

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.

US Patent No. 11,966,347

Inter Partes Review No.: IPR2025-00598

PETITIONER REPLY
TO
PATENT OWNER RESPONSE

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UPDATED LIST OF EXHIBITS

EXHIBIT	DESCRIPTION
Ex-1001	U.S. Patent No. 11,966,346 (“346 patent”)
Ex-1002	Declaration of Kevin C. Almeroth, Ph.D.
Ex-1003	Curriculum Vitae of Kevin C. Almeroth, Ph.D.
Ex-1004	File History of U.S. Patent No. 11,966,346
Ex-1005	U.S. Publication No. 2015/0169477 (“Beel”)
Ex-1006	U.S. Patent No. 8,369,498 (“Dinka”)
Ex-1007	U.S. Publication No. 2016/0014172 (“Van de Laar”)
Ex-1008	U.S. Publication No. 2010/0295994 (“Kaplan”)
Ex-1009	Skype Webpage (Archived Sept. 14, 2012) https://web.archive.org/web/20120914232239/http://www.skype.com/intl/en-us/home (accessed Feb. 3, 2025).
Ex-1010	USB Endpoints and Their Pipes - Windows drivers _ Microsoft Learn.pdf https://learn.microsoft.com/en-us/windows-hardware/drivers/usbcon/usb-endpoints-and-their-pipes (accessed Feb. 3, 2025)
Ex-1011	U.S. Patent No. 7,761,627 (“Christison”)
Ex-1012	EP3732827B1 (“Renard”)
Ex-1013	Skype Webpage (Archived Nov. 28, 2015) https://web.archive.org/web/20151128100316/http://www.skype.com/en/ (accessed Feb. 3, 2025)
Ex-1014	U.S. Patent Application Publication No. 2002/0196378 (“Slobodin”)
Ex-1015	U.S. Patent Application Publication No. 2008/0074560 (“Ichieda”)
Ex-1016	English Translation of JP Patent Application Publication No. 2007-208606 (“Maeda”)
Ex-1017	JP Patent Application Publication No. 2007-208606
Ex-1018	Certification for English Translation of JP Patent Application Publication No. 2007-208606
Ex-1019	U.S. Patent Application Publication No. 2002/0174254 (“Kita”)
Ex-1020	U.S. Patent Application Publication No. 2005/0210390 (“Ono”)
Ex-1021	EP Patent Application Publication No. 2107463 (“Deforche”)
Ex-1022	U.S. Patent Application Publication No. 2009/0172219 (“Mardiks”)
Ex-1023	English Translation of Japanese Patent Application Publication No. 2008-165007 (“Uchida”)
Ex-1024	JP Patent Application Publication No. 2008-165007

Ex-1025	Certification for English Translation of Japanese Patent Application Publication No. 2008-165007
Ex-1026	Imation Wireless Projection Link User Guide
Ex-1027	EZAir Press Release, "EZAir Wireless PC to TV Solutions Now Available Across Europe," March 16, 2011
Ex-1028	Warpia Product Brief, "Wireless USB PC to TV Audio/Video Display Adapter," 2009
Ex-1029	Q-Waves Product Overview, "Quicklink TV," November 2010
Ex-1030	IOGear Installation Guide, "Wireless USB to VGA Kit," 2008
Ex-1031	Dictionary definition of "Communication Protocol"
Ex-1032	WIPO Publication No. WO 2012/128972 ("Scragg")
Ex-1033	Wi-Fi Security Webpage (Archived Aug. 16, 2017) (https://web.archive.org/web/20170816134219/http://www.wi-fi.org/discover-wi-fi/security) (accessed Feb. 3, 2025)
Ex-1034	Dictionary definition of "transform"
Ex-1035	What is screen scraping? By Alexander Gillis (https://www.techtarget.com/searchdatacenter/definition/screen-scraping) (accessed Feb. 10, 2025)
Ex-1036- Ex-1049	RESERVED
Ex-1050	December 18, 2025 Deposition Transcript of Dr. Michael C. Brogioli for IPR2025-00491 file:///C:/Users/kgreenleaf/Downloads/346 Dr. Almeroth Reply Decl.docx
Ex-1051	Microsoft, "USB device drivers (Windows Drivers)," Microsoft Learn, https://learn.microsoft.com/en-us/windows-hardware/drivers/usbcon/ (accessed Mar. 2026)
Ex-1052	"Universal Serial Bus Specification, Revision 2.0," §§ 5.3, 9.1–9.2, April 27, 2000, http://www.poweredusb.org/pdf/usb20.pdf (accessed Mar. 2026)
Ex-1053	"Virtual Audio Device (Kernel Streaming)," Microsoft Learn, https://learn.microsoft.com/en-us/windows-hardware/drivers/audio/virtual-audio-devices (accessed Mar. 2026)
Ex-1054	"Windows Driver Model (WDM)," Microsoft Learn, https://learn.microsoft.com/en-us/windows-hardware/drivers/kernel/introduction-to-wdm (accessed Mar. 2026)
Ex-1055	"About Multimedia (Audio/Video)," Microsoft Developer Network Archive, https://learn.microsoft.com/en-

