

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

YEALINK (USA) NETWORK TECHNOLOGY CO. LTD., and
YEALINK NETWORK TECHNOLOGY CO., LTD.,
Petitioner,

v.

BARCO N.V.,
Patent Owner.

IPR2024-01438
Patent 11,258,676 B2

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

LANEY, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. *Background and Summary*

Yealink (USA) Network Technology Co., Ltd., and Yealink Network Technology Co., Ltd. (collectively, “Petitioner”) and Barco N.V. (“Patent Owner”) are identified as the real parties in interest for this matter. Paper 2 (“Pet.” or “Petition”), 1; Paper 9, 1. The parties identify *Barco, Inc. et al. v. Yealink (USA) Network Technology Co., Ltd. et al.*, 2:23-cv-521 (ED Tex.) (filed Nov. 14, 2023) as a related court proceeding. *Id.* And Patent Owner identifies additional patents, applications, and IPRs between the parties that it contends are related, including IPR2024-01436 (“1436-IPR”), IPR2024-01437 (“1437-IPR”), and IPR2024-01439 (“1439-IPR”). *See* Paper 9, 1–3.

On September 16, 2024, Petitioner filed a Petition requesting *inter partes* review of claims 1, 4, 5, 8, 14, 16, and 18–20 of U.S. Patent No. 11,258,676 B2 (Ex. 1001, “the ’676 patent”), along with a supporting declaration from Kevin C. Almeroth, Ph.D. Pet. 1; Ex. 1002. After institution (Paper 7), Patent Owner filed a Response to the Petition (Paper 15, “PO Resp.”) and likewise included its own supporting declaration from Michael C. Brogioli, Ph.D. (Ex. 2004). Petitioner filed a Reply (Paper 23 (“Pet. Reply”)) and a supplemental declaration from Dr. Almeroth (Ex. 1083), and Patent Owner filed a Sur-reply (Paper 40 (“PO Sur-reply”)). An oral hearing with the parties was held on January 21, 2026, and the transcript is of record. Paper 53 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the challenged claims of the ’676 patent. For the reasons discussed below, we determine Petitioner establishes by a preponderance of the evidence that the challenged claims are unpatentable.

B. The '676 Patent

The '676 patent, titled “Electronic Tool and Methods for Meetings,” relates to electronic tools for meetings that provide connection to a communications network for use in displaying media content. Ex. 1001, code (54), 1:21–25. The '676 patent describes problems “holding a face-to-face meeting using advanced electronic tools,” including complexity of the network infrastructure, high demands on technical expertise of users, great variety of possible collaborative software solutions, time taken to prepare presentations for meetings, and lack of standards for audio, among other problems. *Id.* at 5:3–24.

The '676 patent describes an electronic meeting tool for communicating arbitrary media content from users at a meeting that includes a node configuration adapted to operate a display node of a communications network, the display node being coupled to a first display. Ex. 1001, code (57). “The node configuration is adapted to receive user selected arbitrary media content and to control display of the user selected arbitrary media content on the first display.” *Id.* “A peripheral device adapted to communicate the user selected arbitrary media content via the communications network is a connection unit including a connector adapted to couple to a port of a processing device having a second display, a memory and an operating system, and a transmitter.” *Id.* The tool allows a user to trigger a transfer of the user selected arbitrary media content to the transmitter. *Id.*

C. Illustrative Claims

Petitioner challenges claims 1, 4, 5, 8, 14, 16, and 18–20 of the '676 patent. Pet. 1. Of the challenged claims, claims 1, 14, and 16 are

independent. Ex. 1001, 32:40–36:29. Claims 4, 5, 8, 18, and 20 depend from claim 1; claim 19 depends from claim 16. *Id.*

Claim 1 is illustrative and is reproduced below.

1. A method for connecting one or more processing devices, each processing device being a user device of one participant in a meeting with a plurality of participants, to a wireless communications network having a base node with one or more first displays, the one or more processing devices each having a memory, a second display and an operating system with at least one pre-installed generic driver providing a generic communications protocol for communication between the processing device and a class of peripheral devices, the method comprising the following steps for each processing device:

a) coupling a peripheral device to the processing device, the peripheral device having a wireless transceiver;

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

c) coupling the processing device to the wireless communications network via the peripheral device; running a client application stored on the peripheral device to obtain screen scraped data;

d) routing the screen scraped data between the processing device and the wireless communications network via the means for communication for display on the one or more first displays of the base node, wherein the generic communication protocol is used for transferring the screen scraped data for display between the processing device and the peripheral device; and

e) obtaining electronic access to the one or more first displays for display of the screen scraped data;

the method further comprising:

displaying the screen scraped data on the one or more first displays in accordance with a set of rules, one of the rules being a forcing rule, wherein the forcing rule is that display on the one or more first displays of new screen scraped data is obtained by the action of only one participant involved in the meeting, without requiring the agreement of another participant, the new screen scraped data of any participant for

display overrides or replaces any data displayed on the one or more first displays from the same or another participant of the meeting.

Ex. 1001, 33:60–34:12.

D. Evidence and Asserted Grounds

Petitioner asserts that claims 1, 4, 5, 8, 14, 16, and 18–20 of the '676 patent would have been unpatentable on the following grounds:

Ground	Claim(s) Challenged	35 U.S.C. §	Basis
1	1, 5, 8, 18, 20	103(a) ¹	Ono, ² Deforche ³
2	14	103(a)	Ono
3	4, 16, 19	103(a)	Ono, Deforche, Grimshaw ⁴
4	1, 4, 5, 8, 16, 18–20	103(a)	Uchida, ⁵ Deforche, Grimshaw
5	14	103(a)	Uchida, Grimshaw

II. ANALYSIS

A. Legal Standards

Petitioner bears the burden of establishing the unpatentability of the challenged claims by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). This burden of persuasion never shifts to

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), includes revisions to Sections 102 and 103 that became effective on March 16, 2013. Because the challenged claims issued from an application claiming priority to an application filed before March 16, 2013, we apply pre-AIA law.

