

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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

Petitioners,

v.

BARCO N.V.

Patent Owner.

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CASE: IPR2024-01436

U.S. PATENT NO. 10,762,002

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**PATENT OWNER'S RESPONSE**

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**Exhibits**

| <b>Exhibit Number</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| Ex. 2001              | Reserved                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ex. 2002              | Reserved                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ex. 2003              | Reserved                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ex. 2004              | Declaration of Dr. Michael Brogioli                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Ex. 2005              | Curriculum Vitae of Dr. Michael Brogioli                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ex. 2006              | June 30, 2025 Deposition Transcript of Kevin C. Almeroth in IPR2024-01436                                                                                                                                                                                                                                                                                                                                                                                                 |
| Ex. 2007              | July 1, 2025 Deposition Transcript of Kevin C. Almeroth in IPR2024-01439                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ex. 2008              | July 2, 2025 Deposition Transcript of Kevin C. Almeroth in IPR2024-01437                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ex. 2009              | July 2, 2025 Deposition Transcript of Kevin C. Almeroth IPR2024-01438                                                                                                                                                                                                                                                                                                                                                                                                     |
| Ex. 2010              | Barco Sales Data ( <i>Confidential and Redacted Versions Filed</i> )                                                                                                                                                                                                                                                                                                                                                                                                      |
| Ex. 2011              | Crestron License Agreement ( <i>Confidential and Redacted Versions Filed</i> )                                                                                                                                                                                                                                                                                                                                                                                            |
| Ex. 2012              | <i>Barco and Crestron announce patent license agreement regarding a set of essential ClickShare patents</i> , BARCO (Sept. 12, 2023)<br><a href="https://web.archive.org/web/20240810204702/https://www.barco.com/en/about/press-releases/barco-and-crestron-announce-patent-license-agreement-regarding-a">https://web.archive.org/web/20240810204702/https://www.barco.com/en/about/press-releases/barco-and-crestron-announce-patent-license-agreement-regarding-a</a> |
| Ex. 2013              | <i>ClickShare conferencing &amp; collaboration</i> , BARCO (April 1, 2025),<br><a href="https://web.archive.org/web/20250401012647/https://www.barco.com/en/products/clickshare-conferencing-collaboration#expand">https://web.archive.org/web/20250401012647/https://www.barco.com/en/products/clickshare-conferencing-collaboration#expand</a>                                                                                                                          |

| Exhibit<br>Number | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ex. 2014          | <i>ClickShare Button</i> , BARCO (February 12, 2025)<br><a href="https://web.archive.org/web/20250212164931/https://www.barco.com/en/product/clickshare-conferencing-button">https://web.archive.org/web/20250212164931/https://www.barco.com/en/product/clickshare-conferencing-button</a>                                                                                                                                                                      |
| Ex. 2015          | ECF 65, Joint Claim Construction and Prehearing Statement, <i>Barco, Inc. et al v. Yealink (USA) Network Technology Co., Ltd. et al</i> , 2:2023-cv-521 (E.D. Tex. 11/14/2023)                                                                                                                                                                                                                                                                                   |
| Ex. 2016          | ECF 89, Claim Construction Order, <i>Barco, Inc. et al v. Yealink (USA) Network Technology Co., Ltd. et al</i> , 2:2023-cv-521 (E.D. Tex. 11/14/2023)                                                                                                                                                                                                                                                                                                            |
| Ex. 2017          | List of Products Covered by Barco Patents accessible at:<br><a href="https://www.barco.com/en/about/terms-conditions/patents">https://www.barco.com/en/about/terms-conditions/patents</a>                                                                                                                                                                                                                                                                        |
| Ex. 2018          | <i>Patent</i> , CRESTRON (June 12, 2025)<br><a href="https://www.crestron.com/legal/patents?page=1">https://www.crestron.com/legal/patents?page=1</a>                                                                                                                                                                                                                                                                                                            |
| Ex. 2019          | Crestron Electronics   Private Company Profile, PITCHBOOK                                                                                                                                                                                                                                                                                                                                                                                                        |
| Ex. 2020          | ECF 55, Consent Judgment and Permanent Injunction, <i>Barco, Inc. et al v. Vivitek Corporation et al</i> , Case No. 4:19-cv-3250 (N.D. Cal. 4/27/2020)                                                                                                                                                                                                                                                                                                           |
| Ex. 2021          | <i>Barco Successfully enforces ClickShare IP against competitors in the U.S.</i> , BARCO (May 26, 2020)<br><a href="https://web.archive.org/web/20240424230846/https://www.barco.com/en/about/press-releases/2020-05-26-barco-successfully-enforces-cs-ip-against-competitors-in-the-us">https://web.archive.org/web/20240424230846/https://www.barco.com/en/about/press-releases/2020-05-26-barco-successfully-enforces-cs-ip-against-competitors-in-the-us</a> |
| Ex. 2022          | Paul Krzyzanowski, <i>Devices</i> , PK.ORG (updated March 24, 2011).                                                                                                                                                                                                                                                                                                                                                                                             |
| Ex. 2023          | Excerpts from April 18, 2025 Deposition Transcript of Andrew Ludke ( <i>Confidential and Redacted Versions Filed</i> )                                                                                                                                                                                                                                                                                                                                           |
| Ex. 2024          | <i>USB device class drivers included in Windows</i> , Microsoft (Apr. 9, 2025)<br><a href="https://web.archive.org/web/20250409210411/https://learn.micros">https://web.archive.org/web/20250409210411/https://learn.micros</a>                                                                                                                                                                                                                                  |

| <b>Exhibit<br/>Number</b> | <b>Description</b>                                                  |
|---------------------------|---------------------------------------------------------------------|
|                           | oft.com/en-us/windows-hardware/drivers/usbcon/supported-usb-classes |
| Ex. 2025                  | Reserved                                                            |
| Ex. 2026                  | Dr. Kevin Almeroth's Declaration in IPR2024-01437                   |
| Ex. 2027                  | Dr. Kevin Almeroth's Declaration in IPR2024-01438                   |
| Ex. 2028                  | Reserved                                                            |
| Ex. 2029                  | Reserved                                                            |
| Ex. 2030                  | Dr. Kevin Almeroth's Declaration in IPR2025-00597                   |
| Ex. 2031                  | Reserved                                                            |
| Ex. 2032                  | Modified Protective Order                                           |

## I. INTRODUCTION

U.S. Patent No. 10,762,002 (the “’002 Patent”) describes and claims methods and systems for wirelessly sharing content at a meeting by connecting a user processing device (e.g., a laptop computer) to a peripheral device in communication with a base node connected to a display. *See e.g.*, Ex. 1001, Cls. 1, 11, 21. The ’002 Patent recognizes administrative and logistical hurdles involved in conducting meetings and addresses them with a novel solution. These hurdles include complexity of the networking infrastructure; high demands on technical expertise of users in systems that are supposed to be designed to support everyday use by the non-expert user; barriers to the use of complicated technology in meetings; great variety of possible collaborative software solutions—all of which impede the ability to hold successful meetings.. *Id.*, 4:39-60.

The ’002 Patent, unlike the references relied on in each petitioned Ground, offers a novel solution which greatly simplifies administrative hurdles of conducting a meeting available to all participants without sacrificing security. Both petitioned Grounds are flawed for the same fundamental reason. Each proposes combining references that require implementation of custom-made software solutions (*Kaplan*, *Maeda*, and *Ahmed*) with a reference (*Deforche*) regarding a zero-footprint implementation of a wireless modem. Instead of reconciling these incompatible teachings, the Petition conclusory states that such modification would be predictable

and obvious in light of incidental technological overlap without providing any motivation for actually making the proposed combination or making any showing that such a modification would have been made or could have been made with an expectation of success.

Finally, certain objective indicia of non-obviousness present in this case strongly favor a finding of non-obviousness. The '002 Patent has been successfully licensed, is commercially successful, and the technology embodied therein has garnered praise by others.. In light of the weakness of the Petition's obviousness theories and the clear evidence of secondary indicia of non-obviousness, the Board should uphold the patentability of each of the challenged claims.

## **II. THE '002 PATENT**

### **A. Overview**

The inventors of the '002 Patent recognized a need to improve presenting and collaboratively working on content in a meeting-setting. Ex. 1001, 16:1-15; *see also id.*, 3:12-4:62; Ex. 2004, ¶49. Prior presentation systems relied on cabled connections, LAN communications, or specialized software, systems could be improved by “advantageously us[ing] the availability of a plug and play interface such as a USB interface.” Ex. 1001, 3:12-4:9, 30:36-38.; Ex. 2004, ¶49. Computers and other devices provided for standard built-in support for a USB device, including standard generic audio drivers. Ex. 1001, 30:39-42; Ex. 2004, ¶49. By using these

pre-installed generic drivers rather than implementing special drivers, the computer interfaces can be exploited to provide for wireless presentation without requiring additional PC configuration. Ex. 1001, 30:42-43; Ex. 2004, ¶49.

Figure 1a depicts a meeting room 30 where multiple participants 37 with processing devices (e.g., laptops) 31 are coupled to peripheral devices (also described as connection units) 47 adapted to communicate media content to a base node 36 connected to a display 44:

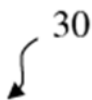


Fig. 1a

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The peripheral device may include various components such as a portable application, a processing engine, a wireless transmitter, a plug and play interface and

a button. Ex. 1001, 23:50-24:3. A user can connect the peripheral device to a port of its processing device to connect to a central display. Ex. 1001, 24:55-58. The connection unit may present itself as various devices, such as a USB composite device, audio device, mass storage device, or human interface device. Ex. 1001, 6:46-53, 6:65-67, 30:44-45; Ex. 2004, ¶51.

When the peripheral device is connected to the processing device, the user can share audio data to the peripheral device's audio device, which is then streamed to the base node. Ex. 1001, 31:11-14; Ex. 2004, ¶52. This audio sharing is done with only standard drivers and does not require special software installation. Ex. 1001, 31:20-25; Ex. 2004, ¶52. The audio data is then transmitted over a communication network to the base node. Ex. 1001, 31:27-29; Ex. 2004, ¶52. Once received, the audio data can be shared in the meetings from the base node. Ex. 1001, 31:65-32:5.

The peripheral device is also capable of sharing display data. Ex. 2004, ¶53; A software application is stored on the peripheral device and run on the processing device captures video data available on the processing device. Ex. 1001, 32:11-26. The software application is stored on the peripheral device and implemented as a portable application, so it leaves a zero-footprint on the processing device once disconnected. Ex. 1001, 21:62-66; 32:19-22; Ex. 2004, ¶53. The video signal is encoded, packeted and shared to the peripheral device using another pre-installed generic driver, like a human interface device (HID) driver. Ex. 1001, 32:35-42. The

video data is then unpacked and transmitted over the communications network with the audio data. Ex. 1001, 32:43-48; Ex. 2004, ¶53.

The base node receives the audio and video data, completes any necessary decoding or unpacking, synchronizes the data and shares it over the display and other output devices. Ex. 1001, 33:8-16; Ex. 2004, ¶54. None of the cited references provide the same wireless content sharing over a peripheral device using pre-installed generic drivers. Ex. 2004, ¶54; *see generally*, Ex. 1014; Ex. 1027; Ex. 1030; Ex. 1031. The references relied upon in the Petition do not render obvious the challenged claims of the '002 Patent.

## **B. Device Drivers**

The '002 Patent relies on an operating system's pre-installed generic drivers. Ex. 1001, Cls. 1, 11, 21. While drivers are also software, drivers differ from computer applications and operating systems in that they are specialized “translators” to allow different systems to communicate with each other. Ex. 2004, ¶68; Ex. 2006, 8:24-9:6.

An operating system is the system level software used to manage the hardware and software resources of a given computer. Ex. 2004, ¶69. It is responsible for the management of memory, file systems, computer networking functionality, and user interfaces, among other key functions. Ex. 2004, ¶69. It also provides the foundation which computer applications can run on. Ex. 2004, ¶69. Common

operating systems include Window, MacOS, Android, iOS, and Linux. Ex. 2004, ¶69.

Software applications are specific computer programs designed to perform user oriented or user-facing tasks. Ex. 2004, ¶70. Examples include web browsers, media players, and productivity applications. Ex. 2004, ¶70.