	us/windows/win32/multimedia/about-multimedia (accessed Mar. 2026)
Ex-1056	“Wireless USB Specification, Revision 1.1,” Wireless USB Promoter Group, Sept. 2010, https://www.usb.org/document-library/wireless-usb-specification-rev-1-1 (accessed Mar. 2026)
Ex-1057	Salman A. Baset & Henning Schulzrinne, “An Analysis of the Skype Peer-to-Peer Internet Telephony Protocol,” Columbia University, 2006, https://arxiv.org/abs/cs/0412017 (accessed Mar. 2026)
Ex-1058	“Wi-Fi Peer-to-Peer (P2P) Technical Specification, Version 1.7,” Wi-Fi Alliance, October 2016
Ex-1059	“Overview of the Media Foundation Architecture,” Microsoft Learn, https://learn.microsoft.com/en-us/windows/win32/medfound/about-topologies (accessed Mar. 2026)
Ex-1060	March 11, 2026 Deposition Transcript of Dr. Michael C. Brogioli for IPR2025-00597 and IPR2025-00598
Ex-1061	ClickShare C-5 datasheet
Ex-1062	Declaration of Dr. Kevin C. Almeroth in Support of Petitioner's Reply

I. INTRODUCTION

Patent Owner's Response fails. It mischaracterizes prior art, limits references to preferred embodiments, and relies on contradictory expert testimony. Dr. Brogioli could not name any OS functioning without drivers; had "no opinion" on whether Kaplan includes non-walled-garden embodiments; conceded dockees can switch roles; and maintained Beel's mass storage device is not an endpoint while conceding the identical '347 Patent component may be. This unreliable testimony pervades Patent Owner's case.

Patent Owner's principal arguments fail: (1) Beel discloses bidirectional data flow; (2) Beel discloses video data processing in the base unit; (3) Beel discloses endpoints; (4) Dinka does not teach away; (5) motivation to combine exists for both grounds; (6) Van de Laar's communication unit can be implemented as a peripheral device; (7) the combination teaches drivers; (8) Kaplan's "walled garden" does not prohibit combination; and (9) secondary considerations lack nexus.

II. GROUND 1: BEEL-DINKA-CHRISTISON

A. Beel Discloses *"the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network"*

Patent Owner wrongly contends that Beel describes only communications from the peripheral device to the base unit. POR, 14-17. The opposite is true.

The Board found Beel teaches this limitation. ID, 15-17. Beel describes "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.” ID, 16; Ex-1062, ¶¶8, 19-20. Patent Owner offers no new evidence.

1. Beel Expressly Discloses Bidirectional Communication

Beel expressly discloses bidirectional communication. The peripheral device includes “a third software code portion for receiving media content from the network and for displaying the media content on the display.” Ex-1005, ¶71; Ex-1062, ¶20. Patent Owner recharacterizes this as pertaining only to outbound communications. POR, 15-17. The Board rejected this. ID, 16-17. Beel also discloses microphones 38 transmitting audio data “to the processing devices 31,” establishing a bidirectional path. Ex-1005, ¶120; Ex-1062, ¶¶21, 45; ID, 18.

Patent Owner contends each cited paragraph describes only outbound communication. POR, 32. The Board found otherwise: Beel’s disclosure is “consistent with Petitioner’s assertions (and contrary to Patent Owner’s).” ID, 17. Even if Beel alone were insufficient, Dinka expressly teaches bidirectional communication. Ex-1006, 4:25-30, 5:2-5; ID, 20.

Patent Owner also argues Beel’s peripheral device processes only outbound data, not “*first processed video data*” from the base unit. POR, 20. This conflates direction with data type. The claim requires processing “*first processed video data received by the first peripheral device.*” Ex-1001, Cl. 1. Beel’s peripheral device

“receiving media content from the network and [processing it] for display.” Ex-1005, ¶71. Patent Owner ignores Beel’s express disclosure of inbound processing.

2. Dr. Brogioli’s Testimony Undermines Patent Owner’s Position

Dr. Brogioli’s testimony undercuts Patent Owner’s position. He speculated Beel’s microphone “may be” directly connected to the processing device, an interpretation Beel does not support. Ex-1060, 21:24-23:25; Ex-1062, ¶23. He conceded Beel’s peripheral device software is “for receiving media content from the network” but admitted this was “a bit unclear” to him. Ex-1060, 117:11-118:9; Ex-1062, ¶23.

B. Beel Discloses “*the functional device being configured for first video data to flow into the base unit...the first video data being processed in the base unit*”

The Board rejected Patent Owner’s argument that Beel does not disclose video data flowing into the base unit or processing data therein. POR, 17-20; ID, 17-18.

Beel describes cameras 39, 40, 41 and whiteboard 45 coupled to base node 36: “a processing device, e.g. a host computer adapted to receive user selected arbitrary media content.” Ex-1005, ¶¶119-120, 123; Ex-1062, ¶22. The Board found “other optional equipment, e.g., cameras, would supply video data to be transferred via base node 36 to the processing devices.” ID, 18. Beel discloses “[c]ameras 39, 40, 41 for recording the progress of the meeting...can be linked by a network 51, e.g. a cable network to the router 42 and/or the base node 36.” Ex-1005, ¶120. Patent Owner

argues camera 35 connects to a “connection unit,” not the base node. POR, 19. Wrong. Camera 35 records whiteboard entries so “the data from the whiteboard can be recorded and stored or transmitted to other networks.” Ex-1005, ¶119. This transmission occurs through the base node. The whiteboard itself “can be optionally coupled to the display 44 and/or the base node 36.” *Id.* Cameras 39, 40, 41 independently establish video data flowing into the base unit; camera 35 provides additional support.