² U.S. Patent Application Publication No. US 2005/0210390 A1, published September 22, 2005 (Ex. 1005) (“Ono”).

³ EP 2107463A2, published October 7, 2009 (Ex. 1030) (“Deforche”).

⁴ U.S. Patent Application Publication No. US 2011/0096138 A1, published April 28, 2011 (Ex. 1008) (“Grimshaw”).

⁵ JP 2008-165007 A, published July 17, 2008 (Ex. 1009) (“Uchida”).

Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

The Supreme Court explained in *KSR International Co. v. Teleflex Inc.* that

[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” (alteration in original))). This search for answers about whether the claimed subject matter would have been obvious to a skilled artisan at the time of the invention applies “an expansive and flexible

approach.” *Id.* at 415. Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. Reaching this conclusion, however, “requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination.” *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). “Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Id.*

“Whether an ordinarily skilled artisan would have been motivated to modify the teachings of a reference is a question of fact.” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1327 (Fed. Cir. 2016) (citations omitted). “[W]here a party argues a skilled artisan would have been motivated to combine references, it must show the artisan ‘would have had a reasonable expectation of success from doing so.’” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1360–61 (Fed. Cir. 2017) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)).

Reasonable expectation of success of the proposed combination is also a question of fact. *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1366 (Fed. Cir. 2016). “The reasonable expectation of success requirement refers to the likelihood of success in combining references to meet the limitations of the claimed invention.” *Id.* at 1367. In evaluating reasonable expectation of success, we must consider the appropriate scope of the “claimed invention.” *Id.* (emphasis omitted).

B. Level of Ordinary Skill in the Art

Petitioner contends that a person having ordinary skill in the art would have had at least a [Master’s Degree in Electrical Engineering] or [Computer Science] and five years of work experience in a related field. Additional educational experience could substitute for some of the work experience.

Pet. 8 (citing Ex. 1002 ¶¶ 36–37). “Patent Owner does not dispute this level of skill in the art.” PO Resp. 10.

On the complete record, we adopt Petitioner’s proposed definition of a person of ordinary skill in the pertinent art, as it is consistent with the ’676 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

C. Claim Construction

In an *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Petitioner proposes constructions for a number of claim terms. Pet. 8–11. Patent Owner proposes constructions for only some of the same terms; specifically, “couple” and “means for communication.” PO Resp. 9–10. We do not find any meaningful difference between the parties’ proposed constructions and our decision in this matter does not turn on resolving any particular differences between the parties’ constructions. Therefore, because only those terms in controversy need to be construed, and only to the extent

necessary to resolve the controversy, we determine that no claim term requires express construction in this proceeding and that the ordinary and customary meaning of the claim terms apply. *See Realtime Data LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019).

D. Overview of the Prior Art

1. Ono (Ex. 1005)

Ono is titled “Image Display Apparatus, Image Display System, and Image Display Method,” and seeks to provide an image display apparatus that is capable of switching among a plurality of networked information terminal apparatuses to display, on a display section, image information from the desired information terminal apparatus. Ex. 1005, code (54), ¶ 7.

Figure 1 of Ono, reproduced below, illustrates an exemplary embodiment of the disclosed image display system. Ex. 1005 ¶ 18.

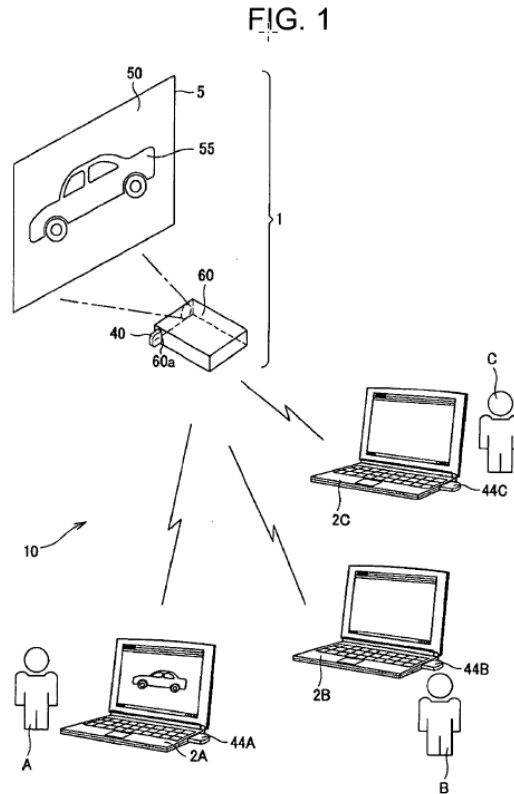


Figure 1 illustrates an image display system that makes up a wireless network “by connecting an image display apparatus 1 and three information terminal apparatuses 2A, 2B, and 2C to a wireless communications channel.” *Id.* ¶ 36. Image display apparatus 1 is comprised of screen 5, image projection apparatus (projector) that projects an image 55 onto a display screen 50 of screen 5, and communications module 40, such as a wireless connection module inserted into slot 60a on projector 60. *Id.* ¶ 38. Communications module 40 is for communicating with the three information terminal apparatuses 2A, 2B and 2C, and is used for transmitting and receiving request signals, response signals, rejection signals, and the like for connecting or disconnecting, as well as, for receiving image information that is sent from the three information terminal apparatuses 2A, 2B, and 2C via the wireless network. *Id.* Information terminal apparatuses 2A, 2B, and 2C are personal computers (PCs) that include connected communications

modules 44A, 44B, and 44C, such as wireless connection modules. The communications modules 44A, 44B, and 44C are also used for transmitting and receiving request signals, response signals, rejection signals, and the like for the connection and disconnection of communications with communications module 40 of projector 60, as well as, for transmitting image information to projector 60. *Id.* ¶ 39.

