patent owner response, or decision on institution.”).

Moreover, Petitioner’s evidence does not support its new theory. Instead, Petitioner’s citations reinforce Patent Owner’s argument that the WDH host (mapped to the base unit of claim 1), not communication unit 121 (mapped to the first peripheral device), performs what Petitioner identifies as processing. Paragraph 59 of van de Laar describes the “docking processor,” the WDH, as managing shared AV data for dockees, including “providing at least one of split screen, overlaying, at least one window, video scaling,

audio mixing.” Paragraph 123 describes the WDH, not communication unit 121, performing processing, including merging, split screen, picture-in-picture, overlay, video mixing, scaling, and re-encoding. Paragraph 128 describes a primary dockee providing output to the WDH, and notes that “[t]he WDH can mix this with the audio output for the audio peripherals so that all people in the room can hear it.” Once again, the WDH, not communication unit 121, performs the processing. As noted above, the paragraphs discussing Figure 3, including paragraphs 73 and 124–126, describe the WDH, not processing unit 121, performing processing.⁸

Dr. Almeroth’s new testimony provides no evidence that the peripheral device processes third video data by encoding it for wireless transmission in WFM packets. Ex. 1062 ¶ 66. Instead, a primary dockee encodes WFM packets for transmission to the WDH. Ex. 1007 ¶ 126. Dr. Ameroth’s testimony on this point, which is inconsistent with van de Laar’s disclosure, lacks credibility and is entitled to little weight.

In sum, Petitioner has not shown that van de Laar and Kaplan teach claim limitation 1[i], “the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data,” or claim limitation 1[m], “the first peripheral device receiving the third video data and processing the third video data to

⁸ We note further that Petitioner cites several of these paragraphs, including paragraphs 56, 115, and 123, to show that the WDH, not communication unit 121, performs the processing when alleging that van de Laar teaches claim limitation 1[h] (“the first video data being processed in the base unit to generate the first processed video data”). Pet. 51–53. This inconsistency further undermines Petitioner’s allegations for claim limitations 1[i] and 1[m].

form second processed video data.” Petitioner does not rely on Christison to cure this deficiency. Pet. 53, 56–57. Thus, Petitioner has not proved, by a preponderance of the evidence, that claim 1 would have been obvious over van de Laar and Kaplan, or over van de Laar, Kaplan, and Christison.

d) Alleged indiscriminate citation to primary and secondary dockees

As explained above, van de Laar describes two different types of “dockee” devices, primary dockees and secondary dockees, with “different sets of access rights and peripheral functions” assigned to them. Ex. 1007 ¶ 77. For example, a primary dockee device is given control of a peripheral for determining the AV data to be rendered, while a secondary dockee device is able to monitor the AV data locally. *Id.*

Claim 1 recites a method that includes “a processing device,” with steps where the same processing device receives data from a base unit and transmits data to the base unit (both via a first peripheral device). Patent Owner contends that Petitioner indiscriminately relies on communications to a secondary dockee for claim limitations 1[g], [i], [k], and [l], but relies on communications from the primary dockee for limitations 1[l], 1[m], and 1[n]. PO Resp. 39. Put differently, Patent Owner argues that Petitioner cites

to two different dockees for these limitations when claim 1 recites a single processing device that satisfies all these limitations.⁹

For claim limitation 1[g], “the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network,” Petitioner argues that “[t]he secondary dockees receive the ‘first processed video data’ via the communication unit 121.” Pet. 50–51 (citing Ex. 1007 ¶¶ 55, 80, 92, 115, 123; Ex. 1002 ¶ 232). Likewise, for limitation 1[i] (discussed in detail above), Petitioner points to description in van de Laar of a secondary dockee enabled to receive AV data as rendered by a functional device. *Id.* at 53 (citing Ex. 1007 ¶¶ 56, 93, 115; Ex. 1002 ¶ 235). Thus, for at least these limitations, Petitioner relies on van de Laar’s description of secondary dockees.