Drivers on the other hand are designed to control hardware connected to a computer, and they allow the operating system and computer applications of a given machine to interact with the connected hardware. Ex. 2022; Ex. 2004, ¶71. Drivers function as translators between the underlying hardware and the software layers of the operating system and applications themselves. Ex. 2004, ¶71. This way, the operating system and applications do not need to know they are accessing one type of device over another (e.g., a USB memory device rather than a memory disk) and can instead leave the specific translation to the driver, allowing the operating system and application to be agnostic to the specific mouse, keyboard, or USB memory device that is connected to the machine, treating them as simply a “human interface device” or a “storage device.” Ex. 2022; Ex. 2004, ¶71.

Drivers are operating system specific—they must operate with and conform to the given operating system’s device driver architecture. Ex. 2004, ¶72. A driver that is designed to work with a large variety of devices is called a generic driver. Ex. 2022; Ex. 2004, ¶72. Drivers may come already installed on commercial operating

systems, and in such a situation would be referred to as “pre-installed drivers.” Ex. 2004, ¶72. One example of a pre-installed generic driver is a USB driver. USB devices have different USB device classes. Ex. 2024, 1. Devices are grouped into classes, and these USB device classes are categorized based on the characteristics of the devices and common functions they perform. Ex. 2024, 1. Operating systems, such as the Microsoft Windows operating system provide support for some device classes with their pre-installed drivers. Ex. 2024, 1, 3-8 (listing Microsoft-provided USB device class drivers); Ex. 2004, ¶72. When supported devices are connected to a computer, the operating system will automatically call the required class driver and the supported device will function without additional drivers being installed. Ex. 2024, 1; Ex. 2004, ¶73. The class drivers are configured with the device class purpose in mind so that they may suitably handle the volume and speed of data transfer. Ex. 2004, ¶73; Ex. 2006, 104:3-105:10. Different class drivers also have different command structures and communications protocol to suit these purposes. Ex. 2004, ¶73.

When certain device capabilities are not supported by the drivers for a given class that are provided by the operating system, a vendor may design a custom or specific driver which can then be installed on a computer to support said functionality. Ex. 2024, 2; Ex. 2004, ¶74. These drivers are considered to be

“special purpose” in that they are unique to a given piece of hardware. Ex. 2004, ¶74; Ex. 2006, 13:12-18, 15:12-17.

**C. Claim Construction**

In *Barco, Inc. et al v. Yealink (USA) Network Technology Co., Ltd. et al*, 2:2023-cv-521 (E.D. Tex. 11/14/2023), the parties have submitted a Joint Claim Construction Statement (Ex. 2015) which included certain agreed constructions and further briefed and argued other claim terms. The court in that case issued a Claim Construction Order construing certain other claims. Ex. 2016. Claims construction here should not conflict with the construction in the District Court. *KioSoft Techs., LLC v. PayRange, Inc.*, IPR2021-00086, Paper 12, at 16 (PTAB Mar. 22, 2021) (“subsequent decisions issued in reliance on these inconsistent claim constructions may lack ‘uniformity’ between us and the district court and may undermine the ‘predictability’ of the [challenged] patent’s scope and the ‘integrity of the patent system’ overall.”)

1. “couple” / “coupling” (Claims 1, 11, 21)

The parties agreed in the district court that *couple* and *coupling* means “Connect[ing] two devices, either directly or indirectly.” Ex. 2015, 7.

2. “pre-installed generic driver” (Claims 1-3, 11, 21)

As agreed in the Petition, the specification of the ’002 Patent provides that “[t]he term ‘pre-installed generic driver’ is intended to mean a driver which is

installed on the processing device such as a computer as a standard driver, e.g. is installed with the installation of the operating system.” Ex. 1001, 14:32-35. The ’002 Patent further notes that “[s]uch a driver is standard for the operating system and can drive a standard class of peripheral devices coupled to or connected to the processing device. The installation of a specific driver for such a peripheral device is not required.” Ex. 1001, 14:35-39. As a result, this term should be construed as “software installed on a processing device as part of the operating system that can drive a standard class of peripheral devices coupled to or connected to the processing device without the need to install a driver specific to a given peripheral device.”

3. “pre-installed generic audio driver” (Claims 1, 11)

Patent Owner does not dispute that a “pre-installed generic audio driver” may be used with audio hardware. Petition, 14. However, more specifically, a “pre-installed generic audio driver” is a “pre-installed generic driver” (as defined above) that is used to drive an audio class of peripheral devices. Ex. 1001, 14:35-37.

4. “Means for audio communication between the peripheral device and the processing device” (claims 1, 11, 21) / “a means for data communication between the peripheral device and the processing device” (claims 1, 11)

The district court has construed the following terms as outlined below:

| Disputed Term                   | The Court’s Construction        |
|---------------------------------|---------------------------------|
| “means for audio communication” | Governed by 35 U.S.C. § 112 ¶ 6 |

| Disputed Term                                            | The Court's Construction                                                                                                                                                                                                                                   |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ('002 Patent, Claim 1)                                   | <b>Function:</b> Provide audio communication between the peripheral device and the processing device<br><b>Structure:</b> “an interface using a generic communications protocol”<br><br>As set forth in Ex. 2016, 10-13.                                   |
| “means for data communication”<br>('002 Patent, Claim 1) | Governed by 35 U.S.C. § 112 ¶ 6<br><b>Function:</b> Provide data communication between the peripheral device and the processing device<br><b>Structure:</b> “an interface using a generic communications protocol”<br><br>As set forth in Ex. 2016, 10-13. |

Ex. 2016, 16.

5. Terms where construction is unnecessary

Patent Owner disputes that any construction is necessary for the following terms:

- “*wireless*” (Claims 1, 11, 21)
- “*means of a first pre-installed generic audio driver of the operating system*” (Claim 1, 11)

- “means of a second pre-installed generic driver of the operating system” (Claims 1, 11)
- “means for coupling” (Claim 11)
- “means for setting up... a means for audio communication between the peripheral device and the processing device and ... a means for data communication between the peripheral device and the processing device” (Claim 11) / “a first software code portion for setting up ... a means for audio communication between the peripheral device and the processing device” (Claim 21)
- “means for routing” (Claim 11) / a third software code portion for routing audio data from the processing device to the peripheral device via the connection and the means for audio communication and for routing the audio data from the peripheral device to the base node over the communications network, wherein the first pre-installed generic driver is used for transferring the audio data between the processing device and the peripheral device (claim 21)
- “a second software code portion for connecting the processing device to a communications network via a transceiver of the peripheral device” (Claim 21)

As the claims of the '002 Patent are not rendered obvious under any reasonable construction of its claim terms, Patent Owner adopts the Petition's construction for the purposes of this proceeding.

**D. Level of Ordinary Skill in the Art**

Petitioner provided the following level of skill for this proceeding: at least a Master's Degree in Electrical Engineering and five years of work experience in computer science and embedded systems, or a Master's Degree in Computer Science and five years of work experience in electrical and computer engineering and embedded systems, and that additional educational experience could substitute for some of the work experience. Petition, 10. Patent Owner does not dispute this level of skill in the art and submits that Dr. Brogioli meets this level and can provide helpful testimony for this case. Ex. 2004, ¶¶1-48, 55; Ex. 2005.

**E. Dr. Almeroth Opinions Should Not Be Afforded Weight**

Dr. Almeroth did not reliably provide consistent opinions across the seven IPR challenges against Patent Owner's patents, so his opinions regarding the validity of each challenged patent should be afforded little weight.

*First*, Dr. Almeroth provides inconsistent opinions regarding his technical knowledge of the patented technology. This is clear from his treatment of drivers and data communications across the challenges. When asked about specific types of data and drivers, Dr. Almeroth stated: "[d]ata is data; right? So whether it's real-

time audio/video, whether it's audio/video from a file, whether it's video scraped off a screen, its source doesn't affect the use of the transfer channels that can be created."

Ex. 2006, 101:1-5. Dr. Almeroth further noted "[i]t's kind of what I described earlier, a way of using a basic interface or a mode and then *data is data* and you can send it. And once it's received, the device can do anything it wants with it." Ex. 2006, 121:15-17. However, in his declaration submitted in IPR2025-00597, Dr. Almeroth indicates that the type of data impacts the way in which the data can be communicated. Ex. 2030, ¶¶212-213. Specifically, Dr. Almeroth states "a POSA would recognize and find it obvious in the art that data is conventionally scaled, transcoded, or mixed *based on a type of functional data* it represents, such on whether the data is audio data, visual data, or another type of data." (emphasis in original). Ex. 2030, ¶212. Further, he explains that "A POSA would recognize and understand that codecs, which were well-known in the art, are specific to data type, such as whether the data being compressed, decompressed, encoded, or decoded is audio data, visual data, *etc.*" (emphasis in original). Ex. 2030, ¶213.

Even though Dr. Almeroth alleges "data is data...its source doesn't affect the use of the transfer channels that can be created[,]" he also explains that there are several tradeoffs involved in selecting certain drivers in place of others when implementing a system. Ex. 2006, 101:1-5, 104:3-105:10. However, such analysis is absent in his proposed combinations. Indeed, Dr. Almeroth's opinions even

regarding drivers were unclear. During depositions, Dr. Almeroth would not provide a clear definition of drivers and software applications, insisting that it is largely dependent on context. Ex. 2006, 24:8-26:17. However, when it suits his argument, Dr. Almeroth clearly identifies a driver as “a term for a special form of software that provides an interface between hardware and application-level software, and is standard in all personal computers.” Ex. 2027, ¶116.

*Second*, Dr. Almeroth offers inconsistent interpretations of references depending on his hindsight-driven theories of invalidity. Instead of providing a clear and consistent interpretation of a reference as a whole, Dr. Almeroth changes his interpretation to fit the challenged claims. For example, in arguing that a POSITA would combine *Maeda* and *Deforche*, Dr. Almeroth opines:

a POSITA would have been motivated to combine the teachings of *Deforche* with the system of *Maeda* because the POSITA would have recognized the combined system provided, at least, a streamlined and more user-friendly application of *Maeda*’s system—a user is not required to install a separate driver or configure any settings for the peripheral device’s functionality.

Ex. 2026, ¶130.

In other words, Dr. Almeroth alleges a POSITA could improve *Maeda* by avoiding the need to install drivers and implement settings that *Maeda*’s system uses. *Id.* However, this conflicts many other opinions Dr. Almeroth has offered regarding

*Maeda*. For example, when asked if *Maeda* describes installation of a driver, Dr. Almeroth indicated that “I don’t see a reference to a driver. ***That might actually be required in the context of other patents and claims***, and so at least for *Maeda* for the ’237, I don’t recall a limitation where I would have needed to point to support in *Maeda* for that concept.”<sup>1</sup> Ex. 2008, 33:13-18. When asked if *Maeda* describes the use of drivers, Dr. Almeroth explained “Paragraph 15 is an example, figure 1, and then it uses that functionality to establish the understanding a person of skill in the art would have had about the use of drivers.” Ex 2006, 78:20-24. He further articulates that:

Pretty much the references to a PC after that and the functionality of a PC communicating with components that are external to the PC via the various interfaces are all the kinds of things that would use drivers. So ***I think the concept is taught pretty expansively throughout Maeda. And to be clear, the concept is using PCs to connect to components outside of the device and the interfaces. And they use the drivers to do that.***

Ex. 2006, 79:21-80:3. In other instances, Dr. Almeroth interpreted *Maeda* as not requiring any software. Ex. 2006, 78:1-7 (“I think a person of skill in the art reading this would understand that you have the typical flexibility of how the functionality

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<sup>1</sup> Emphasis is added unless otherwise noted.

could be implemented *across the spectrum. Mostly hardware, all hardware, mostly software.*”)

Dr. Almeroth’s ambiguous description of references is not limited to *Maeda*. Dr. Almeroth refused to consider the reference for what it reasonably discloses and instead renders all teachings it discloses and does not disclose as design choices to fit the patent challenge. For example, regarding *Kaplan*, when discussing if *Kaplan* requires software installation to function, Dr. Almeroth opined that such software was not necessary. Ex. 2006, 61:6-21 (“.... That is not something I rely on as the basis for my opinions in the declaration.”). When asked if *Kaplan* disclosed embodiments that did not install software, Dr. Almeroth stated “I don’t have *Kaplan* memorized. I don’t know if it gives that as an option, *but it would certainly be an obvious design choice* just based on the simple way in which computers have operated for at least a decade before the ’002 Patent.” Ex. 2006, 63:24-64:3. Dr. Almeroth does this with multiple references. Ex. 2009, 21:4-9 (“There is an embodiment within Ono where it does describe storing the connection application, the driver and configuration information on the hard drive. *But it is not my recollection that that was a limiting aspect of Ono’s invention*”); Ex. 2027, ¶136 (“Although Ono’s connection application 46, a driver 47 and configuration information 48 are described in one embodiment as stored on a USB memory 45... the location of storage of that information would have been simply *a matter of*

*design choice.*”). These ‘design choices’ appear to be based on what specific claim language requires. Ex. 2008, 21:1-5 (“In the context of the ’237 patent, I don’t think I’ve looked – never offered an opinion as to what those required software components are. If I am misremembering some reference to paragraph 48 in the declaration, you can point me to it.”).