In addition, Ono teaches that image display system 10 may have remote controller 69 for selecting one information terminal apparatus from a displayed list to perform operations such as switching the connection and disconnection with the plurality of information terminal apparatuses. Ex. 1005 ¶ 66.

2. *Deforche (Ex. 1030)*

Deforche is titled “Wireless modem device usable on computer device without driver installation,” and relates to providing a wireless modem device with which the need for installation of an appropriate driver can be avoided. Ex. 1030, code (54), ¶ 4. Deforche teaches transferring data wirelessly using a preinstalled generic driver that provides a generic communications protocol for communication between the host computer device and a standard class of computer peripheral devices. *Id.* code (57), ¶ 10. And in operation, Deforche teaches that “[d]ata traffic from the computer device towards the wireless communication network and vice versa is routed over this modem/host communication interface and uses the generic communication protocol provided by the pre-installed generic driver.” *Id.* ¶ 9.

3. *Grimshaw (Ex. 1008)*

Grimshaw is titled “Communication System,” and discloses a communication system to provide presentation functions for conferences.

Ex. 1008, code (54), ¶ 2. Grimshaw's system includes individual user modules 14–20 that each connect to a laptop computer and allow them to send content to display module 22. Ex. 1008 ¶ 12. Each user module includes a button that lets a user to take control over the content of display module 22 and switch the displayed content to the content on its respective laptop. *Id.* ¶ 19.

4. *Uchida (Ex. 1009)*

Uchida is titled “Remote control device and image projection system that remotely control the image projection device,” and seeks to “facilitate communication connection between a computer device and an image projection device.” Ex. 1009, codes (54), (57).

Uchida discloses a method for wirelessly connecting an image projection device to a computer device. Ex. 1009 code (57). A wireless USB dongle (wireless device 1) couples to computer device 4 through a USB connector 105. *Id.* ¶¶ 4, 39. Wireless device 1 “transmits image data [from the computer device 4] to the image projection device 3” where, thereafter, the image projection device “projects an image corresponding to the image data onto the screen.” *Id.* An image transfer stop switch 140 may halt or allow image transfer. *Id.* ¶¶ 70–72.

E. *Ground 1: Claims 1, 5, 8, 18, and 20*

Petitioner contends that claims 1, 5, 8, 18, and 20 would have been obvious over Ono and Deforche. Pet. 15–33. We address each contention below.

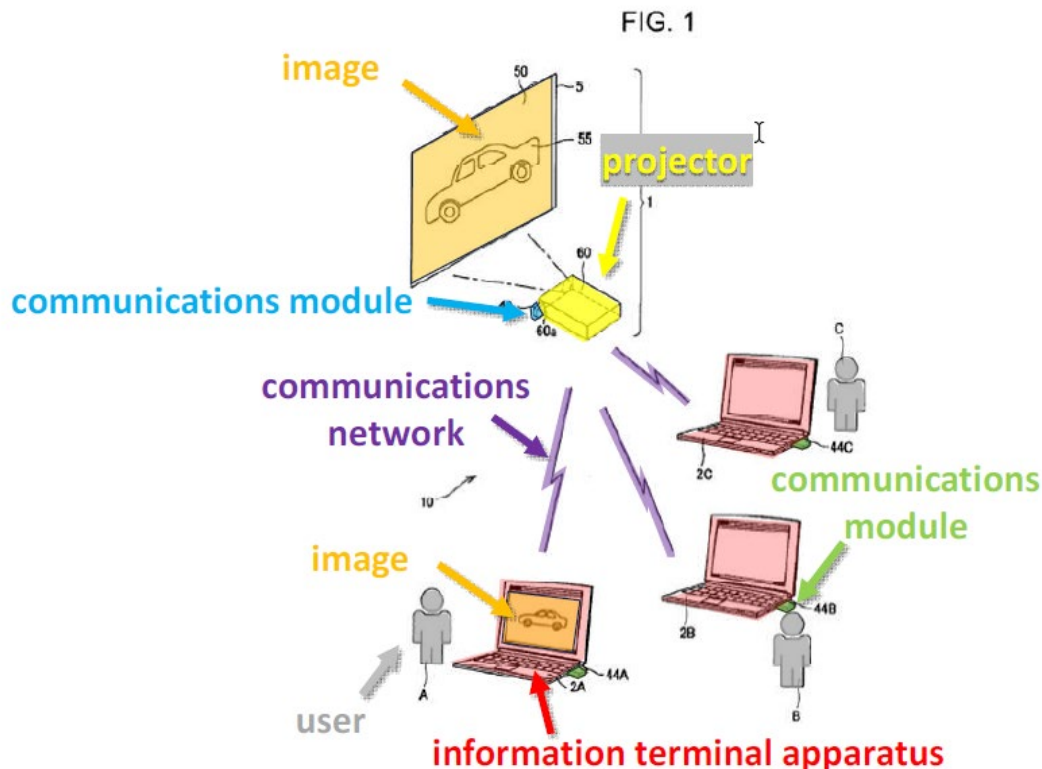
1. *Independent Claim 1*

Petitioner contends that claim 1 is unpatentable as obvious over Ono and Deforche and provides a detailed mapping of the teachings of Ono and Deforche to the elements of claim 1, and we agree for the following reasons.