Beel also discloses processing video data in the base unit. The base node software includes code for “receiving, decrypting and decoding incoming arbitrary media content” and “encoding” video data. Ex-1005, ¶¶67, 72, 155, 317, 320; Ex-1062, ¶¶9-12, 22, 24-31. Patent Owner argues paragraphs 71-72 describe only outbound communications. POR, 9. The Board disagreed, finding those paragraphs describe “sending video data from the base station to the first peripheral device.” ID, 18. Beel’s statement that the system “communicat[es] arbitrary media content between different users” confirms bidirectional flow. Ex-1005, ¶122; Ex-1062, ¶¶44, 46-47.

C. The Prior Art Teaches “*at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device*”

Patent Owner argues Beel does not disclose endpoints because it does not use that word. POR, 21-23. This argument fails.

The '347 Patent admits Figure 4—identical to Beel's Figure 11—depicts “vendor specific endpoints and a number of standard endpoints.” Ex-1001, 18:4-9; Ex-1062, ¶33; compare Ex-1001, FIG. 4 with Ex-1005, FIG. 11. Patent Owner cannot disclaim its own specification. Its argument that Figure 4 components are not labeled as endpoints (POR, 21) ignores that the specification expressly identifies them as such.

1. Dr. Brogioli's Formalistic Approach Ignores Technical Reality

Dr. Brogioli's formalistic position that Beel does not teach endpoints because it omits the word reflects flawed reasoning. Ex-1062, ¶¶33-35, 78, 85-86. He testified references not using “endpoint” do not disclose endpoints. Ex-1060, 106:3-15, 106:24-107:2-5, 109:1-6. Asked whether prior art must use that word, he could only say a reference “could describe such things, maybe with a different choice of words.” Ex-1060, 109:7-20; Ex-1062, ¶34. Yet he conceded “there are endpoints associated with the USB spec for a mass storage device” and Beel's Figure 11 includes “mass storage device 12.” Ex-1060, 95:14-98:1; Ex-1062, ¶¶34, 86. He maintained Beel's mass storage device is not an endpoint while conceding the identical '347 Patent component may be. Ex-1060, 107:25-108:9; Ex-1062, ¶¶34, 78, 85. USB devices include endpoints. Ex-1002, ¶158; Ex-1062, ¶35. Beel discloses “Mass storage device 12,” “USB port 11 by a dedicated audio device 14,” and “the

USB port 11, read by the Human Interface Driver (HID) interface handler 13.” Ex-1005, FIG. 11, ¶¶320-23.

Patent Owner’s “*of the functional device*” argument (POR, 22-23) mischaracterizes both claim language and data flow. The claim requires “*at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device,*” meaning the endpoint exposes the functional device’s data, not that it physically resides there. Data from cameras and microphones flows through the network to the peripheral device, which exposes it through endpoints. Ex-1062, ¶¶32-35. The endpoint is “*of*” the functional device because it represents that device to the OS. The ’347 Patent operates identically: “a functional device, e.g., a second peripheral device is exposed natively or as a mimic...on the first peripheral device.” Ex-1001, 12:21-29.

If Patent Owner urges a narrow “*exposed natively*” construction, Christison independently teaches this limitation. Christison discloses presenting wired USB devices as “native” wireless USB devices. Ex-1011, 6:13-19, 6:17-19, 6:25-26; Ex-1062, ¶¶16-17, 43, 64. The Board recognized Christison renders obvious “configuring descriptor fields, which every USB device has.” Ex-1002, ¶230. Dr. Brogioli acknowledged Christison describes presenting wired USB devices “as if they were native WUSB devices.” Ex-1060, 82:11-20. He conceded a wireless USB device would “appear as a generic USB device” to the OS. Ex-1060, 82:3-8. Patent

Owner's "indiscriminate" characterization (POR, 17-18) ignores Christison's narrow purpose. The primary references independently establish this limitation; Christison strengthens it. Christison was cited during prosecution and the examiner relied on it (Ex-1004, 249-230).

D. Dinka Does Not Teach Away

Patent Owner argues Dinka teaches away because it proposes embedding VoIP into television sets rather than laptops. POR, 25-28. The Board rejected this argument. ID, 21-23. "Dinka does not lead a skilled artisan in a direction divergent from the path taken in the '347 patent." ID, 22-23. "[J]ust because better alternatives exist in the prior art does not mean that an inferior combination is inapt for obviousness purposes." *Id.*

Dinka identifies the same problem as the '347 Patent, *i.e.*, inadequate built-in functional devices-and proposes a similar solution. Ex-1001, 1:41-52; Ex-1006, 2:15-24; Ex-1062, ¶¶36-38. Dinka never says laptop-based VoIP is unworkable. It acknowledges PCs are the most common VoIP platform and proposes an alternative. Ex-1006, 2:1-4; Ex-1062, ¶¶37-38. Dinka discloses "a plurality of computer terminals 102" and states VoIP is "most commonly accessed using a personal computer." Ex-1006, FIG. 1, 2:1-4, 5:45-46; Ex-1062, ¶¶37, 39, 82. Dr. Brogioli conceded Dinka does not say "a VoIP call would be nonfunctional between two

laptops.” Ex-1060, 99:11-17; Ex-1062, ¶¶39, 82. That falls far short of teaching away.