Regarding *Uchida*, Dr. Almeroth did not consider teachings to the extent they were not required by the challenged patent. Ex. 2007, 30:22-31:3 (“I have not specifically looked. My recollection is that where the information comes from to set up the wireless network is not a requirement of the claims of the ’951 Patent. So how *Uchida* accomplishes it or how a person of skill in the art would understand that it could be set is not relevant to an aspect of the claim language of the ’951 Patent.”) Rather than consider the teachings of references as a whole, independent from the challenged claims, Dr. Almeroth would simply evade questions regarding aspects of the references he did not rely on. Indeed, he indicated he didn’t have aspects “memorized” over twenty times and identified over fifteen “design choices” throughout the course of his depositions. *See generally* Ex. 2006; Ex. 2007; Ex. 2008; Ex. 2009. The expansive view Dr. Almeroth takes regarding “design choices” renders his opinions regarding references unreliable and inconsistent.

Based on these examples, among a myriad of others, it is clear that Dr. Almeroth’s interpretation of the reference is not actually based on the reference

itself, but is instead biased by the patent he is challenging with his opinions and that the opinions he advances are driven by a desire to reach the claims: classic hindsight. Accordingly, his opinions on at least this topic should be afforded little weight.

### **III. OVERVIEW OF THE CITED REFERENCES**

#### **A. Kaplan (Ex. 1027)**

The first primary reference, U.S. Pub. No. 2010/0295994 (“*Kaplan*”), describes transmitting video content between a computer and display device using a transmitter and a receiver. Ex. 1027, Abstract; Ex. 2004, ¶56. The transmitter is a dongle with a USB connector and connects to a port of a computer. Ex. 1027, ¶17. The receiver includes one or more video and audio outputs (such as HDMI) and connects to a display. Ex. 1027, ¶16. The system also includes a remote control which controls the playback of video footage on the display device. Ex. 1027, ¶19. Together, these components provide a system which makes video footage accessible on a computer to a display device. Ex. 1027, ¶19. Figure 2 below shows the remote control 130, receiver 110 connected to a display device 210, and transmitter 120 connected to a computer 220:

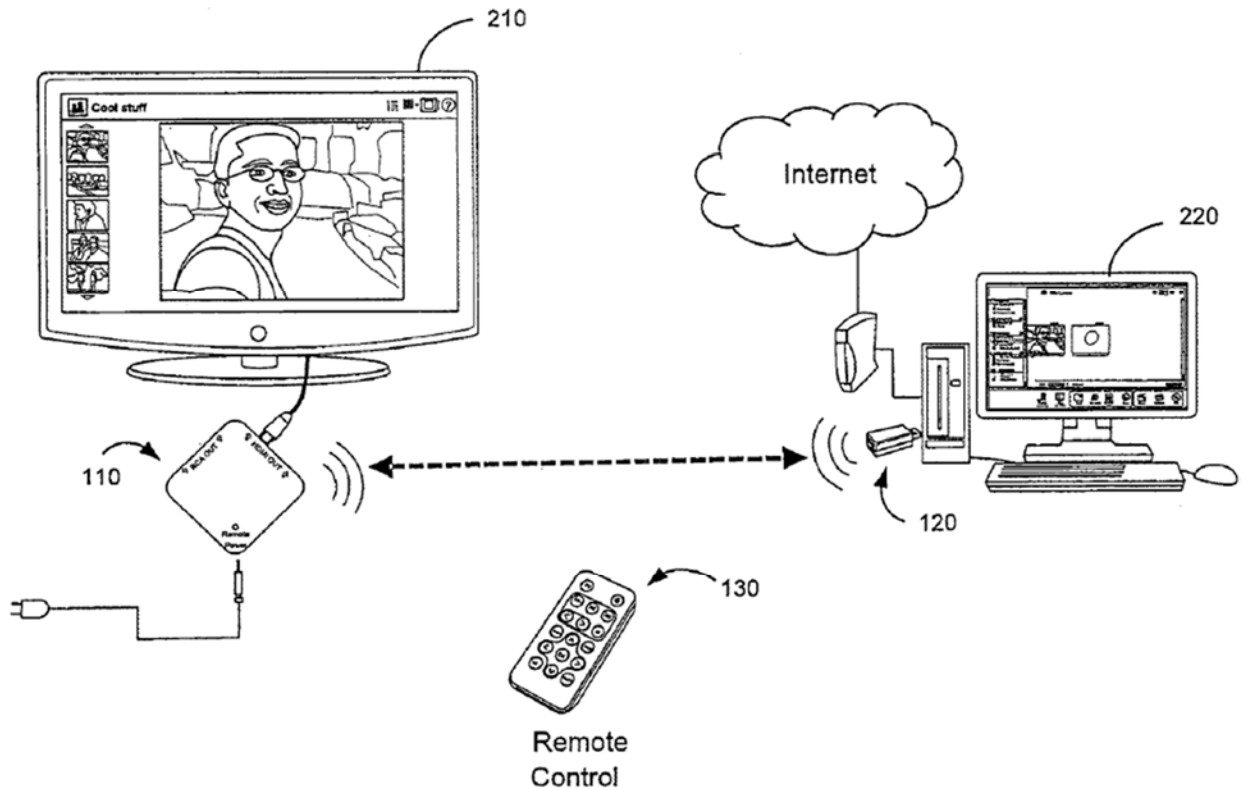


**FIG. 2**

Ex. 1027, Fig. 2, ¶21; Ex. 2004, ¶57.

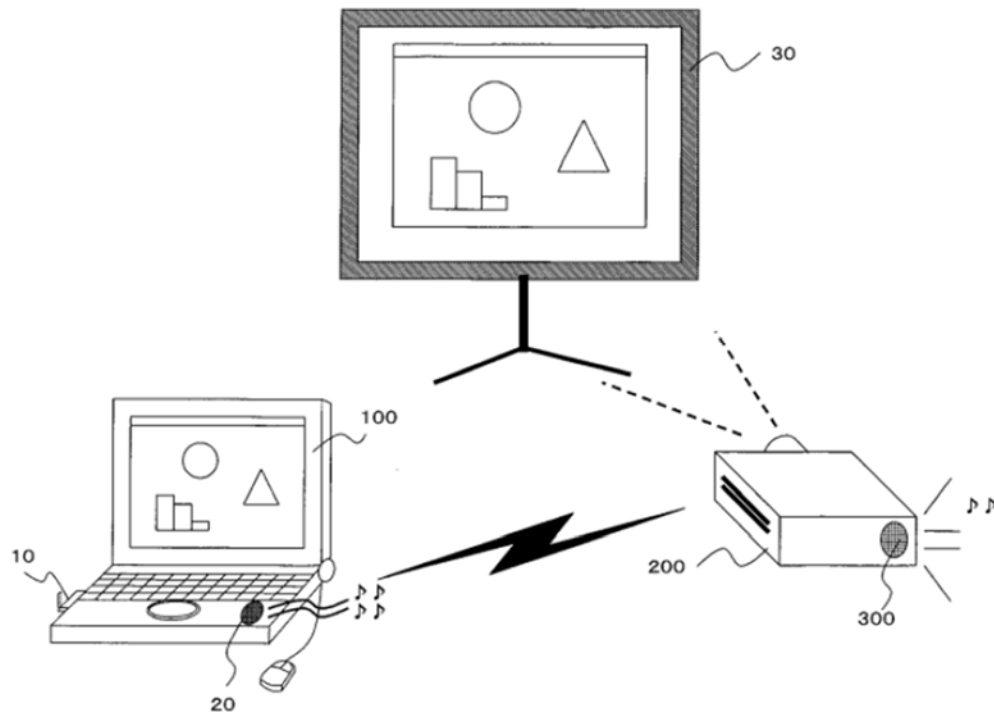
To enable content sharing, when first connected the transmitter (120) installs software onto the computer, and through the use of this installed software, the user is able to share media from computer 220, through transmitter 120 to receiver 110 and ultimately to display device 210 where content is displayed. Ex. 1027, ¶22; Ex. 2004, ¶58. Alternatively, instead of installing the software from the transmitter, the software may be downloaded from the internet. Ex. 1027, ¶22; Ex. 2004, ¶59. However, in all embodiments, only once the software is installed, can the video content be shared on the display. Ex. 1027, ¶23 (“After the installation of software

resident on the transmitter, typically only requiring an acceptance of a click-through license agreement by the family member, the family member is able to receive videos from the user and then watch them on their television.”); Ex. 2004, ¶59. *Kaplan* specifically notes that a benefit of its system is the availability of metadata associated with the video content stored on the computer or the internet, which is available, in contrast to convention media extenders, due to the custom software solution which makes proprietary features available. Ex. 1027, ¶29 (“Additionally, since embodiments of the present invention provide *custom software solutions*, the methods and systems described herein make available proprietary features such as user-defined channels that are not available using conventional techniques.”); Ex. 2004, ¶60. *Kaplan* indicates that this metadata and user-defined channels are not available using other techniques. Ex. 1027, ¶29 (“The availability of this metadata contrasts with conventional media extenders in which only video content is available.”); Ex. 2004, ¶60.

**B. Maeda (Ex. 1031)**

The other primary reference, the English translation of JP Patent Application Publication No. 2007-208606 (“*Maeda*”), provides a video transmission system where a PC is used to generate an image and audio, which are then transmitted to a projector using a wireless LAN. Ex. 1031, ¶15; Ex. 2004, ¶61. The transmission

system includes a projector 200 with a speaker 300, a screen 30, a wireless LAN card 10 containing a wireless LAN chip attached to the PC 100:



Ex. 1031, Fig. 1; Ex. 2004, ¶61.

The PC 100 includes multiple “functional components,” which a POSITA would understand to include software components. Ex. 1031, ¶22; Ex. 2004, ¶62. They include a control unit, a screen generation unit, an image capture unit, an audio generation unit and image output unit, an audio output unit, a PC communication unit, and an audio capture unit. Ex. 1031, ¶22.

### C. Ahmed (Ex. 1014)

The same secondary references are used in both grounds, the first is International Patent Application Publication No. 2006/113711 (“*Ahmed*”), which is

directed towards wireless, real time transmission of data from a source to a monitor. Ex. 1014, Abstract; Ex. 2004, ¶63. *Ahmed* recognized that prior art approaches to integration of computing devices with televisions have focused on (1) transforming the television into a networked computing appliance; (2) creating a specialized hardware device that receives media from a computing device; or (3) integrating a means of accepting storage devices, like a memory stick, into the television. Ex. 1014, 2:13-21; Ex. 2004, ¶63. These past approaches, however, are inferior because they require modifying existing equipment or purchasing new hardware. Ex. 1014, 2:20-26; Ex. 2004, ¶63. Instead, *Ahmed* proposed a solution that relied on existing computer devices to transmit, store, and playback media to existing television to experience the media in a simple and inexpensive way. Ex. 1014, 3:3-9; Ex. 2004, ¶63.

*Ahmed* describes communications between a computing device and remote monitor. Ex. 1014, 7:6-15 It also requires a processing system which can be integrated into the remote monitor, the computer, or incorporated into a standalone device that is in wireless communication with the remote monitor or computing device. Ex. 1014, 7:18-22; Ex. 2004, ¶64. The computing device must be capable of running the novel software solution *Ahmed* proposes. Ex. 1014, 7:27-29; Ex. 2004, ¶64.

The novel software solution provides multiple different modules. The modules are used for (1) the real-time capture of media, (2) managing a buffer for storing the captured media, (3) a codec for compressing and decompressing the media, and (4) packaging the processed media for transmission. Ex. 1014, 8:7-12; Ex. 2004, ¶64.