1. A method for connecting one or more processing devices, each processing device being a user device of one participant in a meeting with a plurality of participants, to a wireless communications network having a base node with one or more first displays, the one or more processing devices each having a memory, a second display and an operating system with at least one pre-installed generic driver providing a generic communications protocol for communication between the processing device and a class of peripheral devices, the method comprising the following steps for each processing device:

Petitioner identifies information terminal apparatuses 2A, 2B, and 2C in Ono as disclosing the recited processing devices that each have a memory, a second display, and an operating system with at least one pre-installed generic driver providing a generic communications protocol for communication between the processing device and a class of peripheral devices. Pet. 16–20 (citing Ex. 1005 ¶¶ 36, 37–41, 50, 53–55, 58, 60–62, 73–74, 76, 88, 144, Figs. 1, 2, 7, 9, 13). Although Ono does not expressly discuss the use of pre-installed generic drivers that provide a generic communications protocol, Petitioner notes that Ono does teach that the information terminal apparatuses use drivers for wireless communication and that “Deforche discloses wirelessly transferring data and describes using the well-known Windows operating system having pre-installed generic drivers to run an application stored on a peripheral device.” *Id.* at 15 (citing Ex. 1005 ¶¶ 2, 53–55; Ex. 1030 ¶¶ 9, 30; Ex. 1002 ¶¶ 116–117). As such, Petitioner contends that “[i]t would have been obvious to modify Ono’s similar device using the well-known method of using the pre-installed generic Window’s drivers, as disclosed by Deforche, to communicate information to Ono’s USB peripheral devices.” *Id.*; *see also id.* at 20 (citing Ex. 1030 ¶¶ 10, 28–30, 34–41, 52; Ex. 1002 ¶¶ 120–124).

Petitioner identifies Ono's image display apparatus 1, which includes a wireless communication module 40, control section (CPU) 61, projector 60, and display screen 50, as disclosing the recited wireless communications network having a base node with one or more first displays. Pet. 16–17 (citing Ex. 1005 ¶¶ 36, 37–41, Figs. 1, 2, 9, 13; Ex. 1002 ¶ 118). Relying on an annotated version of Figure 1 from Ono (reproduced below), Petitioner contends that Ono shows that its information terminal apparatuses 2A, 2B, and 2C connect to the base node through a wireless communications network through peripheral devices having a wireless transceiver. *Id.* at 17.



Annotated Figure 1 of Ono illustrates an image display system that makes up a wireless network by connecting an image display apparatus 1 (yellow) and three information terminal apparatuses 2A, 2B, and 2C (red) to a wireless communications channel (purple) using peripheral devices 44A, 44B, and 44C having a wireless transceiver (green). *See* Ex. 1005 ¶¶ 36, 39.

Patent Owner disputes that the proposed combination of Ono and Deforche would have been obvious at the time of the invention. *See* PO Resp. 23–26. In particular, Patent Owner argues that the Petition provides no motivation or justification for modifying Ono’s peripheral device in the manner taught by Deforche to utilize a pre-installed generic driver for communication with the processing device. *Id.* at 23. This is so, Patent Owner asserts, because “[t]here is no basis to conclude that Ono does not utilize a specific driver, software application, and configuration information installed onto the information terminal,” and “Deforche is designed to provide a zero-footprint implementation of a wireless modem.” *Id.* at 24 (citing Ex. 1005 ¶¶ 55; 1030 ¶¶ 28–29; Ex. 2004 ¶¶ 83–85); *see id.* at 24–26 (citing Ex. 1001, 12:51–56; Ex. 1005 ¶ 55; 1030 ¶¶ 3–4, 9, 15, 28, 36, 50; Ex. 2004 ¶¶ 84–89). “A [skilled artisan] would not be motivated to make the combination, because Ono does not describe a zero-footprint implementation,” states Patent Owner. *Id.* (citing Ex. 2004 ¶¶ 77, 82).

In the Reply, Petitioner counters that the “how and why” a skilled artisan would have combined Ono and Deforche is to enable the “use [of] ubiquitous pre-installed generic drivers to use a USB interface, as described by Deforche.” Pet. Reply 7 (citing Ex. 1005 ¶¶ 2, 53–55; Ex. 1030 ¶¶ 9–10, 30, 37; Ex. 1002, ¶¶ 116–117; Ex. 1001, 4:55–60, 12:18–21). Additionally, Deforche teaches a preference to use a zero-footprint application, which “can be any type of application,” that involves the “use of existing USB class drivers.” *Id.* at 8 (citing Ex. 1030 ¶¶ 14, 29–43, 50–51, Fig. 4a). Petitioner argues that “[t]here is nothing prohibiting implementing Ono’s application as a zero-footprint application.” *Id.*

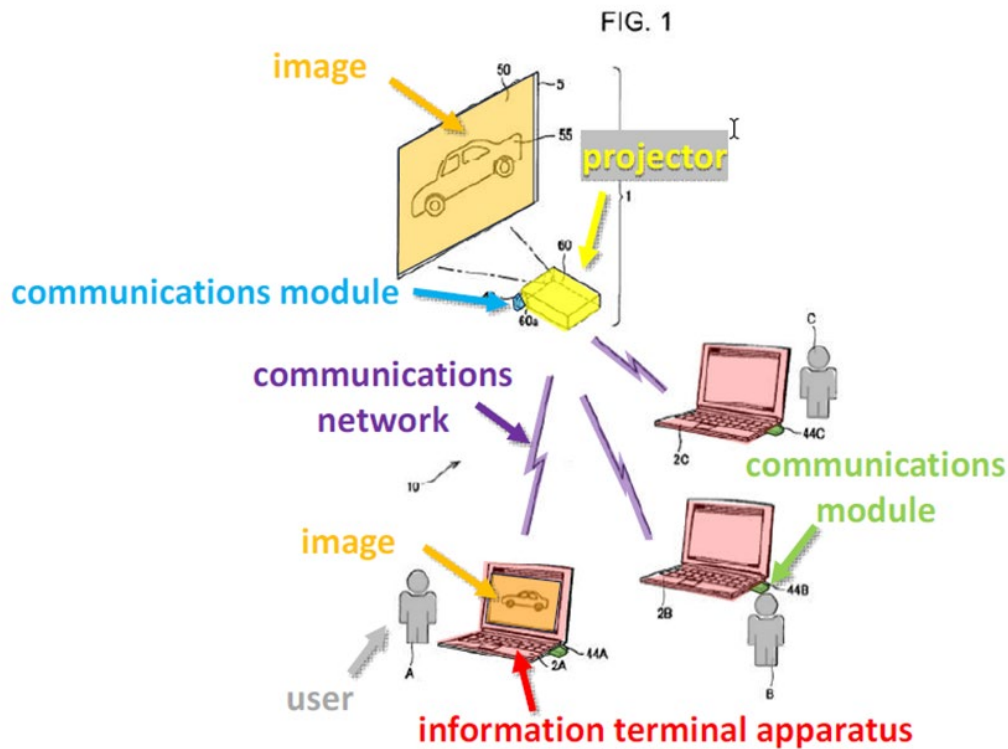
In the Sur-reply, Patent Owner maintains that no motivation exists to combine Ono and Deforche. PO Sur-reply 7. Patent Owner finds it