In contrast, for claim limitations 1[m] (“the first peripheral device receiving the third video data and processing the third video data to form second processed video data”) and 1[n] (“wherein the base unit receives the second processed data, and decodes and/or enhances the second processed data and forwards it to a functional device which is connected or attached to the base unit through a serial connection”), Petitioner cites to disclosure in van de Laar of a primary dockee generating WFM packets and transmitting

⁹ Neither party argues that this is a situation that implicates the Federal Circuit’s “general rule that the use of the indefinite articles ‘a’ or ‘an’ means ‘one or more.’” *SanDisk Corp. v. Kingston Tech. Co.*, 695 F.3d 1348, 1360 (Fed. Cir. 2012). Although claim 1 does not preclude multiple processing devices, the references in claim 1 to required characteristics of “the processing device” make clear that at least one processing device must meet such requirements, and Petitioner does not contend otherwise.

them to the WDH. *Id.* at 56–57 (citing Ex. 1007 ¶¶ 59, 60, 73, 79–86, 123–126; Ex. 1002 ¶¶ 242–243). Thus, for at least these limitations, Petitioner relies on van de Laar’s description of primary dockees.

Patent Owner advances its argument primarily for claim limitation 1[g]. PO Resp. 37–40. Patent Owner argues that the Petition fails to identify any instances of video data being communicated from the WDH to a primary dockee, and, instead, wrongly relies on features of the secondary dockee for this limitation while relying on primary dockee features for other limitations. *Id.* at 38–40. Patent Owner argues that primary and secondary dockees, by design, have different access levels and capabilities with respect to the WDH and functional devices. *Id.* at 39 (citing Ex. 2004 ¶¶ 163–164).

Van de Laar’s disclosure supports Patent Owner’s argument. According to van de Laar,

The inventors have seen that the above problems of interference between dockees when attempting to dock to a same peripheral are overcome by distinguishing at least two types of dockees, and providing control over the peripheral to only a primary dockee. The secondary dockee gets a different, restricted access to the peripheral, or, in effect, a different peripheral function is presented to the secondary dockee to represent the access to the original peripheral. For example, the primary dockee gets access to a display, whereas the secondary dockee is enabled to monitor the output on the display by receiving a video data stream of a peripheral similar to a camera function. Ex. 1007 ¶ 55.

In the Reply, Petitioner argues that van de Laar’s primary and secondary dockees can transition between roles and simultaneously send and receive content. Reply 16 (citing Ex. 1007 ¶¶ 59–60, 93, 96, 123; Ex. 1062 ¶¶ 68–70). The Reply does not identify properly where Petitioner previously

raised this new theory and we do not find where. Nor is this argument responsive to the Patent Owner Response. Thus, it will not be considered.

Even if we were to consider the new theory, Petitioner's evidence is problematic. For example, van de Laar's paragraph 60 states "[o]ptionally, the docking processor is arranged for, upon instruction of a primary and/or secondary dockee device, transforming a secondary device into a primary dockee device, or a primary dockee device into a secondary device.

Advantageously, in a group of dockees, the assignment of the primary and secondary dockee function can be modified later." At most, this establishes that the docking processor can change a dockee's role from a primary dockee to a secondary dockee, and vice versa, as a user's roles change in a meeting. It does not show that a dockee changes roles mid-transaction or that a primary dockee is also simultaneously a secondary dockee.

Paragraph 93 states that "[t]he primary dockees may have read and write access to a display screen and/or audio, while the secondary dockees may only have read access. For example such difference may apply for the lecture room use case and for the meeting room use case." The fact that a primary dockee also has read access does not show that it is also a secondary dockee. Indeed, paragraph 93 states that "the A/V output may be offered to a secondary dockee through a simulated peripheral (e.g. simulated webcam) that would appear to the dockee as if it were a normal peripheral," but makes no such provision for primary dockees receiving output through a simulated peripheral.

Petitioner relies on new expert testimony to explain its new theory. Reply 16 (citing Ex. 1062 ¶¶ 68–70, 72, 84). In his testimony, Dr. Almeroth posits that "Van de Laar expressly teaches that dockees are not locked into a

single role,” and purports to quote paragraph 93 of van de Laar as stating “[e]ach dockee can therefore operate in the capacity as a primary, secondary, or both, by having any combination of write and read permissions,” and paragraphs 59–60 of van de Laar as stating “[t]he system ‘allows for more than one primary dockee to be connected to the wireless docking host (WDH) at the same time, and that each primary dockee can both send AV data to the WDH and receive AV data from the WDH.’” Ex. 1062 ¶ 69. These quotations from van de Laar do not exist, and the actual disclosures of those paragraphs are different in substance. Asked to explain these discrepancies at the hearing, counsel for Petitioner argued that the quotations should not have been identified as quotes and that the language in the incorrect quotes came from a brief filed in a different proceeding.