The real-time capture of media module is described as a mirror display driver and virtual display driver, the two of which are installed as components in the kernel mode of the operating system. Ex. 1014, 9:20-23; Ex. 2004, ¶65. The mirror display driver captures content on the display of the computer while the virtual display driver captures media on a secondary display associated with the computer. Ex. 1014, 9:16-31; Ex. 2004, ¶65. *Ahmed* also describes an embodiment where a virtual audio driver is installed to be used as a default playback or recording device, and assist with the transfer of content. Ex. 1014, 18:27-30; Ex. 2004, ¶65. In all instances, these drives are part of *Ahmed's* novel software solution. Ex. 2004, ¶65.

In *Ahmed's* system, the content is played on the PC, the video is captured and compressed, the audio is captured, and they are transmitted in sync to the receiver which decompresses the content and plays it on the TV. Ex. 1014, Fig. 5; Ex. 2004, ¶66.

**D. Deforche (Ex. 1030)**

The second secondary reference, EP Patent Application Publication No. 2107463 (“*Deforche*”), describes a system that provides *a wireless modem* without the need of installing specialized drivers. Ex. 1030, ¶4; Ex. 2004, ¶67. Previously, a user needed to install proprietary drivers before they can use a USB network device. Ex. 1030, ¶30; Ex. 2004, ¶67. *Deforche* advocates for “zero footprint” solutions which avoid the end user needing administrator rights on the computer and provides the user with connectivity without interfering on the PC itself. Ex. 1030, ¶¶28-29; Ex. 2004, ¶67. *Deforche* does not describe the transmission of audio or video data but instead is focused on connecting a computer device to a wireless communication network via a modem. Ex. 1030, ¶6; Ex. 2004, ¶67.

**IV. GROUND 1**

The Petition’s proposed combination of *Kaplan*, *Ahmed*, and *Deforche* fails to render each Challenged Claim obvious. Ex. 2004, ¶¶75-109. This combination is constructed not based on any knowledge or teachings in the art but instead by hindsight in attempt to reconstruct the claims of the ’002 Patent.

The Petition asserts that *Kaplan* discloses a system for remotely displaying content but is insufficient in that it does not disclose use of drivers (*Kaplan* indeed does not disclose the use of drivers). Petition, 26. Then, the Petition alleges a POSITA would be motivated to modify *Kaplan* with *Ahmed* for this *exact*

insufficiency (i.e., the lack of driver specific description). Petition, 26-27. Lastly, as *Kaplan* and *Ahmed* are still insufficient together for failing to teach use of ***pre-installed generic*** drivers, the Petition alleges a POSITA would further combine *Deforche* with *Kaplan* and *Ahmed* because of their insufficiency. This piecemeal combination is driven solely by the Petition's desire to arrive at the claimed use of pre-installed generic drivers. Setting aside the Petition's heavy reliance on hindsight to reconstruct the claims, a POSITA would not be motivated to combine *Kaplan*, *Deforche*, and *Ahmed* to arrive at the Challenged Claims for at least two reasons.

First, both *Kaplan* and *Ahmed* require use of custom software solutions that are installed on a PC, exactly what the '002 Patent avoids. *See*, Ex. 1001, 4:35-60 ("The following problems remain... Need to install proprietary drivers for audio"). Meanwhile, *Deforche* goes in an entirely different direction, in a different field, teaching the use of a zero-footprint implementation for wireless modem communication. A POSITA would not consider combining a reference which discourages installation of software with systems which ***require*** installation of custom software. Ex. 2004, ¶76.

Second, *Ahmed* makes specific reference to special purpose drivers in the form of a mirror display driver and audio driver. However, *Deforche* provides no reference of these drivers by name or by function, nor is there any evidence a mirror display driver is availability on generic computers. So, a POSITA would not be

motivated to implement *Ahmed's* special purpose drivers as pre-installed generic drivers. Ex. 2004, ¶77.

Finally, irrespective of the insufficient motivation to combine, the cited references fail to disclose all claim limitations of the '002 Patent. Specifically, none of the references teach using “generic audio drivers” at all, let alone “setting up, by means of a first pre-installed generic audio driver... a means for audio communication between the peripheral device and processing device[.]” Ex. 1001, Cls. 1, 11, 21; Ex. 2004, ¶78.

**A. A POSITA Would Not Combine a Zero-Footprint System with Systems that Require Custom Software Solutions**

1. *Kaplan* and *Ahmed* Both Require Special Purpose Software to Accomplish Their Respective Display Functions

When *Kaplan's* transmitter is first plugged into a computer, the software is uploaded and installed onto the system (sometimes automatically). Ex. 1027, ¶22; Ex. 2004, ¶82. The software is used to access video footage or other media on the computer and to transmit the media to the receiver, the primary purpose of *Kaplan*. Ex. 1027, Abstract, ¶22; Ex. 2004, ¶81. The “custom software solutions” of *Kaplan* provide an additional benefit of providing user-defined channels that are not available with other conventional techniques without these proprietary features. Ex. 1027, ¶29; Ex. 2004, ¶83. In addition to allowing access to the video footage and user-defined channels, *Kaplan's* software is described as providing the user interface

depicted in Fig. 2 in some embodiments. Ex. 1027, ¶26, Fig. 2. Further, as computers typically have significant computing resources, the vast majority of the processing may be performed by the computer through assistance of the application. Ex. 1027, ¶27; Ex. 2004, ¶83. When the computer does not contain the required software components, additional software will be installed or updated. Ex. 1027, ¶48 (“the resident software application may check the computer 220 to determine whether required software components are available on the computer 220 and then install the software components in the computer 220 when the software components are not available on the computer 220.”); Ex. 2004, ¶84. *Kaplan’s* operation and benefits rely on the installation of this custom software. Ex. 2004, ¶¶81-84.

Likewise, *Ahmed’s* system requires software installation. Ex. 2004, ¶85. *Ahmed’s* system presents a “novel software solution[.]” Ex. 1014, 7:26-29. This software includes modules for real-time media capture, managing a buffer for storing the capture media, a code for compressing and decompressing the media, and a model for packaging the processed media for transmission. Ex. 1014, 8:7-12; Ex. 2004, ¶85. *Ahmed* also notes that its novel software system can be automatically downloaded, installed, and updated on the computer device. Ex. 1014, 29:20-22; Ex. 2004, ¶86. In certain embodiments, the novel software solution relies on a mirror display driver. Ex. 1014, 9:17-19; Ex. 2004, ¶86. In other embodiments, a virtual audio driver is used and “is installed as a normal audio driver[.]” Ex. 1014, 18:27-

30; Ex. 2004, ¶86. These drivers, which are specifically installed to implement *Ahmed*, are relied on throughout the Petition. *See* Petition, 26, 33, 35, 46, 50, 54, 56, 57.

2. *Deforche's Zero-Footprint Would Not Be Combined With Kaplan and Ahmed*

*Deforche* is designed to be a zero-footprint system. Ex. 1030, ¶¶4, 28; Ex. 2004, ¶88. A system is zero-footprint when it provides functionality without the need of installing new drivers and/or other software applications. Ex. 1030, ¶28; Ex. 1001, 12:65-13:3; Ex. 2004, ¶88. *Deforche* recognizes that “[i]t is a disadvantage of existing wireless modem devices that users cannot use them on a foreign computer device... [where] the user has no administrator rights and installation of the appropriate driver is not allowed.” Ex. 1030, ¶3; Ex. 2004, ¶88. So, *Deforche* provides “a wireless modem device and a method for operating same, with which the need for installation of an appropriate driver can be avoided.” Ex. 1030, ¶4. By using pre-installed generic drivers, *Deforche's* system provides “the advantage that a user can use the wireless modem device on a computer device on which he has no administrative rights, i.e., a computer device on which his user rights are restricted so that he cannot install specific driver for the wireless modem device[.]” Ex. 1030, ¶9; Ex. 2004, ¶89. While *Deforche* also contemplates a modem which uses a custom USB modem driver, *Deforche's* zero-footprint design (which does not require

installation of specialized drivers but instead utilizes pre-installed generic drivers) is the sole embodiment of *Deforche* relied on by the Petition. Petition, 25, 27, 34, 47, 55; *see* Ex 1030, ¶34; Ex. 2004, ¶89.

In this implementation *Deforche*'s modem is designed to present itself as a USB composite device which includes a mass storage device and human interface device. Ex. 1030, ¶36; Ex. 2004, ¶90. In some situations, *Deforche* relies on portable applications which runs from the modem device without needing to be installed on the host. Ex. 1030, ¶¶15, 50; Ex. 2004, ¶90. However, it is clear that the relied-on system is designed to avoid installation of proprietary or custom software and drivers. Ex. 1030, ¶¶4, 28; Ex. 2004, ¶90. Therefore, a POSITA would not consider combining *Deforche* with systems which require proprietary or custom software or drivers to function. Ex. 2004, ¶90.

However, this special purpose software is exactly what both *Kaplan* and *Ahmed* require. Ex. 2004, ¶91. *Kaplan* proposes a custom application to provide wireless presentation, which provides additional benefits like “user-defined channels” not otherwise available. Ex. 1027, ¶¶22, 29. Similarly, *Ahmed* presents a “novel software solution” for real-time media capture, managing a buffer for storing the captured media, and packaging the processed media for transmission. Ex. 1014, 8:7-12. There is no motivation to combine a system like *Deforche*, which avoided “the need... to install drivers and/or application on PCs to give USB modem

connectivity” with systems that rely heavily on unique software implementations. Ex. 1030, ¶28; Ex. 2004, ¶91.

**B. Deforche’s Teachings Cannot be Applied to *Ahmed* With a Reasonable Expectation of Success**

Even if a POSITA ignores the incompatibility of *Deforche*’s zero-footprint teachings with *Ahmed*’s novel software solution, a POSITA would still not be motivated to make the proposed combination to arrive at the claimed invention. Ex. 2004, ¶92. *Deforche* does not provide for pre-installed generic drivers capable of the functions described by *Ahmed*. Rather, *Deforche* provides a description of pre-installed generic drivers of human interface drivers (HID) and mass storage device drivers (MSD). Ex. 1030, ¶10; Ex. 2004, ¶93. A HID is used to communicate data between a human interface device (e.g., a keyboard) and the operating system of a computer or other processing device. Ex. 1001, 14:39-46; Ex. 2004, ¶94. Likewise, a MSD is used to communicate between a mass storage device and the operating system. Ex. 2004, ¶94. In *Deforche*, the USB modem is to present itself as a composite device with a USB mass storage device or human interface device when the modem’s proprietary driver is not available to achieve its zero-footprint objective. Ex. 1030, ¶36; Ex. 2004, ¶94.

Conversely, *Ahmed* does not rely on human interface devices or mass storage devices. Ex. 2004, ¶95. Instead, *Ahmed*’s “novel software system” describes use of

a special mirror display driver “for capturing the contents of a primary display associated with the computer” and a virtual audio driver “installed as a normal audio driver that can be selected as a default playback and/or recording device.” Ex. 1014, 8:7-12, 9:27-28, 18:27-30; Ex. 2004, ¶95. Unlike the human interface device and mass storage device drivers described in *Deforche*, *Ahmed*’s mirror display driver and virtual audio driver are not even designed to communicate with peripheral devices. *See infra* Section IV.C; Ex. 1014, 7:18-22, 9:26-27, 10:1-13, 18:27-19:5, 19:10-12, 27:4-13; Ex. 2004, ¶¶103-107. Moreover, a POSITA would recognize that *Ahmed*’s special purpose drivers provide functionality not implementable using *Deforche*’s generic drivers. Ex. 2004, ¶96; Ex. 2024, 3-8 (identifying available pre-installed generic USB drivers on a windows device). *Ahmed*’s system actually discourages use of specialized hardware that receives media from a computing device and communicates it through a wired connection to a television. Ex. 1014, 2:13-19; Ex. 2004, ¶96.

Neither the Petition nor Dr. Almeroth assert that *Ahmed*’s mirror display driver is available “installed on a processing device such as a computer as a standard driver, e.g. is installed with the installation of the operating system” as their proposed construction of “pre-installed generic driver” requires. Petition, 13 (citing Ex. 1001, 14:32-46; Ex. 1002, ¶72). A mirror display driver is not available as a pre-installed generic driver. Ex. 2004, ¶97; *See* Ex. 2024, 3-8. The Petition presents no evidence

that a mirror display driver or functional equivalent even **can** be implemented as a pre-installed generic driver. Ex. 2004, ¶97; *See* Ex. 2024, 3-8.