E. Petitioner Establishes Motivation to Combine

The Board found sufficient motivation. ID, 21. “Dinka’s teachings would have improved Beel’s similar system” with “predictable results.” *Id.* The ’347 Patent admits Skype was known. Ex-1001, 1:36-46; Ex-1062, ¶¶41, 81-82. Combining Beel with Dinka’s Skype functionality yields a predictable bidirectional conferencing system. Ex-1062, ¶¶40-43.

Patent Owner’s *Virtek Vision Int’l ULC v. Assembly Guidance Systems, Inc.* reliance is misplaced. 97 F.4th 882, 888 (Fed. Cir. 2024). Petitioner articulates why a POSITA would combine these references, not merely that known elements exist. Ex-1062, ¶¶40-43. Patent Owner emphasizes “could have been combined” language. POR, 30-32. But the Board found motivation established. ID, 21. Both references address A/V conferencing, disclose similar architectures, and the ’347 Patent admits Skype was known. This is reasoning with some rational underpinning. That Beel distinguishes meeting system types (POR, 31) only confirms Beel knew of web conferencing, making the combination more obvious. Ex-1062, ¶42.

F. Dependent Claims Are Obvious

Patent Owner largely relies on arguments for the independent claims, but Petitioner addresses issues specific to the following dependent claims.

1. Claims 2 and 13: “*the first video data is interpreted and/or encoded in the base unit*”

Beel's “Base Node Software” includes “code...for auto-composing of different incoming arbitrary media streams and rendering of composited image on display.” Ex-1005, ¶154; Ex-1062, ¶¶51-52. Auto-composing requires interpreting incoming video data. Ex-1002, ¶¶137-139; Ex-1062, ¶¶24-27, 51, 80. Beel also discloses “Scaling of incoming arbitrary media Streams” (Ex-1005, ¶156), requiring data analysis. Ex-1062, ¶¶51, 80. Dr. Brogioli admitted he did not address “interpreting.” Ex-1060, 132:5-24; Ex-1062, ¶¶51, 80.

2. Claims 3 and 14: “*the base unit is configured to enhance, mix, multiplex, and/or encrypt the first video data*”

Beel's base node software includes “code...for auto-composing of different incoming arbitrary media streams.” Ex-1005, ¶154; Ex-1062, ¶52. Auto-composing equals “mixing” or “multiplexing.” Ex-1002, ¶¶139, 168; Ex-1062, ¶¶29-31, 52. Beel discloses mixing audio and video for synchronization. Ex-1005, ¶¶314-18, 323; Ex-1062, ¶¶27-30. Patent Owner says Dr. Almeroth provided “without any evidence” (POR, 24), but compositing multiple streams is mixing by definition. Ex-1062, ¶52.

3. Claims 5 and 16: “*the first peripheral device is configured to demultiplex and/or decrypt*”

A POSITA would find it obvious to demultiplex data for “incoming arbitrary media content” obtained through Beel's video mixing, using standard algorithms and decryption. Ex-1005, ¶72; Ex-1002, ¶137; Ex-1062, ¶¶53-54.

4. Claims 4 and 15: “*the first peripheral device is configured to decode and/or interpret the first processed video data*”

Beel teaches the peripheral device decoding and interpreting video data. The peripheral device receives video packets that are “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.” Ex-1005, ¶322; Ex-1062, ¶¶48-50. Beel also discloses the peripheral device software includes code “for receiving, decrypting and decoding incoming arbitrary media content.” Ex-1005, ¶72; Ex-1062, ¶53. This decoding and unpacking is precisely what Claims 4 and 15 require. Ex-1002, ¶¶140-141, 169. Dr. Brogioli did not dispute that unpacking and decoding constitute “decode and/or interpret.”

III. GROUND 2: KAPLAN-VAN DE LAAR-CHRISTISON

A. The Combination Teaches “*a first peripheral device being configured to be coupled to the processing device via a generic communications protocol*”

Patent Owner argues the Petition fails to identify which transmission path the combination uses and that Van de Laar’s communication unit 121 is not a peripheral device. POR, 33-36. Both arguments attack the references individually, not the combination.

The combination is clear: Kaplan’s USB peripheral implements Van de Laar’s communication unit. Pet., 46; Ex-1008, ¶17. The Board found this sufficient. ID, 33-34. Patent Owner’s “unclear[ness]” claim (POR, 33-34) ignores how combinations

work: one reference teaches function, another teaches form. *In re Keller*, 642 F.2d 413, 426 (1981). Kaplan teaches USB connectivity using “a standard USB connection.” Ex-1008, ¶¶17, 45. A POSITA would use Kaplan’s USB peripheral to implement Van de Laar’s wireless communication function, applying a known technique to yield predictable results.

Van de Laar does not require an internal communication unit. Patent Owner argues Figure 1 depicts communication unit 121 as “integrated into” dockee 120. POR, 35-36. But Van de Laar teaches the communication unit can use “WiFi,” “Bluetooth,” or “60 GHz” technology. Ex-1007, ¶¶74-76; Ex-1062, ¶¶65, 74. Nothing precludes external USB implementation. Ex-1062, ¶65. Dr. Brogioli identified no technical obstacle to peripheral implementation. Ex-1060, 136:4-17; Ex-1062, ¶74. The Board found Patent Owner’s argument unpersuasive. ID, 34-35.