“mystifying” Petitioner contends that it would have been obvious to modify Ono with the alleged “well-known method of using the pre-installed generic Window’s drivers, as disclosed by Deforche, to communicate information to Ono’s USB peripheral devices,” “given that Ono itself uses a custom[] driver that is installed by an installer *after* plugging in USB memory 45.” *Id.* (citing Pet. 15; Pet. Reply 7–8; Ex. 1005 ¶ 55). Patent Owner asserts that “the Reply inexplicably disputes that installation is required in Ono,” when “Ono is clear, ‘an installer will automatically be activated on the information terminal apparatus 2A, and the connection application 46, the driver 47 and the configuration information 48 will automatically be stored in the HDD (Hard Disk Driver).’” *Id.* at 8 (citing Pet. Reply 8, 13–14; Ex. 1005 ¶ 55, 58, 62, 76; Ex. 2033, 30:18–24). As such, according to Patent Owner, “*even if* a [skilled artisan] modified Ono as Petitioner advocates, the benefits of a zero-footprint system as taught by Deforche would not be achieved because the driver and configuration information would still be installed.” *Id.* at 9. And contrary to Petitioner’s assertion that modifying Ono in view of Deforche would have been a common-sense application of Deforche’s zero-footprint advantages to Ono’s device ready for improvement, Patent Owner contends that “neither the Petition nor the Reply identify how Ono is allegedly improved by Deforche’s zero-footprint system.” *Id.* at 10 (citing Pet. Reply 8).

After studying and weighing the evidence, in view of both parties’ arguments, we find Petitioner’s evidence compelling to show that Ono discloses a processing device, including a memory, a second display and an operating system that communicates with a peripheral device, and that the processing device is used by a user in a meeting with a plurality of participants to connect to a wireless communications network having a base

node with a display. Petitioner's evidence is also compelling to show Deforche discloses and suggests that there were advantages to be gained by utilizing a generic communications protocol established by the processing device's pre-installed generic drivers to enable communications between the processing device and the peripheral device. And even after giving the appropriate weight to Patent Owner's objective evidence to the contrary (*see infra* §II.J), Petitioner's evidence from Ono and Deforche outweighs any doubt created. Ono and Deforche demonstrate more clearly and directly (i.e., more persuasively) that a skilled artisan would have known to configure Ono in the manner recited, and described by Deforche, to provide a wireless modem device that avoids the need for a user to install a driver onto the processing device (and avoid having the necessary authorization to do so) to establish communications between the modem/processing devices.

Starting with the uncontested facts (referring again to annotated Figure 1 of Ono):



Ono's projector 60 is a base node that includes a first display and a communications module 40, such as a wireless connection module, for communicating image data through a wireless network in the image display system 10 that Ono teaches (Ex. 1001 ¶¶ 35–36, 38, Fig. 1; *see* PO Resp. 16–18; Pet. 16–17); projector 60 receives the image data sent from the respective informational terminal apparatuses 2A, 2B, and 2C (Ex. 1001 ¶ 38); each of Ono's informational terminal apparatuses 2A, 2B, and 2C is a processing device of a participant in a meeting with a plurality of participants and each device includes a memory, a second display, and an operating system and each device communicates displayed image data through a wireless network to projector 60 using a wireless communications module (e.g., 44A, 44B, 44C) (Ex. 1001 ¶¶ 38–39, 41, Fig. 1; *see* PO Resp. 16–18; Pet. 17–20); and each of Ono's wireless communications modules 44A, 44B, 44C is a peripheral device, which communicates with the

operating system of the disclosed processing device (e.g., informational terminal apparatus 2A) to transmit image data to the base node projector 60 (*id.*).

Patent Owner correctly identifies that a difference between Ono's image display system 10 and the one used for the recited method is that Ono's system does not disclose using a pre-installed generic driver to provide a generic communications protocol to enable communications between the processing device and its respective peripheral device. *See* Ex. 1005 ¶ 55; *see* PO Resp. 23–26. Ono instead teaches wireless modem devices that cannot be used with a processing device to which the user does not have administrator rights. This is because the modem devices require a connection application 46, driver 47, and configuration information 48 to be installed on the user's processing device to establish a communications protocol between the two devices, rather than relying on the processing device's pre-installed generic drivers to establish that communications protocol. *Id.* Nevertheless, we disagree with Patent Owner that this difference is dispositive of Petitioner's contention.

To the contrary, we find that difference establishes why a skilled artisan would have known to modify Ono's modem device, in view of Deforche, to have the recited configuration. Deforche teaches expressly that skilled artisans recognized that there were disadvantages with wireless modem configurations, like Ono's, that require installation of an appropriate driver before applications running on the computer device can use the functionality of the wireless modem to connect to wireless networks. Ex. 1030 ¶¶ 2–3. And Deforche teaches a configuration specifically for wireless modem devices to avoid those disadvantages by utilizing a pre-installed generic driver of the processing device's operating system to set up

a modem/host communication interface through which the two devices can communicate with each other. *Id.* ¶¶ 4, 9. Because “[d]ata traffic from the computer device towards the wireless communication network and vice versa is routed over this modem/host communication interface and uses the generic communication protocol provided by the preinstalled generic driver,” Deforche states that the configuration taught “has the advantage that the need for a specific driver for the communication between the wireless modem device and the computer device can be avoided” and “the advantage that a user can use the wireless modem device on a computer device on which he has no administrator rights, i.e. a computer device on which his user rights are restricted so that he cannot install a specific driver for the wireless modem device.” *Id.* ¶ 9.