Further, *Deforche* also provides no mention of an audio driver (which, given its invention is directed towards **a wireless modem**, this makes perfect sense). *See generally*, Ex. 1030. Likewise, the Petition presents no evidence that *Ahmed*'s special purpose virtual audio driver or functional equivalent **can** be implemented as a pre-installed generic driver. Ex. 2004, ¶98; *See* Ex. 2024, 3-8. Despite this lack of disclosure, the Petition asserts that “It would thus have been obvious to modify *Ahmed* with *Deforche*'s ‘pre-installed generic audio driver’ because it is a known technique to improve a similar device in the same way[.]” Petition, 27, 47 (citing Ex. 1002, ¶95) (emphasis in original). This argument is overly conclusory given the distinctions between the various drivers and software applications in the Petition's references.

Due to *Ahmed* and *Deforche*'s use of different drivers for different purposes, and without evidence that certain relied on drivers are even available as pre-installed generic drivers, there is **no basis** to conclude that the *Kaplan-Ahmed-Deforche* combination can be implemented with a reasonable expectation of success. Ex. 2004, ¶99.

**C. The Combination Does Not Disclose Setting up Communications Using Pre-Installed Generic Drivers**

Claim 1 requires use of a first pre-installed generic driver to set up audio communication between the peripheral device and processing device, as well as a second pre-installed generic driver to set up data communication between the peripheral device and processing device. Ex. 1001, Cl. 1. Similar limitations are also included in Claim 11 and Claim 21. Ex. 1001, Cls. 11, 21; Ex. 2004, ¶100. The Petition also provides identical arguments for each independent claim. Petition, 28, 43-45. None of the references cited in the Petition teach this limitation. Ex. 2004, ¶100.

**1. Kaplan Does Not Describe Use of Drivers**

There is no discussion of drivers in *Kaplan*. See Generally, Ex. 1027; Ex. 2004, ¶101. *Kaplan* discloses a USB transmitter which “includes software that is configured to access video footage stored on a computer or on a web server accessible through the internet.” Ex. 1027, ¶22. This software is not a pre-installed generic driver, but instead a custom software solution. Ex. 1027, ¶22; Ex. 2004, ¶101. The Petition agrees that *Kaplan* does not disclose use of pre-installed generic drivers. Petition, 26, 32, 34.

2. *Ahmed's Drivers Are Used to Capture Data, Not Communicate Data With a Peripheral Device*

The Petition relies on *Ahmed's* alleged teachings of a mirror display driver and an audio driver to allege the combination renders each independent claim obvious. Petition, 32-33, 34-35, 44-45. As explained with respect to the combination, *Ahmed's* drivers are not pre-installed generic drivers. *See supra* Section IV.B; *see also* Ex. 1014, 8:7-12, 9:27-28, 18:27-30; Ex. 2004, ¶102. Further, *Ahmed's* drivers do not communicate with peripheral devices as required by each independent claim. Ex. 2004, ¶102.

Instead, *Ahmed's* mirror display driver “is used for capturing the contents of the primary display associated with the computer[.]” Ex. 1014, 9:26-27; Ex. 2004, ¶103. Any media displayed on a computer, like through a media player, is also rendered on the mirror display driver (or the virtual mirror display driver) and copied to the application's memory. Ex. 1014, 10:1-8; Ex. 2004, ¶103. *Ahmed's* application captures the real-time images projected on the display by copying the memory to locally allocated memory. Ex. 1014, 10:9-13; Ex. 2004, ¶103. The Petition does not identify any disclosure in *Ahmed* where the mirror display driver is used to set up a means for communication between a processing device and a peripheral device. Ex. 2004, ¶104; *see* Petition, 35 (citing Ex. 1014, Abstract, 27:4-27, Fig. 12, 8:7-22, 9:12-13, 9:24-31, 10:9-13, 16:7-14, 4:3-5). *Ahmed's* system actually discourages

the use of specialized hardware that receives media from a computing device and communicates it through a wired connection to a television. Ex. 1014, 2:16-19; Ex. 2004, ¶105. Said otherwise, *Ahmed* is used by Petitioner simply for the general proposition that drivers exist. The Petition does nothing to suggest that *Ahmed*'s drivers are capable of facilitating the communication of any information, let alone the claimed "communication between the peripheral device and the processing device" by means of the claimed pre-installed generic driver of the operating system.

*Ahmed*'s mirror display driver (which is not a pre-installed generic driver) is instead used for ***video capture*** not data communication to a peripheral device. Ex. 2004, ¶105; *see* Petition, 35 ("Therefore, Ahmed discloses the use of a video driver for capturing video data"). A pre-installed generic driver is used "software installed on a processing device as part of the operating system that ***can drive a standard class of peripheral devices coupled to or connected to the processing device*** without the need to install a driver specific to a ***given peripheral device***." *See supra* Section II.C.2-II.C.3. This is consistent with the Claims. *E.g.*, Ex. 1001, 1 ("by means of a second pre-installed generic driver... a means for data communication between the peripheral device and the processing device"). In *Ahmed*, the drivers are not even used to drive or communicate to a peripheral device. Ex. 1014, 9:26-27; Ex. 2004, ¶105. Indeed, *Ahmed* proposes various embodiments that do not involve communications from a computer to a peripheral device. Ex. 1014, 7:18-22 ("The

processing system on chip can either be *integrated into the remote monitor 103 and computing device 101* or incorporated into a standalone device that is in *wired communication with the remote monitor 103* or computing device 101.”); Ex. 2004, ¶105. Even the relied on “socket 1202 for transmitting video” is a component used to share data between a transmitter and receiver, not between a computer and peripheral device. Petition, 35; Ex. 1014, 27:4-13, Fig. 12.

The Petition also relies on *Ahmed’s* disclosure of a virtual audio device. Petition, 33. However, *Ahmed’s* disclosure is similarly deficient with respect to using the virtual audio driver to communicate audio data to a peripheral device. Instead, *Ahmed* states:

a virtual audio driver, referred to as a virtual audio cable (VAC) is installed as a normal audio driver that can be selected as a default playback and/or recording device. A feature of VAC is that, by default, it routes all the audio going to its audio output pin to its input pin. Therefore, if VAC is selected as a default playback device, then all the audio being played on the system would go to the output pin of VAC and hence to its input pin... it would be able to capture everything that is being played on that system.

Ex. 1014, 18:27-19:5. Again, this driver is also used to *capture* media, not *set up communications*. Ex. 1014, 18:27-19:5; Ex. 2004, ¶106. Even once captured, the content is transmitted wirelessly. Ex. 1014, 19:10-12; Ex. 2004, ¶107. As *Ahmed’s* use of the virtual audio driver and mirror display driver is directed towards the

*capture* of media and is silent with regard to communication of that data, *Ahmed* fails to disclose the use of any driver to set up a means for audio communications. Ex. 2004, ¶107.

3. *Deforche* Does Not Describe the Identified Data Communications

The Petition relies on *Deforche* to allege obvious of use of a pre-installed generic audio driver. Petition, 33-34. However, *Deforche* does not describe audio communications—the word *audio* does not even appear in its text. *See generally*, Ex. 1030. Instead *Deforche* teaches using pre-installed generic drives (e.g., USB/HID) to communicate **IP data** in the context of its wireless modem communication. Ex. 1030, ¶¶33-34; Ex. 2004, ¶108. Further, while the Petition relies on an alleged “video driver” for capturing video data (Petition, 35) there is no disclosure of a video driver in *Deforche*. Ex. 2004, ¶108; *see generally*, Ex. 1030.

As none of the cited references, alone or in combination recite these limitations, Ground 1 fails.

**D. The Petition Ignores Antecedent Basis in the Dependent Claims**

Claim 2 recites: “wherein Step b) comprises presenting **the** peripheral device to the processing device as a human interface device and wherein **the** pre-installed generic driver is a human interface device driver.” Ex. 1001, Cl. 2. In other words, Claim 2 requires presenting **the** peripheral device of Claim 1 as a human interface

device, and *the* pre-installed generic driver of claim 1 is a human interface device driver.

Likewise, Claim 3 recites: “wherein Step b) comprises presenting *the* peripheral device to the processing device as a mass storage device and wherein *the* pre-installed generic driver is a mass storage device driver.” Ex. 1001, Cl. 3. So, *the* peripheral device of Claim 1 present as a mass storage device, and the pre-installed generic driver of Claim 1 is a human interface device driver. A similar antecedent basis is present in Claim 12 and Claim 13. Ex. 1001, Cl. 12-13.

Despite the Petitions earlier reliance on the “mirror display driver” of *Ahmed* for the pre-installed generic driver of Claim 1, the Petition now relies on the human interface device or mass storage device described in *Deforche* and *Kaplan* for Claims 2 and 3. *Compare* Petition, 34-35; Petition 41. The Petition provides no evidence that the human interface device driver or the mass storage device driver are capable of performing the limitations of Claim 1. Accordingly, this argument also fails.

**E. The Petition Fails to Identify Teachings of the Identified Constructions in the Cited References**

The Petition presents multiple constructions for terms of the '002 Patent. Petition, 13-19. “For IPR,... a petitioner must also identify how the *construed* claim is unpatentable over the relevant evidence.” Consolidated Trial Practice Guide, 42

(November 2019) (citing 37 C.F.R. §42.104(b)). The Petition fails to meet this requirement for multiple claim limitations.

The Petition allegedly challenges Claim 11 in tandem with Claim 1. Petition, 28. However, the Petition’s argument only recites the limitations of Claim 1. Petition, 28, 30, 32, 34, 35, 38, 39, 40. Likewise, the Petition provides no additional argument for Claim 21 but instead cites to their arguments for Claim 1. Petition, 44-45.

Failure to address the differences in each claim is a fundamental flaw of the Petitioned Grounds. “The petition ***must specify*** where ***each element*** of the claim is found in the prior art patents or printed publication relied upon.” 37 CFR §42.104(b)(4). The Petition itself identifies differences in Claims 11 and 21 as compared to Claim 1. For example, the Petition identifies multiple terms in Claims 11 and 21 not found in Claim 1 with proposed constructions:

- “*means for coupling*” (Claim 11)
- “*means for setting up... a means for audio communication between the peripheral device and the processing device and ... a means for data communication between the peripheral device and the processing device*” (Claim 11) / “*a first software code portion for setting up ... a means for audio communication between the peripheral device and the processing device*” (Claim 21)

- *“means for routing” (Claim 11) / a third software code portion for routing audio data from the processing device to the peripheral device via the connection and the means for audio communication and for routing the audio data from the peripheral device to the base node over the communications network, wherein the first pre-installed generic driver is used for transferring the audio data between the processing device and the peripheral device (claim 21)*
- *“a second software code portion for connecting the processing device to a communications network via a transceiver of the peripheral device” (Claim 21)*

As the Petition does not identify teachings that render the construed terms of Claims 11 and 21 obvious, ***at least*** Claims 11, 19, 21, and 22 are not obvious.

Additionally, the Petition failed to apply evidence relating to its own constructions. For example, the Petition provides a construction for the “means for audio communication between the peripheral device and the processing device” (claims 1, 11, 21) and “a means for data communication between the peripheral device and processing device” (claims 1, 11). Petition, 15. The Petition argues “the structure for both the audio and data communication encompasses an interface using the communication protocol of the specification. Petition, 16. When alleging obviousness, the Petition makes no reference to the construction of these terms.

Petition, 32-35. Instead, the Petition states “Ahmed discloses a setting up and interface and thus communication by means of an audio driver” without explaining if or how *Ahmed* provides “an interface using the communication protocol of the specification.” Petition, 16, 33. Likewise, the Petition fails to allege existence of an interface with respect to the “a means for data communication between the peripheral device and the processing device.” Petition, 34.

Further, even if the Petition did sufficiently identify “an interface using a generic communications protocol” the Petition failed to identify the function of providing data or audio “communication between the peripheral device and the processing device” consistent with the District Court’s construction. Ex. 2016, 10-13.

The Petition also must satisfy the construction of “pre-installed generic [audio] driver”. The Petition provides no explanation of the purpose of a driver. *See* Petition, 13, 14. The Petition must prove that the alleged pre-installed generic drivers are “software installed on a processing device as part of the operating system that *can drive a standard class of peripheral devices coupled to or connected to the processing device* without the need to install a driver specific to a given peripheral device.” *See supra* Section II.C.2-II.C.3.