1. The Docking Processor 101 Is Distinct from the Communication Unit 121

Patent Owner argues the Petition conflates docking processor 101 (in the WDH) with communication unit 121 (in the dockee). POR, 39-41. Wrong. Van de Laar’s Figure 1 shows distinct components: docking processor 101 in the WDH; communication unit 121 in dockee 120. Ex-1007, ¶¶75-76, Fig. 1; Ex-1062, ¶74. The combination uses Kaplan’s USB peripheral for the dockee’s communication function—connecting to the processing device and wirelessly communicating with the base unit. Ex-1062, ¶74.

A POSITA would implement the communication unit as a USB peripheral. Kaplan shows “[t]he ubiquity of the USB standard and the availability of USB ports.” Ex-1008, ¶45. The Board agreed. ID, 35.

B. Petitioner’s Reliance on Primary and Secondary Dockees Is Appropriate

Patent Owner argues Petitioner “indiscriminately” relies on both dockee types. POR, 39-41. But Van de Laar teaches dockees can transition between roles. Ex-1007, ¶93.

1. Dockees Can Transition Between Primary and Secondary Roles

Van de Laar teaches primary dockees have “read and write access,” can transition between roles, and can simultaneously send and receive content. Ex-1007, ¶¶59-60, 93, 96, 123; Ex-1062, ¶¶68-70. It teaches “transforming a secondary device into a primary dockee device, or a primary dockee device into a secondary device.” Ex-1007, ¶60; Ex-1062, ¶69. Dr. Brogioli confirmed: “[Y]ou can be in a primary dockee state or a secondary dockee state, or go from a secondary dockee state...to a primary dockee state.” Ex-1060, 90:24-91:6; Ex-1062, ¶¶68, 72, 84. He conceded when a secondary dockee “changed into a primary dockee,” it “would have write access.” Ex-1060, 91:20-92:1; Ex-1062, ¶¶72, 84. This flexibility makes reliance on both functionalities proper. Van de Laar designed its system for flexibility. Ex-1062, ¶¶69-70, 84.

Patent Owner argues Van de Laar's Skype disclosure is limited to primary dockee-to-WDH communication. POR, 42-43. This misreads Van de Laar. Van de Laar teaches Skype runs on dockees. Ex-1007, ¶128; Ex-1062, ¶73. "Dockee device" encompasses both types. The WDH forwards content to secondary dockees: "The WDH provides an A/V stream representing the output being sent by presenter P to the WDH peripherals. This allows the users of the secondary dockee devices to follow the presentation." Ex-1007, ¶115; Ex-1062, ¶73. Dockees can transition between roles (Ex-1007, ¶60; Ex-1062, ¶¶69-70), so the same device running Skype can function as either. Patent Owner's primary-only limitation finds no support in Van de Laar.

2. Skype and Miracast Operate at Different Protocol Layers

Patent Owner argues Skype and Miracast cannot function together. POR, 43-44. This reflects fundamental misunderstanding. Skype operates at the application layer; Miracast operates at the transport layer. Ex-1007, ¶73; Ex-1062, ¶73. They routinely coexist. A user can run Skype while using Miracast to mirror that call—precisely Van de Laar's use case. Ex-1062, ¶73. *See* Ex-1007, ¶¶73, 128 (describing audio/video streaming mechanisms including Skype alongside wireless transport standards). Patent Owner conflates content generation with content transport.

Patent Owner argues the WDH, not the peripheral device, generates WFM packets. POR, 46-47. This mischaracterizes data flow. Van de Laar teaches the

WDH forwards WFM packets “in broadcast mode” to secondary dockees. Ex-1007, ¶126; Ex-1062, ¶66. The communication unit 121 functions as a “WFM sink,” receiving and processing those packets. Ex-1007, ¶¶124-126; Ex-1062, ¶66. This is the claimed peripheral-device processing. Patent Owner conflates packet generation (at the WDH) with packet reception and processing (at the communication unit), but the claims require processing at the peripheral device, which the combination of Kaplan and Van de Laar teaches. Ex-1062, ¶¶65-66.

C. The Combination Teaches “*a custom or standard driver*”

Patent Owner argues neither reference uses the word “driver.” POR, 44-45. This formalistic approach ignores technical reality. Operating systems use drivers to interface with peripherals. This is fundamental. Ex-1062, ¶¶13-18. A reference describing a USB device connecting to a Windows® computer inherently teaches driver use, that is how USB devices interact with operating systems. Ex-1062, ¶¶14-17. Kaplan discloses its processing device runs Windows® and automatically detects peripheral connections. Ex-1008, ¶¶47-49. The '347 Patent admits the OS installs “pre-installed generic driver[s]” “with the installation of the operating system.” Ex-1001, 8:65-9:1; Ex-1062, ¶18. A POSITA would understand Kaplan’s system includes standard drivers. Van de Laar’s peripherals support Wi-Fi standards requiring drivers. Ex-1002, ¶¶239-241; Ex-1062, ¶¶15, 75; ID, 38.

Dr. Brogioli opines simulated peripherals do not necessarily require drivers. Ex. 2004, ¶175. This contradicts how operating systems function. Ex-1062, ¶¶13-14, 79. He could not identify any real-world OS presenting simulated peripherals without drivers. Ex-1062, ¶¶13, 87. Asked for “an example of an operating system that presents devices to application software without using a driver,” he admitted: “I haven’t looked at that in this...I don’t think I looked at that in my declaration.” Ex-1060, 78:1-12; Ex-1062, ¶¶13, 77, 87. He could only speculate “you can simulate any number of things in software for access that may not require a driver,” but identified no actual implementation. Ex-1060, 149:18-150:1; Ex-1062, ¶¶76-77, 87. Yet he conceded when “a USB device is connected to a Windows computer, the operating system loads a device driver to interface with that device.” Ex-1060, 78:15-21; Ex-1062, ¶14.