“The motivation-to-combine analysis is a flexible one. Any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1379 (Fed. Cir. 2023) (internal quotations omitted). And as the Federal Circuit has held, “[t]here is a motivation to combine when a known technique has been used to improve one device, and a [skilled artisan] would recognize that it would improve similar devices in the same way.” *Intel Corp.*, 61 F.4th at 1380. Here, Deforche establishes compellingly that utilizing an operating system’s pre-installed generic driver to provide a generic communications protocol for communications between the processing device and a peripheral device was a known configuration for improving wireless modem devices, such as Ono’s, that require administrator rights and a specific driver to be installed to enable communications between the wireless modem device and the processing

device. Therefore, we find Deforche provides compelling evidence that a motivation existed at the time of the invention for a skilled artisan to modify Ono's peripheral device in the manner recited with a reasonable expectation of success.

a) coupling a peripheral device to the processing device, the peripheral device having a wireless transceiver;

Petitioner identifies Ono's wireless communication modules 44A, 44B, 44C as each disclosing a recited peripheral device with a wireless transceiver that is coupled to a respective processing device (the information terminal apparatuses 2A, 2B, and 2C). Pet. 20–21 (citing Ex. 1005 ¶¶ 39, 52, 54–55, 62, 83–90, Figs. 1, 4, 9, 16; Ex. 1002 ¶ 125–127). Patent Owner does not dispute these contentions. *See generally* PO Resp.

On this record, and absent any argument or evidence to the contrary, we determine that Petitioner's evidence and analysis shows persuasively that Ono discloses element 1(a).

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

Petitioner contends that Ono discloses above element 1(b) as follows:

[T]o connect the projector 60 of the image display apparatus 1 and the information terminal apparatus 2A to the wireless network, the user clicks on a set-up file with a mouse after plugging the USB memory 45 in a USB jack on the information terminal apparatus 2A . . . an installer will automatically be activated on the information terminal apparatus 2A, and the connection application 46, the driver 47 and the configuration information 48 will automatically be stored in the HDD (Hard Disk Drive). Then, if the user inserts the wireless connection module 44 into the USB jack (slot) on the information terminal apparatus 2A, connection configuration for the wireless network will be completed, and transmission and reception of

data with the projector 60 of the image display apparatus 1 that is already running will be carried out via the wireless network.

Pet. 21–22 (citing Ex. 1005 ¶¶ 55, 62, 76; Ex. 1002 ¶¶ 128–132). Petitioner contends that “[t]he means for communication includes one or more of the installer on USB memory 45, connection application 46, driver 47, configuration information 48, and wireless connection module 44” and that Deforche confirms setting up this communication using a pre-installed generic driver of the operating system was well known and obvious to a skilled artisan. *Id.* at 22–23 (citing Ex. 1005, Fig. 4; Ex. 1030 ¶¶ 9, 30).

Patent Owner argues that the “Petition fails to identify the appropriate ‘means for communication’ claimed by the ’676 Patent,” which functions to “provide data communication between the peripheral device and the processing device” and, structurally, is “an interface using a generic communication protocol.” PO Resp. 9–10, 26 (citing Ex. 2016, 10–13, 16; Ex. 1001, 20:35–50; Ex. 2004 ¶ 56). This is so, according to Patent Owner, because “the Petition identifies the driver used to install the connection application, driver, and configuration information” and “it is the *specific special purpose driver* installed through Ono-Deforche’s (alleged) pre-installed generic driver, that serves as the means for setting up the means for communication between the peripheral device and the processing device, not the generic pre-installed driver itself.” *Id.* at 27 (citing Pet. 21–22; Ex. 1005 ¶¶ 50, 55; Ex. 2004 ¶¶ 91–92).

In its Reply, Petitioner highlights that no dispute exists that Deforche teaches “setting up, by means of a pre-installed generic driver of the operating system on the computer device, a modem/host communication interface” to provide data communication between the modem (peripheral device) and the host (processing device). Pet. Reply 9 (citing Ex. 1030, code

(57); Ex. 1072, 72:13–73:13). Petitioner argues that, “to the extent that Ono’s driver is not a pre-installed generic driver, it would have been a simple substitution to use such a driver as taught by Deforche” and that Patent Owner “wholly ignored the clear obviousness analysis in the Petition,” which contends that “[s]wapping Ono’s driver for Deforche’s would have been a simple substitution using known methods to achieve the predictable result of communicating between a processing device and a peripheral device.” *Id.* at 10 (citing Pet. 23; Ex-1083 ¶¶ 11–17).

In its Sur-Reply, Patent Owner asserts that the Petition only relied on Ono for the recited “means for communication” and that it “did not rely on Deforche.” PO Sur-reply 11–12 (citing Pet. 22). Patent Owner asserts that “[t]he Petition does not explain how the pre-installed generic drivers disclosed in Deforche contribute to the ‘setting-up’ of the relied on installer, connection application, driver, configuration information and wireless connection module of Ono.” *Id.* at 12 (citing Pet. 22–23; Pet. Reply 9–10). Patent Owner asserts that “[t]he Petition is inconsistent and fails to articulate what elements of the prior art are involved in the ‘means for communication’ and what elements are involved in ‘setting up’ the means for communication.” *Id.* at 13.

After studying and weighing the evidence, in view of both parties’ arguments, we find Petitioner’s evidence compelling to show that Ono, in view of Deforche, discloses and/or suggests setting up, by means of the pre-installed generic driver of the operating system, a means for communication between the peripheral device and the processing device. Ono teaches expressly a process for setting up communications between the information terminal apparatus and wireless connection module for communicating data therebetween. *See* Ex. 1005 ¶ 55. And as part of that process, a user installs

a driver on the information terminal apparatus to establish a protocol for the apparatus and a wireless connection module to communicate data. *Id.* Thus, Ono clearly discloses setting up an interface between the peripheral device and the processing device using a communication protocol that allows for data communications therebetween.