## V. GROUND 2

For Ground 2, the Petition presents almost identical arguments as those of Ground 1, simply replacing *Kaplan* with *Maeda*. Accordingly, Ground 2 fails for similar reasons. Ex. 2004, ¶¶110-121. For example, The Petition asserts that *Maeda* discloses a system for remotely displaying content but is insufficient in that it does not disclose use of drivers. Petition, 46. Then, like with Ground 1, the Petition alleges a POSITA would be motivated to modify *Maeda* with *Ahmed* for this *exact* insufficiency (i.e., the lack of driver specific description). Petition, 46. Then, like with *Kaplan and Ahmed*, because *Maeda* and *Ahmed* are still insufficient together for failing to teach use of *pre-installed generic* drivers, the Petition alleges a POSITA would further combine *Deforche* with *Maeda* and *Ahmed* because of their insufficiency. Petition, 46-47.

As the Petition relies on the same arguments and same evidence from *Deforche* and *Ahmed* articulated in Ground 1, Ground 2 fails for the same reasons.

### A. A POSITA Would Not Be Motivated to Combine Maeda, Ahmed, and Deforche with a Reasonable Expectation of Success

*Maeda*, like *Kaplan*, is not a zero-footprint system. Ex. 2004, ¶¶115-117. *Maeda*'s system has a functional configuration to provide the image transmission system. Ex. 1031, ¶21. This functional configuration “includes a control unit 121, a screen generation unit 122, an image capture unit 123, an audio generation unit

124, an image output unit 125, an audio output unit 126, a PC communication unit 127, and an audio capture unit 128 as functional components.” Ex. 1031, ¶22; Ex. 2004, ¶116. Each of these “functional components” are implemented as software rather than hardware. Ex. 2004, ¶117; Ex. 2026, ¶130 (Dr. Almeroth opining that *Maeda* could be improved if “a user *is not* required to install a separate driver or configure any setting for peripheral device functionality.”). The functional components of this system “can be *applied* to a system that transmits images and audio from an image generation device such as a PC to an image projection device such as a projector[.]” Ex. 1031, ¶78; Ex. 2004, ¶117; Ex. 2026 ¶130. So, while it can be implemented on a traditional PC, the system must be applied or as a POSITA would understand this term, installed, to function. Ex. 1031, ¶78; Ex. 2004, ¶117. In its reply, the Petitioner may argue that the “functional components” of *Maeda* do not need to be installed. However, the Petition has not provided evidence that these functional modules are available on a generic computer. Ex. 2004, ¶117.

So, just as with *Deforche* with *Kaplan* and *Ahmed*, a POSITA would not combine *Deforche* with either *Maeda* or *Ahmed* because both require implementation of custom software or drivers rather than providing a zero-footprint implementation. *See supra* Section IV.A; *see also* Ex. 1014, 7:26-29, 8:7-12, 9:17-19, 18:27-30; 29:20-22, Ex. 1030, ¶¶3-4, 9, 15, 28, 34, 36, 50; Ex. 2004, ¶¶85-86, 88-91, 115-117.

As articulated with respect to Ground 1, there is no basis to conclude that the drivers of *Ahmed* would or could be modified with the teachings of *Deforche* with a reasonable expectation of success. *See supra* Section IV.B; *see also*; Ex. 1001, 14:39-46; Ex. 1014, 2:16-19, 8:7-12, 9:27-28, 18:27-30; Ex. 1030, ¶¶10, 36; Ex. 2004, ¶¶92-99, 118-119. *Maeda* provides no evidence or teachings relating to drivers to address this flaw. Ex. 2004, ¶119. Accordingly, there is also no basis to conclude that the *Maeda-Ahmed-Deforche* combination can be made with a reasonable expectation of success for the same reasons explained with respect to Ground 1.

**B. The Combination Does Not Disclose Setting up Communications Using Pre-Installed Generic Drivers**

Claim 1 requires use of a first pre-installed generic driver to set up audio communication between the peripheral device and processing device, as well as a second pre-installed generic driver to set up data communication between the peripheral device and processing device. Ex. 1001, Cl. 1. Similar limitations are also included in Claim 11 and Claim 21. Ex. 1001, Cls. 11, 21. The Petition also provides identical arguments for each independent claim. Petition, 47, 63.

There is no discussion of drivers in *Maeda*. *See Generally*, Ex. 1031. Further, the software solution (functional configuration) described in *Maeda* is not pre-installed or generic, but is a custom solution that must be applied or installed onto

the processing device. Ex. 1031, ¶¶78; Ex. 2004, ¶¶120-121. The Petition agrees that *Maeda* does not disclose the use of pre-installed generic drivers. Petition, 46, 53, 55.

As described with respect to Ground 1, neither *Ahmed* nor *Deforche* render this limitation obvious. *See supra* Sections IV.C.2-IV.C.3; *see also* Ex. 1014, 2:16-19, 7:18-22, 8:7-12, 9:26-28, 10:1-13, 18:27-19:5, 19:10-12; Ex. 1030, ¶¶33-34; Ex. 2004, ¶¶102-107, 120-121. Accordingly, Ground 2 also fails for failing to recite all limitations of the independent claims of the '002 Patent.

**C. The Petition Ignores Antecedent Basis in the Dependent Claims**

The Petition, like with Ground 1, relies on a human interface device and mass storage device for claims 2 and 3, having previously relied on a mirror display driver. *Compare*, Petition, 40-41; Petition 60-61. For the same reasons described with respect to Ground 1, Ground 2 also fails. *See supra* Section IV.D; Ex. 1001, Cl. 1-3, 12-13.

**D. The Petition Fails to Identify Teachings of the Identified Constructions in the Cited References**

Like with Ground 1, the Petition does not even identify the limitations of Claim 11, despite providing constructions for its unique terms. Petition, 47-60. Likewise, the Petition provides no new arguments for claim 21 despite also including unique claim constructions for its unique claim terms. Petition, 63-65.

Additionally, like with Ground 1, in Ground 2 the Petition fails to apply the constructions of the terms, like the “means for audio communication between the peripheral device and the processing device” (claims 1, 11, 21), “a means for data communication between the peripheral device and processing device” (claims 1, 11) and “pre-installed generic [audio] driver[.]” Therefore, the Petition fails for the same reasons outlined above. *See supra* Section IV.E.

## **VI. EVIDENCE ESTABLISHES NON-OBVIOUSNESS OF THE INVENTION**

A determination of obviousness requires determination of (1) the scope and content of the prior art; (2) the difference between the claims and the prior art; (3) the level of ordinary skill in the art; and (4) the presence of evidence of secondary considerations. *See Graham v. John Deer Co. of Kan. City*, 383 U.S. 1, 17-18 (1966). These secondary considerations include commercial success, industry praise, unexpected results, copying, industry skepticism, licensing, and long-felt but unsolved need. *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012). When evidence of secondary considerations is present, it must be considered by the Board. *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1340 (Fed. Cir. 2016) (“We must therefore remand for the Board to examine Nike’s evidence and its impact, if any, on the Board’s analysis under the first three *Graham* factors.”). Patent Owners must show a sufficient nexus between

the objective evidence and the claimed invention, but objective evidence “need only be reasonably commensurate with the scope of the claims[.]” *Rambus Inc. v. Rea*, 731 F.3d 1248, 1256, 1257 (Fed. Cir. 2013) (internal quotation marks and citation omitted). A nexus is presumed when “the patentee shows that the asserted objective evidence is tied to a specific product and that product ‘embodies the complained features, and is coextensive with them.’” *Polaris Indus. V. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018) (citing *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000)). Here, the proffered secondary considerations are based on both Barco’s patent practicing product as well as its competitors’ licensing activities.

“Licenses to the challenged patent then, unlike products or other forms of objective evidence of nonobviousness, do not require a nexus with respect to the specific claims at issue, nor does our nexus law require that a particular patent be the only patent being licensed or the sole motivation for entering into a license.” *Ancora Techs., Inc. v. Roku, Inc.*, No. 2023-1674, 2025 WL 1679967, at \*7 (Fed. Cir. June 16, 2025). Moreover, “the fact that a license concerns rights to more than one patent does not detract from the fact that each patent is a subject of the license.” *Id.* at \*8. Where “other patents may have also been part of the license [it] does not detract from the nexus inquiry. These licenses, taken by substantial parties paying substantial royalties to secure the right to practice the [challenged] patent, should

have been given more, *if not controlling*, weight in the Board's obviousness determination” *Id.* at \*9.

**A. The Barco System Embodies the Claimed Invention.**

Patent Owner need not show “a perfect correspondence” between the claim invention and the commercial product. *Fox Factory Inc., v. SRAM LLC*, 944 F.3d 1366, 1374 (Fed. Cir. 2019). Instead, the Patent Owner must show that the product is essentially the claimed invention. *Id.*, (citing *Demarco Corp., v. F. Von Langsdorff Licensing, Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988)). Patent Owner provides a system for wireless presentation, which embodies claims of the '002 Patent. Ex. 2013. Patent Owner identifies the '002 Patent as practiced by the ClickShare Products on its website. Ex. 2017, 9. The Clickshare line involves the ClickShare Button (“ClickShare Button”) and a number of components capable of receiving communications from the ClickShare including the C-5, C-10, CX-20, CX-30, CX-50, CX-50 Gen2, CB Core, and CB Pro (“Barco Bases”). Together, ClickShare Button and a Barco Base form the Barco System.

The ClickShare marketing materials illustrate that the Barco System is essentially the claimed invention. *See generally* Ex. 2013; Ex. 2014. The features and benefits the '002 Patent’s claims provide are evident in the Barco System. For example, “[a]nyone can use the Button, both employees and guests, both on Windows and Mac... No *installation* or training needed.” Ex. 2014, 3. Likewise,

the ClickShare “connects your laptop to the audio and video equipment of your conference room,” as noted in each independent claimed of the ’002 Patent. Ex. 1001, Cl. 21 (“routing the audio data from the peripheral device to the base node over the communications network, wherein the first pre-installed generic driver is used for transferring the audio data between the processing device and the peripheral device.”); Ex. 2013, 1; *see also* Ex. 1001, Cls. 1, 11. The relationship between the claims of the ’002 Patent and the Barco System are clear. *See Demarco*, 851 F.2d at 1394 (“A requirement for proof of the negative of all imaginable contributing factors would be unfairly burdensome.”). As is clear from the images of the products below, there is essentially no unclaimed feature in the accused products.

The Barco System practices at least claims 1-2, 9-11, and 19-22 of the ’002 Patent. Ex. 2004, ¶¶122-147.

1. Claim 1

- a. A method for connecting a processing device to a communications network, the processing device having a memory, a display and an operating system with pre-installed generic drivers providing a communications protocol for communication between the processing device and a class of peripheral devices, the method comprising:

The Barco System provides a process for connecting a processing device (e.g., a laptop computer) to a communications network as set forth in claim 1. Ex. 2004,

¶123. ClickShare Button connects the processing device to a communications network:

## What is ClickShare?

ClickShare is an [award-winning wireless meeting room system](#) for easy video conferencing, collaboration and presentation. It connects your laptop to the audio and video equipment of your conference room, so you can start your meeting in under 7 seconds with one click via the ClickShare Button or App.

Ex. 2013; Ex. 2004, ¶124.

ClickShare Button provides network connectivity through a wireless transmission protocol:

### General specifications

|                                |                                                                                     |
|--------------------------------|-------------------------------------------------------------------------------------|
| Connectors                     | USB-C type                                                                          |
| Authentication protocol        | WPA2-PSK in stand alone mode<br>WPA2-PSK or IEEE 802.1X in network integration mode |
| Wireless transmission protocol | IEEE 802.11 a/b/g/n/ac                                                              |
| Frequency band                 | 2.4 GHZ and 5 GHz                                                                   |

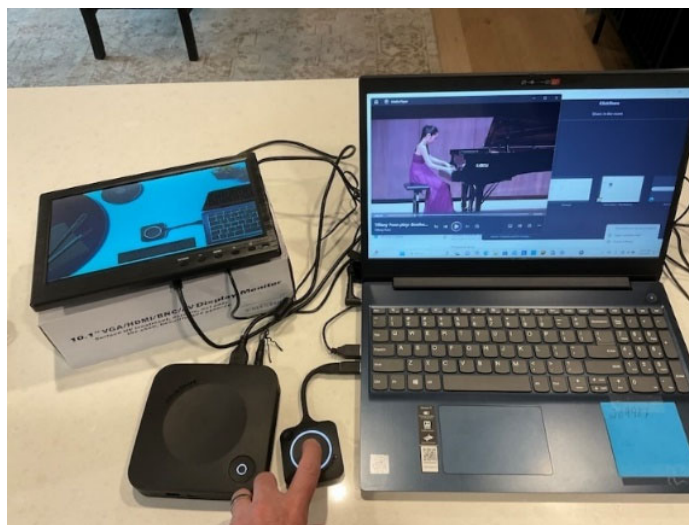
Ex. 2014; Ex. 2004, ¶124.