D. Kaplan’s “Walled Garden” Does Not Prohibit Combination with Van de Laar

Patent Owner argues Kaplan’s “walled garden” is incompatible with Van de Laar. POR, 49-52. The Board rejected this. ID, 30-33.

Patent Owner omits that Kaplan describes “[e]mbodiments” with a walled garden-not all embodiments. Ex-1008, ¶21; Ex-1062, ¶71. Kaplan states “steps may be added or removed depending on the particular applications.” Ex-1008, ¶56. Pre-pairing occurs “in a particular embodiment,” indicating others exist. Ex-1008, ¶¶31, 54; Ex-1062, ¶71. Dr. Brogioli’s deposition testimony confirms this flexibility.

When asked whether “Kaplan contemplate[s] embodiments that do not require a ‘walled garden’ approach,” Dr. Brogioli testified: “I don’t recall that being something I’m discussing in my declaration, to the extent that’s within Kaplan.” Ex-1060, 112:24-113:1-5; Ex-1062, ¶71. Dr. Brogioli further admitted having “no opinion one way or the other whether Kaplan includes embodiments that do not require a ‘walled garden’ approach.” Ex-1060, 113:6-114:5; Ex-1062, ¶71. Federal Circuit precedent prohibits limiting prior art to preferred embodiments. *Honeywell Int’l Inc. v. 3G Licensing, S.A.*, 124 F.4th 1345, 1355-56 (Fed. Cir. 2025) (“We have long recognized that obviousness ‘does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art.’”). Moreover, the Board found that Patent Owner’s argument “does not allege (and we do not find) that the claims preclude transceivers paired out-of-the-box, or a walled garden approach.” ID, 32.

Petitioner does not rely on Kaplan’s pairing protocol. The Board noted “Petitioner does not rely on Kaplan to show which communications protocols might be used, and, thus, does not rely on the feature of Kaplan that Patent Owner argues is not compatible with van de Laar.” ID, 31-32. Petitioner relies on Kaplan for USB connectivity between processing device and peripheral transceiver. Pet., 45-46. Courts may read a reference “for all that it teaches, including uses beyond its primary

purpose.” *In re Mouttet*, 686 F.3d 1322, 1331 (Fed. Cir. 2012). Patent Owner’s walled-garden argument targets a feature Petitioner does not rely on.

Patent Owner argues Kaplan requires custom software, suggesting incompatibility with generic drivers. POR, 10-12. This fails. Kaplan’s software installation relates to content-sharing, not driver operation. Ex-1008, ¶22. Petitioner relies on Kaplan for USB connectivity. Pet., 45-46. Generic USB drivers are standard OS components. Ex-1001, 8:65-9:1. Whether Kaplan’s application software is “custom” is irrelevant to USB drivers. The transmitter installs application software for video streaming (Ex-1008, ¶22), but this is distinct from the operating system’s USB drivers that interface with the transmitter hardware. Second, Petitioner does not rely on Kaplan’s content-sharing protocol. The combination uses Kaplan to show USB connectivity between a processing device and peripheral transceiver. Pet., 45-46. The generic drivers that enable this USB connection are standard OS components, as the ’347 Patent admits. Ex-1001, 8:65-9:1. Whether Kaplan’s application software is “custom” or “proprietary” is irrelevant to whether the USB connection uses generic drivers—it obviously does.

Patent Owner’s argument reflects the bodily-incorporation fallacy. POR, 52. But “a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements.” *Mouttet*, 686 F.3d at 1332-33. “The test for obviousness is not whether the features of a secondary

reference may be bodily incorporated into the structure of the primary reference.”
Keller, 642 F.2d at 425. The combination applies Kaplan’s USB dongle teaching to
Van de Laar’s multi-device WDH architecture.

E. Petitioner Establishes Motivation to Combine

The Board found rational underpinning: “Kaplan’s standard operating system
and data transformations would have improved the usability of van de Laar’s
system.” ID, 30. Patent Owner argues Petitioner merely alleges references “*could*
have been combined.” POR, 49-54. But the Petition articulates specific reasons: Van
de Laar’s multi-device capability improves Kaplan’s single-transmitter approach,
enabling “collaboration and interaction purposes.” Ex-1007, ¶94; Ex-1002, ¶215.
Van de Laar expressly teaches the benefit of,

allow[ing] 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 collaboration and interaction purposes.

Ex-1007, ¶94. This express teaching of multi-user collaboration using shared
peripherals provides exactly the type of specific, articulable motivation that KSR
requires. Kaplan’s USB peripheral implements Van de Laar’s wireless
communication function. *KSR*: “[A] person of ordinary skill has good reason to
pursue the known options within his or her technical grasp.” 550 U.S. at 421.

Patent Owner calls Petitioner's Christison reliance "indiscriminate." POR, 17-18, 43-44. Wrong. Christison serves a narrow purpose: if Patent Owner urges a narrow construction of exposed natively, Christison teaches presenting remote USB devices as "native." Ex-1011, 6:13-19, 6:25-26. Dr. Brogioli confirmed Christison describes presenting wired USB devices "as if they were native WUSB devices." Ex-1060, 82:11-20. Optional reliance is permitted. Christison provides additional support if the Board construes "exposed natively" narrowly. Kaplan and Van de Laar independently establish the claimed limitations; Christison strengthens the case.