Tr. 47:20–48:3. Counsel was unsure whether the relevant paragraphs of Dr. Almeroth’s Reply Declaration were drafted by Dr. Almeroth or Petitioner’s attorneys. *Id.* at 47:1–8, 48:4–48:19.

We do not conclude that either Dr. Almeroth or Petitioner’s attorneys deliberately misrepresented van de Laar’s disclosure. However, the record shows uncertainty as to whether the opinions stated in Dr. Almeroth’s Reply Declaration are his own or those of the attorneys who drafted the briefing in this proceeding (or a different proceeding). In any case, the record shows that Dr. Almeroth did not review his testimony carefully before submitting it. Dr. Almeroth’s Reply Declaration is unreliable, lacking in credibility, and entitled to no weight.

Thus, neither van de Laar’s disclosure nor Dr. Almeroth’s testimony supports Petitioner’s new theory as to van de Laar’s primary and secondary dockees. Even if we were to consider the Reply’s new arguments, Petitioner

has failed to identify in van de Laar a processing device that performs all the functions of a processing device required by claim 1.

In sum, Petitioner has not shown that van de Laar and Kaplan teach claim limitation 1[g], “the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network.” Petitioner does not rely on Christison to cure this deficiency. Pet. 50–51. Thus, for this additional reason, Petitioner has not proved, by a preponderance of the evidence, that claim 1 would have been obvious over van de Laar and Kaplan, or over van de Laar, Kaplan, and Christison.

e) Claims 2–31

Independent claims 12, 23, and 27 each include limitations substantially similar to claim limitations 1[g] and 1[i]. Claims 12 and 23 also each include a limitation substantially similar to claim limitation 1[m]. Petitioner includes its analysis of claim 12 along with claim 1. Pet. 44. Petitioner does not argue claims 23 and 27 separately and, instead, refers to its analysis of claims 1 and 12 for claims 23 and 27. *Id.* at 66–71. For the reasons given for claim 1, Petitioner has not met its burden to prove, by a preponderance of the evidence, that van de Laar, Kaplan, and (optionally) Christison teach each limitation of claims 12, 23, and 27.

Claims 2–11 depend, directly or indirectly, from claim 1. Claims 13–22 depend, directly or indirectly, from claim 12. Claims 23–26 depend from claim 23. Claims 28–31 depend, directly or indirectly, from claim 27. Petitioner’s additional arguments and evidence for the dependent claims do not remedy the deficiency in its showing for the independent claims.

Id. at 58–66, 69, 71. Thus, Petitioner has not met its burden to prove, by a preponderance of the evidence, that van de Laar, Kaplan, and (optionally) Christison teach each limitation of claims 2–11, 13–22, 23–26, and 28–31.

3. Conclusion of Obviousness

As detailed above, we find that van de Laar, Kaplan, and, optionally, Christison do not teach each limitation of claims 1–31. We have considered Patent Owner’s objective indicia of nonobviousness (PO Resp. 54–71) and it does not change our conclusion. Upon consideration of all the evidence, we conclude that Petitioner has not proved by a preponderance of the evidence that claims 1–31 would have been obvious over van de Laar and Kaplan, or over van de Laar, Kaplan, and Christison.

E. Objective Indicia of Nonobviousness

Patent Owner advances objective indicia of nonobviousness, including evidence of commercial success and licensing. PO Resp. 56–71; Sur-reply 22–25. Petitioner responds to this argument and evidence. Reply 26–29. Although we have considered Patent Owner’s objective indicia, because we find that Petitioner does not prove that claims 1–31 would have been obvious on any of its asserted grounds, we need not discuss or make findings as to whether Patent Owner’s offered objective indicia show nonobviousness. In any case, consideration of Patent Owner’s objective indicia does not change our findings or conclusions as to the Petitioner’s evidence of obviousness.

IV. CONCLUSION

Petitioner has not proved by a preponderance of the evidence that claims 1–31 of the '347 patent are unpatentable.

The outcome for the challenged claims of this Final Written Decision is summarized in the following table:

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–31	103	Beel, Dinka		1–31
1–31	103	Beel, Dinka, Christison		1–31
1–31	103	Van de Laar, Kaplan		1–31
1–31	103	Van de Laar, Kaplan, Christison		1–31
Overall Outcome				1–31

V. ORDER

It is hereby:

ORDERED that 1–31 of the '347 patent are not unpatentable; and

FURTHER ORDERED that because this is a Final Written Decision, parties to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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IPR2025-00598
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