The processing device includes a memory, display, and operating systems with pre-installed generic drivers. Ex. 2004, ¶125. The processing device communicates with a class of peripheral devices (e.g., USB devices). Ex. 2004, ¶125. USB devices are a standard class of peripheral devices that are driven by pre-installed generic drivers. Ex. 2004, ¶125. USB provides a generic communication

protocol for communication between the processing device and a class of peripherals. Ex. 2004, ¶125.

- b. a) coupling an external peripheral device physically to a port of the processing device, wherein the peripheral device comprises a wireless transceiver and a connector, said connector configured to couple to the port of the processing device;

The Barco System includes an external peripheral device (ClickShare Button) that is coupled to a port of the processing device. Ex. 2004, ¶¶126-127. For example, Clickshare Button includes a USB interface which plugs into a processing device:



Ex. 2004, ¶127.

Clickshare Button includes a wireless transceiver and a connector configured to couple to the port of the processing device. For example, ClickShare Button's wireless transceiver includes Wi-Fi capabilities, and ClickShare Button's connector includes a USB interface:

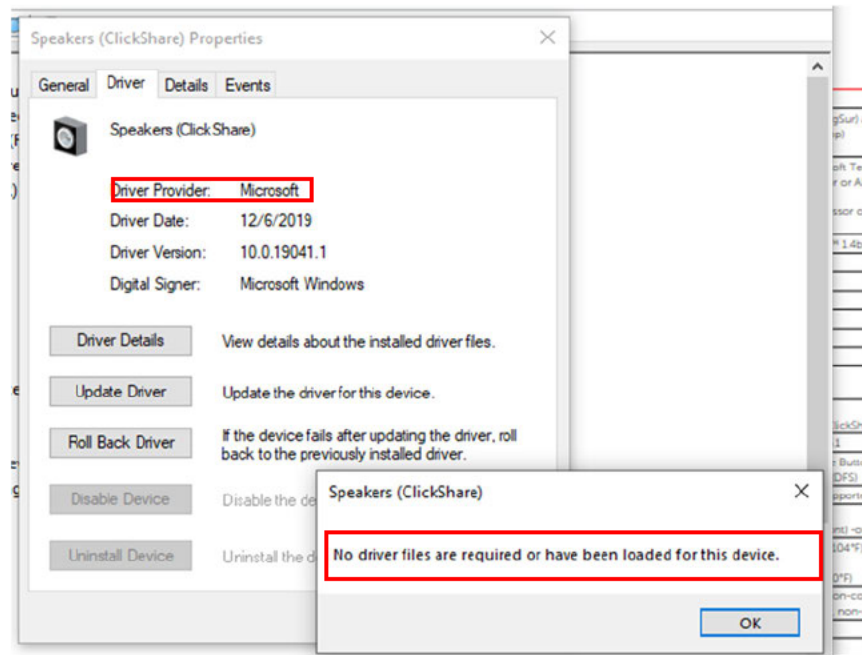
**General specifications**

|                                |                                                                                     |
|--------------------------------|-------------------------------------------------------------------------------------|
| Connectors                     | USB-C type                                                                          |
| Authentication protocol        | WPA2-PSK in stand alone mode<br>WPA2-PSK or IEEE 802.1X in network integration mode |
| Wireless transmission protocol | IEEE 802.11 a/b/g/n/ac                                                              |
| Frequency band                 | 2.4 GHZ and 5 GHz                                                                   |

Ex. 2014; Ex. 2004, ¶128.

- c. b) setting up, by means of a first pre-installed generic audio driver of the operating system, a means for audio communication between the peripheral device and the processing device and

The Barco System relies on the processing device's pre-installed generic audio driver of the operating system, to set up a means for audio communication between Clickshare Button and the processing device. Ex. 2004, ¶129. Clickshare Button utilizes the USB audio drivers on the processing device. Ex. 2004, ¶130. The audio related devices are set up by means of pre-installed generic drivers. The driver provider is also the provider of the operating system:

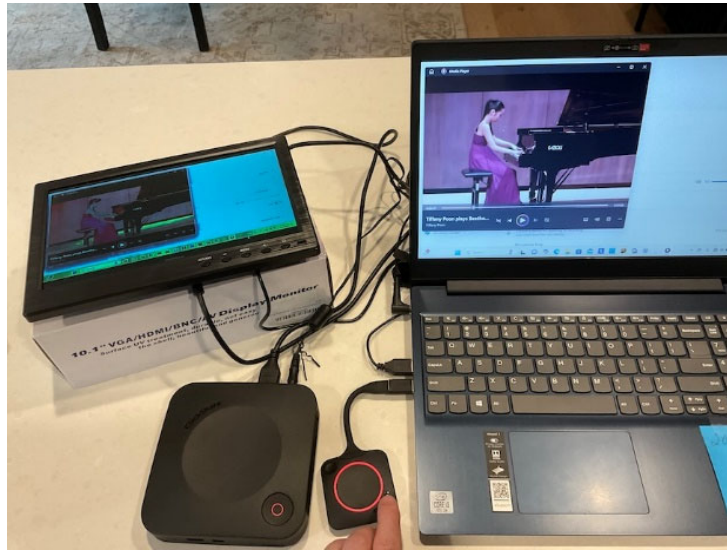


Ex. 2004, ¶130.

The pre-installed generic drivers are a means for audio communication between Clickshare Button and the processing device. Ex. 2004, ¶131.

- d. by means of a second pre-installed generic driver of the operating system, a means for data communication between the peripheral device and the processing device;

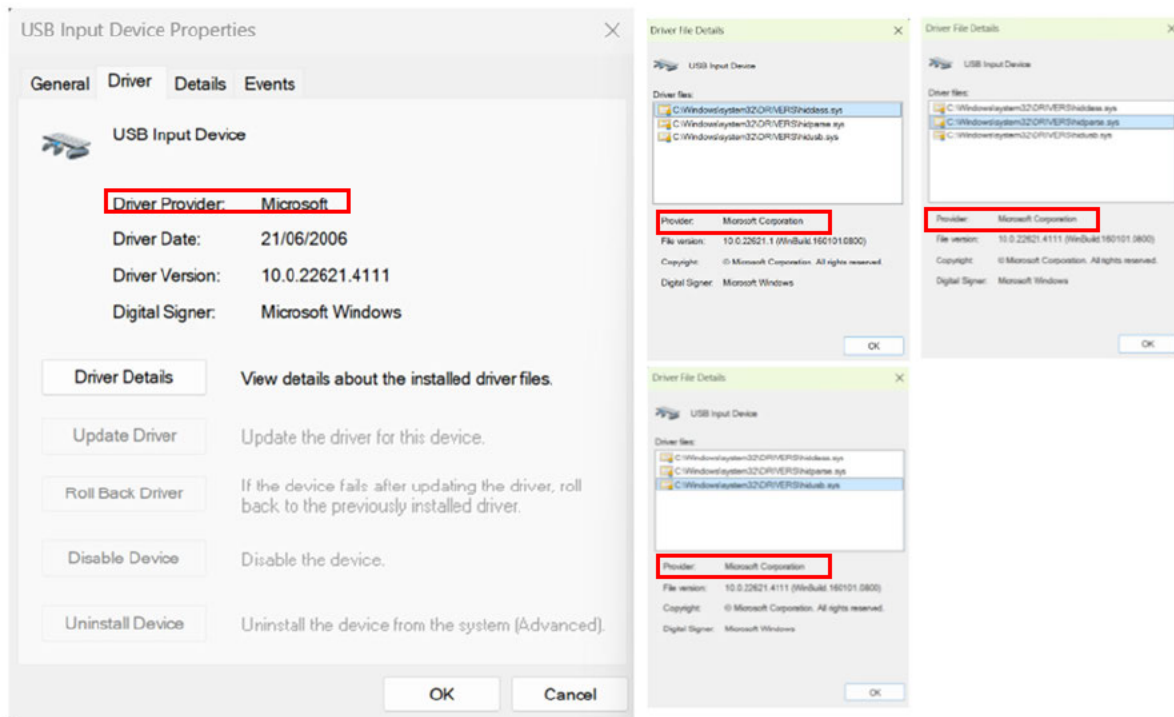
The Barco System relies on the processing device's pre-installed generic driver of the operating system to set up a means for data communication between Clickshare Button and the processing device. Ex. 2004, ¶132. ClickShare Button is used to perform wireless presentation which includes communicating video data:



Ex. 2004, ¶133.

Video data requires a second pre-installed generic driver for data communication between the ClickShare Button and the processing device. Ex. 2004, ¶134. Video data is screen scraped on the processing device using a portable application and shared via the HID driver to pass the video data to the peripheral device. Ex. 2004, ¶134.

The HID driver is a second pre-installed generic driver as a means for data communication between the ClickShare Button and the processing device. Ex. 2004, ¶135. The driver provider for this HID data communication is also the provider of the operating system, Microsoft (e.g., as shown in Figure Y below):



Ex. 2004, ¶135.

- e. c) using the peripheral device to connect the processing device to a communications network via the wireless transceiver;

The Barco System provides the Clickshare Button which is configured to connect the processing device to a communications network via a wireless transceiver. Ex. 2004, ¶136. Clickshare Button connects a processing device to a communications network. Ex. 2004, ¶137. ClickShare Button has a wireless transceiver with 802.11 a/b/g/n/ac/ax capabilities, as shown below:

#### General specifications

|                                |                                                                                     |
|--------------------------------|-------------------------------------------------------------------------------------|
| Connectors                     | USB-C type                                                                          |
| Authentication protocol        | WPA2-PSK in stand alone mode<br>WPA2-PSK or IEEE 802.1X in network integration mode |
| Wireless transmission protocol | IEEE 802.11 a/b/g/n/ac                                                              |
| Frequency band                 | 2.4 GHz and 5 GHz                                                                   |

Ex. 2014; Ex. 2004, ¶137.

- f. d) routing audio data from the processing device to the wireless transceiver via the connector of the peripheral device and the means for audio communication and routing the audio data from the wireless transceiver of the peripheral device to a base node over the communications network, wherein the first pre-installed generic audio driver is used for transferring the audio data between the processing device and the peripheral device.

The Barco System is configured to route audio data from the ClickShare Button transceiver via the connector and means for audio communication. Ex. 2004, ¶138. When ClickShare Button is connected to the processing device, the audio is routed via the means for audio communication to ClickShare Button via the connector. Ex. 2004, ¶139.

ClickShare Button routes audio data to a ClickShare Conference, ClickShare Video Bar, or ClickShare Present (“ClickShare Room System”), over the communications network. Ex. 2004, ¶139.

2. Claim 2

- a. The method of claim 1 wherein Step b) comprises presenting the peripheral device to the processing device as a human interface device and wherein the pre-installed generic driver is a human interface device driver.

As described with respect to *supra* Section VI.A.1.d, ClickShare Button presents as a human interface device wherein the pre-installed generic driver is a human interface device driver. Ex. 2004, ¶140.

3. Claim 9

- a. The method of claim 1 further comprising time-stamping synchronously the audio with the data stream.

ClickShare Button provides both audio data and video data which are synchronized. Ex. 2004, ¶141. Accordingly, the Barco System practice this claim.

4. Claim 10

- a. The method of claim 9 further comprising encoding, optionally encrypting the audio data.

Clickshare Button encodes and encrypts the audio data. Ex. 2004, ¶142. For example, ClickShare button complies with the WPA2-PSK protocol, which is a widely used WiFi Security protocol:

**General specifications**

|                                |                                                                                     |
|--------------------------------|-------------------------------------------------------------------------------------|
| Connectors                     | USB-C type                                                                          |
| Authentication protocol        | WPA2-PSK in stand alone mode<br>WPA2-PSK or IEEE 802.1X in network integration mode |
| Wireless transmission protocol | IEEE 802.11 a/b/g/n/ac                                                              |
| Frequency band                 | 2.4 GHZ and 5 GHz                                                                   |

Ex. 2012; 2004, ¶142.