F. Ground 2 Dependent Claims

Patent Owner largely relies on arguments for the independent claims, but Petitioner addresses issues specific to the following dependent claims.

1. Claims 2 and 13: "*the first video data is interpreted and/or encoded in the base unit*"

Kaplan teaches its receiver 110 performs "[v]ideo processing, buffering, storage, and the like." Ex-1008, ¶27; Ex-1062, ¶¶55-57. Video processing involves interpreting data. Ex-1002, ¶244; Ex-1062, ¶56. Van de Laar teaches encoding data into "WFM packets" (Ex-1007, ¶126) and secure Wi-Fi using encrypted protocols. Ex-1007, ¶¶118-119; Ex-1062, ¶59. Patent Owner's argument that processing is "divided" among components ignores that both references teach processing at the base unit. Ex-1062, ¶¶55-57.

2. Claims 3 and 14: “*the base unit is configured to enhance, mix, multiplex, and/or encrypt the first video data*”

Van de Laar expressly discloses: “[i]f two or more primary docking devices send output to the same display peripherals simultaneously, the display output may be merged by the WDH using split screen, PIP, overlay or any other means of audio and video mixing, scaling and/or re-encoding.” Ex-1007, ¶123; Ex-1062, ¶¶58, 62. This teaches WDH mixing—precisely what claims 3 and 14 require. Ex-1062, ¶58. Van de Laar also teaches encryption through secure Wi-Fi. Ex-1007, ¶¶118-119; Ex-1062, ¶59.

3. Claims 5 and 16: “*the first peripheral device demultiplexes, and/or decrypts, the first processed video data*”

The Petition explains a POSITA would demultiplex data obtained through Van de Laar's video mixing. Ex-1002, ¶249; Ex-1062, ¶¶60-61. If data is mixed at the base unit, demultiplexing extracts individual streams at the receiving device, basic signal processing a POSITA would have understood. Ex-1062, ¶¶53-54, 60. Van de Laar also discloses, “[R]ead access may be to the original, full resolution AV data, or to a modified, e.g. scaled and/or transcoded, representation” (Ex-1007, ¶56), requiring decoding. Ex-1062, ¶¶53, 61.

4. Claims 4 and 15: “*the first peripheral device is configured to decode and/or interpret the first processed video data*”

Kaplan teaches video processing that includes decoding and interpreting. Kaplan discloses “[v]ideo processing, buffering, storage, and the like” at the

peripheral device. Ex-1008, ¶27; Ex-1062, ¶67. A POSITA would understand video processing inherently includes decoding. Ex-1002, ¶247; Ex-1062, ¶67. Van de Laar teaches that dockees receive “transcoded...representation of the primary AV data.” Ex-1007, ¶56; Ex-1062, ¶¶53, 63, 67. Use of transcoded data inherently requires the receiving device to decode and/or interpret the video data. Ex-1002, ¶248; Ex-1062, ¶67. All video communication involves encoding and decoding based on various protocols or codecs, such as H.264. Ex-1001, 14:9; Ex-1062, ¶¶26-28.

5. Claim 28: “*wherein third video data...is sent to an endpoint of the first peripheral device via a generic driver*”

Patent Owner argues the Petition improperly relies on Van de Laar’s Skype disclosure for Claim 28 and conflates primary and secondary dockee functions. POR, 45-46. This misreads both the claim and the combination.

Claim 28 requires third video data from a host or third-party application sent to an endpoint via a generic driver. Van de Laar teaches this. Ex-1062, ¶66. When a user runs Skype on the dockee (processing device), that application generates video data. Ex-1007, ¶128; Ex-1062, ¶66. This video data is sent through the dockee’s communication unit to the WDH. Kaplan’s USB peripheral is a communication unit that includes endpoints receiving data via generic USB drivers. Ex-1008, ¶¶45-49; Ex-1002, ¶¶267-270; Ex-1062, ¶¶35, 75. The ’347 Patent admits generic drivers are “installed with the installation of the operating system.” Ex-1001, 8:65-9:1; Ex-1062, ¶18.

Patent Owner's argument that the Petition "entirely ignores the use of Skype disclosed in Van de Laar" (POR, 45) is wrong. Van de Laar expressly teaches Skype running on dockees: "[T]he A/V data is generated by a UC application, such as, e.g., Skype, running on the dockee device." Ex-1007, ¶128; Ex-1062, ¶66. This is the claimed "*3rd party application running on the processing device.*" The video data from Skype travels through the communication unit's endpoints—precisely what Claim 28 requires. Ex-1062, ¶66. Patent Owner conflates where Skype runs (on the dockee) with where content is displayed (on WDH peripherals), but Claim 28 addresses data flow from application to peripheral device endpoint.

IV. SECONDARY CONSIDERATIONS DO NOT OVERCOME OBVIOUSNESS

A. The Crestron License Lacks Nexus

Patent Owner argues the Crestron's license demonstrates industry recognition. POR, 69-71. It does not.