Ono's set-up process differs from the one recited, however, because it does not utilize the pre-installed generic drivers of the operating system to establish an interface with a generic communication protocol to provide data communications. Nevertheless, Deforche demonstrates that such a difference is nothing more than an obvious modification and not a patentable distinction. *See* Pet. 23 (citing Ex. 1030 ¶¶ 9, 30); Pet. Reply 9–10 (citing Ex. 1030, code (57); Ex. 1083 ¶¶ 11–17; Ex. 1072, 72:13–73:13).

Deforche demonstrates that there were known disadvantages with wireless modem devices, like the one Ono discloses, that users cannot use on a foreign computer device because the user has no administrator rights and installation of the appropriate driver is not allowed. Ex. 1030 ¶ 3. Deforche teaches a technique for improving those wireless modem devices, which avoids the need for a user to have special privileges and enables the user to connect to any processing device. *Id.* ¶¶ 4, 28. In particular, Deforche teaches a technique for connecting a host computer device to a wireless communication network that includes the following steps:

- (a) connecting a wireless modem device to the host computer device; (b) setting up, by means of a pre-installed generic driver of the operating system on the computer device, a modem/host communication interface [] for communication between the wireless modem device and the computer device; (c) connecting the host computer device to a wireless communication network via the wireless modem device; (d) routing data traffic [] between the host computer device and the wireless

communication network over the modem/host communication interface [].

Ex. 1030, code (57). As a result, “[t]he generic communication protocol [provide by the pre-installed generic driver] is used in the modem/host communication interface [] for transferring the data traffic [] between the host computer device and the wireless modem device.” *Id.*; *see also id.* ¶¶ 9, 30. This is strong evidence that a skilled artisan would have been motivated to modify Ono’s set up process to utilize the pre-installed generic drivers of the processing device to establish an interface using a generic communication protocol for data communications between the peripheral device and the processing device, as taught by Deforche, because doing so was recognized by skilled artisans to improve similar devices in the same way. *See Intel Corp.*, 61 F.4th at 1380. Additionally, the combination unambiguously identifies the recited “means for communication,” which undermines completely Patent Owner’s argument.

Furthermore, giving the appropriate weight to Patent Owner’s objective evidence to the contrary (*see infra* §II.J), Petitioner’s evidence from Ono and Deforche again outweighs any doubt created. Ono and Deforche demonstrate more persuasively that modifying Ono in the manner recited was nothing more than a skilled artisan applying a known way to provide a wireless modem device that avoids the need for a user to install a driver onto the processing device (and avoid having the necessary authorization to do so) to establish communications between the modem/processing devices. Therefore, we determine that Petitioner’s evidence shows by a preponderance of the evidence that the combination of Ono and Deforche disclose element 1(b) and that a skilled artisan would

have known to combine those references in manner claimed with a reasonable expectation of success.

c) coupling the processing device to the wireless communications network via the peripheral device; running a client application stored on the peripheral device to obtain screen scraped data;

Referencing Ono's description of the wireless connection modules (e.g. 44A, 44B, 44C) associated with the information terminal apparatuses (e.g., 2A, 2B, 2C) being used to communicate with the image display apparatus 1, Petitioner contends that Ono discloses coupling the processing device to the wireless communication network via the peripheral device. Pet. 23 (citing ¶¶ 35, 39–42, 50–57, 61, 62, 68, 76, 88, Figs. 1, 2; Ex. 1002 ¶ 133). In addition, Petitioner contends that Ono's description of transmitting image information displayed by information terminal apparatus 2A to the wireless connection module 40 of the projector 60 through the wireless connection module 44 demonstrates to a skilled artisan that the content of the transmitted image data is "screen scraped data." *Id.* at 24 (citing Ex. 1005 ¶¶ 41, 54–55, 58, 73, 76, 88, 144, Fig. 1; Ex. 1002 ¶¶ 134–137). And Petitioner notes that the '676 patent acknowledges that screen scraping was nothing new to skilled artisans who were well aware of screen scraping techniques used for transmitting wirelessly screen scraped data to a projector. *Id.* (citing Ex. 1001, 13:59–62; Ex. 1033 ¶¶ 11–12).

Petitioner contends that, although Ono's client application is stored on a separate USB memory, "as opposed to [the] USB-type wireless information communications module 44," the stored location of that application is "simply a matter of design choice." Pet. 25. Petitioner contends that the communications module 44 would have been a known alternative for storing the client application because "[a]t the time of the

alleged invention, a [skilled artisan] could have readily combined the memory storage capability of a USB memory device (like USB memory 45) and the wireless transceiver functionality (like that of information communications module 44) into a single device.” *Id.*

To support that assertion, Petitioner points to Deforche’s teaching of “a wireless USB dongle (i.e., transmitter 120/transceiver 450) using a client application stored on the transceiver” and Deforche’s explanation that

[i]n the connection method and the wireless modem device of the invention, a pre-installed generic driver of an operating system installed on the computer device is used for setting up a modem/host communication interface by means of which the wireless modem device and the computer device can communicate with each other.

Id. at 25–26 (citing Ex. 1030 ¶¶ 9, 34, 46, 52, Fig. 2). As a result, Petitioner contends that a skilled artisan “would have recognized from the teachings of Deforche that implementing a dual-purpose transmitter would have reduced the number of components needed to set up a wireless network like that of Ono and increased the ease in setting up such a network.” *Id.* at 26 (citing Ex. 1002 ¶¶ 134–137).