5. Claim 11

- a. A system for connecting a processing device to a communications network, the processing device having a memory, a display and an operating system with pre-installed generic drivers providing a generic communications protocol for communication between processing device and a class of peripheral devices, the system comprising:

This limitation is practiced for the Barco System as shown *supra* Section VI.A.1.a. Ex.2004, ¶143.

- b. a) means for coupling an external peripheral device physically to a port of the processing device, the peripheral device comprising a wireless transceiver and a connector, said connector configured to couple to the port of the processing device;

This limitation is practiced for the Barco System as shown *supra* Section VI.A.1.b. Ex. 2004, ¶143.

- c. b) means for setting up, by means of a first pre-installed generic audio driver of the operating system, a means for audio communication between the peripheral device and

the processing device and by means of a second pre-installed generic driver of the operating system, a means for data communication between the peripheral device and the processing device;

This limitation is practiced for the Barco System as shown *supra* Sections VI.A.1.c-VI.A.1.d. Ex. 2004, ¶143.

- d. c) wherein the peripheral device is configured in a way to connect the processing device to a communications network via the transceiver;

This limitation is practiced for the Barco System as shown *supra* Section VI.A.1.e. Ex. 2004, ¶143.

- e. d) means for routing audio data from the processing device to the wireless transceiver via the connector of the peripheral device and the means for audio communication and means for routing the audio data from the wireless transceiver of the peripheral device to a base node over the communications network, wherein the first pre-installed generic audio driver is used for transferring the audio data between the processing device and the peripheral device.

This limitation is practiced for the Barco System as shown *supra* Sections VI.A.1.f. Ex. 2004, ¶143.

6. Claim 19

- a. The system of claim 11 further comprising time-stamping synchronously the audio stream with the data stream.

This limitation is practiced for the Barco System as shown *supra* Section VI.A.3.a. Ex. 2004, ¶144.

7. Claim 20

- a. The system of claim 19 further comprising means for encoding, optionally encrypting the audio data.

This limitation is practiced for the Barco System as shown *supra* Section VI.A.4.a. Ex. 2004, ¶145.

8. Claim 21

- a. A peripheral device 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 providing a generic communication protocol for communication between the processing device and a class of peripheral devices, the peripheral device comprising a connection configured to be physically coupled to a port of the processing device and a memory in which executable software code is stored for execution on the processing device, said executable software code comprising:

This limitation is practiced for the Barco System as shown *supra* Sections VI.A.1.a-VI.A.1.b, VI.A.1.e. Ex. 2004, ¶146.

- b. a first software code portion for setting up, by means of the pre-installed generic driver of the operating system, a means for audio communication between the peripheral device and the processing device;

This limitation is practiced for the Barco System as shown *supra* Section VI.A.1.c. Ex. 2004, ¶146.

- c. a second software code portion for connecting the processing device to a communications network via a transceiver of the peripheral device;

This limitation is practiced for the Barco System as shown *supra* Section VI.A.1.d. Ex. 2004, ¶146.

- d. a third software code portion for routing audio data from the processing device to the peripheral device via the connection and the means for audio communication and for routing the audio data from the peripheral device to the base node over the communications network, wherein the first pre-installed generic driver is used for transferring the audio data between the processing device and the peripheral device.

This limitation is practiced for the Barco System as shown *supra* Sections VI.A.1.e-VI.A.1.f. Ex. 2004, ¶146.

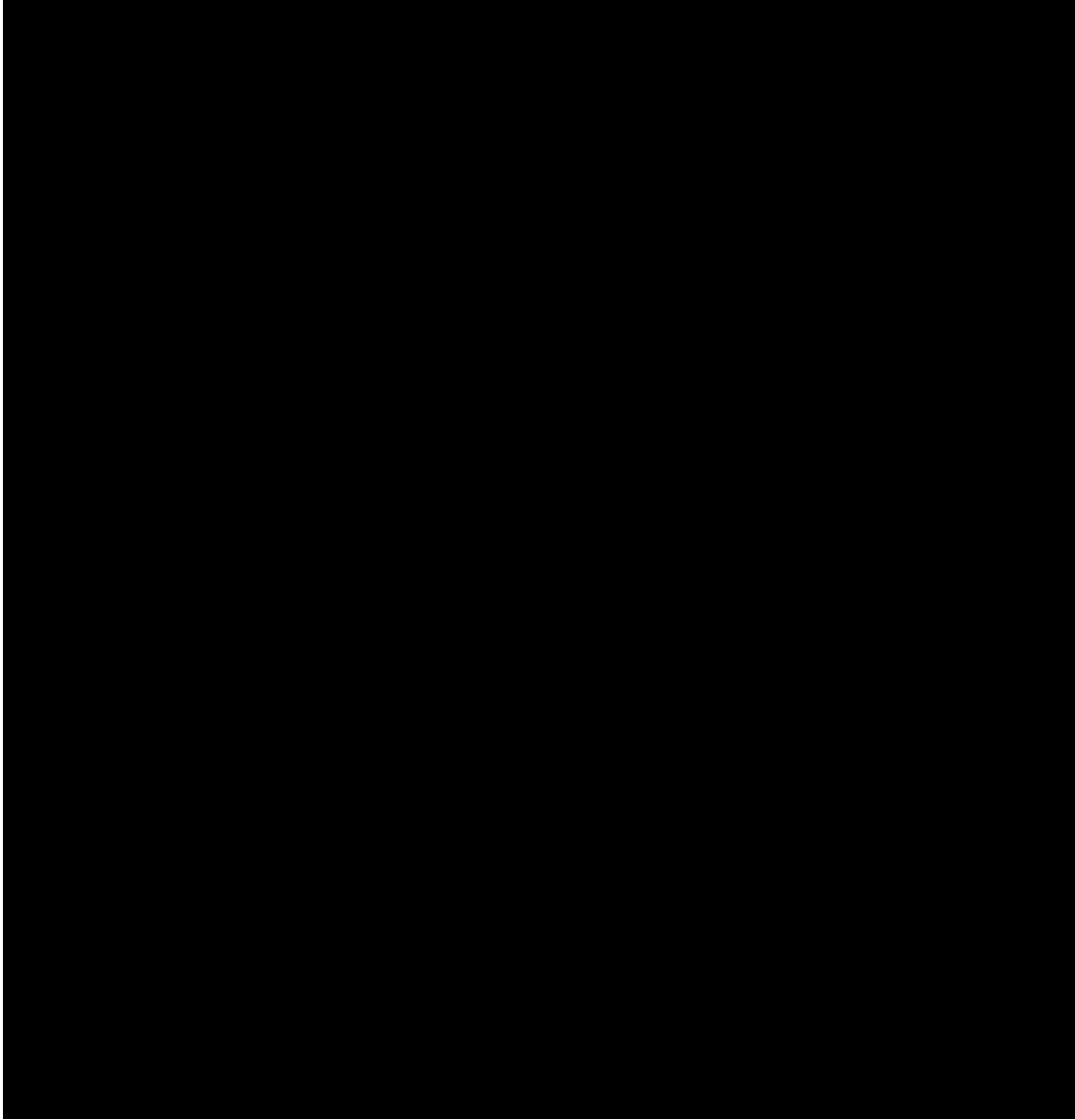
9. Claim 22

- a. The method of claim 1, wherein the audio driver is a generic audio driver.

This limitation is practiced for the Barco System as shown *supra* Section VI.A.1.c. Ex. 2004, ¶147.

**B. The Barco System Has Achieved Significant Commercial Success**

The commercial success of the Barco Practicing System is demonstrated by the United States Net Sales Annual Totals for the ClickShare product line:



Ex. 2010.

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<sup>2</sup> The Provided Financial Data is through Q3 of 2024.

Over this period, Patent Owner has [REDACTED] in revenue and [REDACTED] in profit in the United States from its commercialization of the invention claimed in the '002 Patent. Ex. 2010. Patent Owner's commercial success using its patented invention is strong evidence that the claims of the '002 Patent are nonobvious.

**C. Acquiescence of Market Competitors**

Crestron is a licensee of the '002 Patent. Ex. 2011, 15. Crestron is a sophisticated engineering company, and has been a leading innovator in the commercial and residential control and automation solutions for over 40 years. Ex. 2019. Crestron's sophistication relating to intellectual property is evidenced by their ownership of 460 separate patents in numerous fields including the following CPC codes: electric digital data processing, fixed or movable closures for openings in buildings, vehicles, fences or like enclosures in general, loudspeakers, microphones, gramophone pick-ups or like acoustic, electromechanical transducers, printed circuits, and transmission of digital information. Ex. 2019. Crestron is a competitor of Patent Owner. Ex. 2023, 28:22-29:16.

[REDACTED]

[REDACTED]

[REDACTED] Ex. 2011; Ex. 2023, 58:10-59:17, 66:22-67:7. It is true that the license covers more than just the

'002 Patent, it covers the entire Barco Clickshare Portfolio. Ex. 2011, 15. However, “[l]icenses to the challenged patent then, unlike products or other forms of objective evidence of nonobviousness, do not require a nexus with respect to the specific claims at issue, nor does our nexus law require that a particular patent be the only patent being licensed or the sole motivation for entering into a license.” *Ancora. v. Roku*, 2025 WL 1679967, at \*7 (Fed. Cir. June 16, 2025). As Crestron is an industry leader in the presentation space, it is presumed that it performed a significant investigation into the validity and infringement of the patents covered by the license, thereby strengthening the evidentiary value of the Crestron license for the purpose of proving nonobviousness. *RCA Corp. v. Data General Corp.*, 701 F. Supp 456, 471 (D. Del. 1988), *aff’d*, 887 F.2d 1056 (Fed. Cir. 1989); *B&H Manufacturing Inc. v. Foster-Forbes Glass Co.*, 26 USPQ2d 1066, 1070 (N.D. Ind. 1993) (the Licensees represented major industry players, which was found to be evidence that “they would not have bowed to pressure to take a license without first reaching the conclusion that ultimately litigation would prove futile.”); *see also Columbia Broadcasting Sys. v. Sylvania Elec. Prods., Inc.*, 415 F.2d 719, 728 (1st Cir. 1969), cert denied, 396 U.S. 1061 (1970). Crestron also identifies the licensed patents on its website. Ex. 2018.

Upon agreeing to the license, Andrew Ludke, the Senior Director of Project Management at Crestron, praised Barco’s patented inventions stating that “Our

customers expect fully integrated solutions that make workplace collaboration simple. With this agreement we will bring robust wireless conferencing based on Barco's ClickShare intellectual property to our popular digital workplace technologies to meet the growing demand for BYOM solutions[.]” Ex. 2012. The license agreement, by Mr. Ludke's own admission, has been “mutually beneficial”. Ex. 2023, 76:12-18. Given that Creston has already paid more than the cost of litigation in licensing, its acquiescence to the validity of Barco's patent portfolio is strong evidence of the non-obviousness of the '002 Patent.

Creston is not the only example of industry acquiescence. For example, in *Barco, Inc. et al v. Vivitek Corporation et al*, Case No. 4:19-cv-3250 (N.D. Cal. 4/27/2020), another competitor in the industry in 2019 agreed to a Consent Judgment and Permanent Injunction regarding certain patents owned by Patent Owner, including U.S. Patent No. 8,756,348, which is the parent of the '002 Patent. Ex. 1001, Title Page; Ex. 2020, 2; Ex. 2021. Likewise, other competitors, such as Sahara Presentation Systems changed the design of their competing product rather than face liability for patent infringement. Ex. 2021 (“Barco ended its case against Sahara Presentation Systems after obtaining that its Clevershare products were materially redesigned to avoid patent infringement.”).

## **VII. CONCLUSION**

For the reasons set forth above, the patentability of all claims of the '002

Patent should be upheld.

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Respectfully submitted,

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**Certification of Word Count Under 37 C.F.R. § 42.24(d)**

The undersigned hereby certifies that the foregoing contains 13,117 words according to the word count of the word-processing software used to prepare the foregoing.

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**CERTIFICATE OF SERVICE**

I hereby certify that on July 16, 2025 a true and correct copy of the foregoing was caused to be served on the following counsel of record for Petitioner by electronic mail at the following addresses:

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