The license covers twenty patents from three families and international rights. Ex-2011, 15; Ex-1062, ¶91. Unlike *Ancora Technologies, Inc. v. Roku, Inc.*, 140 F.4th 1351 at 1362 (Fed. Cir. 2025), where the challenged patent was "the only patent identified," this broad portfolio dilutes any probative value. *See Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 838 (Fed. Cir. 2015) ("It is therefore difficult to determine the extent to which the licensing agreement was a result of the novel features in the [challenged] patent, as opposed to the other patents involved.");

BillJCo, 2025 WL 1417957, at *3 (Board properly gave little weight to license that included more patents than challenged patents). Patent Owner performed no apportionment isolating the '347 Patent's contribution—a fatal failure. Ex-1062, ¶91. Indeed, Barco's own director testified that each patent is “independently valuable.” Ex-2031, 141:20-143:18.

Patent Owner's argument that Crestron licensed “before offering any product” (POR, 69-70) is irrelevant, as licensing does not indicate nonobviousness “if it cannot also be shown that the licensees did so out of respect for the patent rather than to avoid litigation expense.” *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1038 (Fed. Cir. 2017). Here, Crestron's Mr. Ludke testified the license resulted not from any such respect for the '347 Patent, but from “mutual business interests.” Ex-2023, 76:12-18. Without *any* evidence isolating the '347 Patent's contribution, the Crestron License lacks probative value. Ex-1062, ¶91.

B. Commercial Success Lacks Nexus

Patent Owner argues ClickShare's commercial success demonstrates non-obviousness. POR, 68-69. But it fails to establish nexus.

ClickShare includes significant unclaimed features, such as Teams and Zoom integration, and standalone mode *without* dongles. Ex-1062, ¶90. ClickShare's base units work perfectly without peripheral devices (dongles), using either the ClickShare app or other conferencing platforms, and without dongles, they do not

practice the invention. Dr. Brogioli even admitted he has “not done a breakdown of features driving commercial success” and performed no analysis of “what additional features might be driving the commercial success.” Ex-1060, 142:23-143:9; Ex-1062, ¶¶83, 88, 90. Unlike Dr. Almeroth, Dr. Brogioli “hasn’t analyzed” what other factors drive Barco’ Ex-1060, 142:23-143:4; Ex-1062, ¶¶83, 88, 90. Crestron’s Mr. Ludke also testified he was “surprised” anyone would want to use a dongle because “you can just join a Teams meeting from your laptop without using” one. These admissions suggest ClickShare’s broad ecosystem of features—not the claimed invention—drives its alleged commercial success. Ex-1062, ¶90. The presumption of nexus applies only where “the product is the invention disclosed and claimed.” *Fox Factory Inc., v. SRAM, LLC*, 944 F.3d 1366, 1373. Barco’s products embody far more.

Barco’s sales data methodology is also fatally flawed. Barco admits it does not record profit per-product (POR, 68 n.6). Instead, it estimates ClickShare Conference profits by multiplying US sales revenue by the overall ClickShare gross margin. This circular methodology assumes the ClickShare Conference line—which includes at least six related IPRs’ patents—derives profits at the same rate as the broader ClickShare portfolio. It fails to isolate the ’347 Patent’s contribution from the five other challenged patents or from unclaimed features. Barco’s revenue

estimates fail to isolate patented features from the products' broader commercial appeal.

Patent Owner's "industry praise" evidence also fails to establish nexus. The articles it cites praises not patented but broad product features: "running high-quality meetings from your laptop," Teams/Zoom integration, ease of use-without isolating the specific claim limitations. Ex-2027; Ex-2029; Ex-1062, ¶¶90; POR, 58-59. Industry praise must be directed to what is novel and would not have been obvious. *Geo M. Martin Co., v. All. Mach. Sys. Int'l LLC*, 618 F.3d 1294, 1305 (Fed. Cir. 2010). The cited articles praise ClickShare's overall user experience, not the specific data flow architecture the '347 Patent claims. Dr. Brogioli also performed no analysis of which features drive the cited recognition. Ex-1060, 142:23-143:9; Ex-1062, ¶¶83, 91. Without evidence tying praise to the claimed invention rather than unclaimed features, this evidence again lacks probative value. Ex-1062, ¶¶91.

C. Secondary Considerations Cannot Overcome Strong Prima Facie Case

Even if Patent Owner established some secondary considerations, they cannot overcome Petitioner's strong prima facie case. The prior art teaches every limitation. Secondary considerations "is not significant enough as a matter of law" to overcome strong obviousness evidence. *Pfizer, Inc., v. Apotex, Inc.*, 480 F.3d 1348, 1370.

V. CONCLUSION

Patent Owner's arguments rest on mischaracterizations and unreliable expert testimony. The prior art teaches every limitation. Secondary considerations lack nexus and cannot overcome the strong prima facie case.

For the foregoing reasons, Petitioner respectfully requests that the Board find claims 1-31 of U.S. Patent No. 11,966,347 unpatentable.

Dated: March 31, 2026

Respectfully submitted,

/Stephen Yang/

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing response totals 5,389 as counted by the Word Count feature of Microsoft Word, which is less than 5,600 allowed under 37 C.F.R. § 42.24(a)(1)(i), excluding the parts of the paper exempted by 37 C.F.R. § 42.24(a).

Dated: March 31, 2026

/Stephen Yang/

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CERTIFICATE OF SERVICE

I hereby certify that on March 31, 2026, I caused a true and correct copy of the foregoing response to be served via Federal Express mail on the Patent Owner at the following correspondence addresses of record:

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