In response, Patent Owner argues that “[t]he Ono-Deforche combination fails to teach (1) running a client application stored on the peripheral device and (2) running the client application to obtain screen scraped data.” PO Resp. 28 (citing Ex. 2004 ¶¶ 79, 93). Patent Owner first argues that Petitioner incorrectly contends “including the connection application on the wireless transceiver instead would have been a simple design choice” because “the Petition fails to establish this modification would ‘have reduced the number of components needed to set up a wireless network.’” *Id.* at 28–29 (citing Ex. 1005 ¶¶ 51, 54; Ex. 2004 ¶¶ 94, 96–97).

And “even if the connection application were stored on the transmitter,” Patent Owner argues that “the Petition fails to establish that the *Ono-Deforche* combination teaches ‘**running** the client application stored on the peripheral device.’” *Id.* at 29.

Supporting this argument, Patent Owner argues that Ono makes it “clear that the contents of the USB memory are installed and stored onto the information terminal apparatus (PC)” and, “[i]ndeed, ***at least*** the driver would need to be installed on the information terminal device to drive the wireless connection module.” *Id.* (citing Ex. 1005 ¶¶ 51, 55; Ex. 2004 ¶ 98). Patent Owner asserts that, because installing the driver on the PC is necessary in Ono’s configuration for driving the wireless connection module, a skilled artisan “would also install the connection application and configuration information.” *Id.* (citing Ex. 2004 ¶ 99). According to Patent Owner, “[i]t is insufficient to allege that, because Deforche discloses a wireless modem which can be run using pre-installed generic drivers, that it would be obvious to do the same for Ono’s wireless connection module without contemplating which drivers would be utilized and how that system would function.” *Id.* at 30 (citing Ex. 2004 ¶ 101).

Patent Owner argues next, regarding “running a client application . . . to obtain screen scraped data,” that Ono’s “connection application is used to provide network connection” and “[t]here is no disclosure of the connection application screen scraping or capturing images from the information terminal apparatus.” PO Resp. 30 (citing Ex. 1005 ¶ 51; Ex. 2004 ¶ 102). Patent Owner adds that “Deforche cannot correct the insufficiency of Ono” because “Deforche is directed to a wireless modem” and it “does not describe screen scraping or wireless presentation.” *Id.* at 31 (citing Ex. 2004 ¶ 104; Ex. 1030). “Accordingly, *even if* the connection application was on

the connection module instead of the USB memory, and *even if* the connection application could be run while on the connection module, the Petition still does not meet its burden to shown that the client application obtains screen scraped data,” Patent Owner concludes. *Id.*

In its Reply, Petitioner counters by contending that Ono discloses or suggests a client application to obtain screen scraped data and that “no credible dispute” exists that the combination of Ono and Deforche renders obvious “running a client application stored on the peripheral device to obtain screen scraped data.” *See* Pet. Reply 10–13. Petitioner contends Ono’s description of “obtaining a car image from information terminal 2a and displaying it on image display apparatus 1” and of an “information terminal apparatus whose image is to be shown on the screen 5” demonstrates to a skilled artisan the use of a client application “to obtain screen scraped data.” *Id.* at 10–11 (citing Ex. 1005 ¶¶ 41, 54–55, 58, 73, 76, 88, 161, Figs. 1, 4). Petitioner further supports this contention by noting that the ’676 patent describes screen scraping as being something known at the time of the invention to skilled artisans by identifying U.S. Patent Application Publication No. US 2002/0196378 A1, published December 26, 2002 (“Slobodin”), which “discloses that its screen scraping logic can be implemented on a system like Ono’s.” *Id.* at 11 (citing Ex. 1001, 13:59–62; Ex. 1033 ¶ 73). “Therefore, because Ono teaches displaying a car and reproducing the same image on a projector, it would have been obvious that Ono discloses screen scraping.” *Id.* at 12 (citing Ex. 1083 ¶¶ 18–20; Ex. 1033).

Deforche, Petitioner continues, “expressly discloses ‘running a client application stored on the peripheral device’ that also has the transmitter.” Pet. Reply 12 (citing Ex. 1030 ¶¶ 34 (“At this point, the USB modem

presents itself as a USB Mass Storage Device (10) presenting a CD Rom (exposing flash memory)[,] the CD Rom has an autorun that launches a launcher in which the user has the possibility to launch amongst other applications a web browser (e.g. Firefox) and a Connection Manager (CM). This launcher is based on portable application principles, as it is also done with other applications.”), 15–19, 25–34, 41, 45, 47–52). The combination of Ono and Deforche, Petitioner contends, “renders obvious launching an application stored on a peripheral device containing an application” because Deforche teaches that “the application could be any application, including Ono’s screen scraping application.” *Id.* (citing Ex. 1030 ¶ 34). “The combination would require simply placing Ono’s screen scraping application on the peripheral device, as taught by Deforche,” Petitioner concludes. *Id.* at 12–13 (citing Ex. 1083 ¶¶ 21–23).

In its Sur-reply, Patent Owner characterizes Petitioner’s reply as “completely ignor[ing] other elements that are installed in Ono.” PO Sur-reply 14. Patent Owner points out, for example, that Ono describes driver 42 and connection information 43 as being both (a) installed on the processing device and (b) used to transfer images on the wireless network. *Id.* (citing Ex. 1005 ¶¶ 51, 53, 56). Patent Owner describes the Reply, and Petition, as failing to “address **how** the entire system functions without installation of these elements, or if these elements can be implemented along with the portable application on the storage device.” *Id.* Lastly, Patent Owner states that Petitioner’s “allegations that Slobodin renders this limitation obvious should be ignored as beyond the scope of the challenge” because Slobodin is “a reference not identified in the Grounds.” *Id.*

After studying and weighing the evidence, in view of both parties’ arguments, we find Petitioner’s evidence to show more persuasively that

Ono, in view of Deforche, discloses and/or suggests the recited steps of: “coupling the processing device to the wireless communications network via the peripheral device” and “running a client application stored on the peripheral device to obtain screen scraped data.” To start, we note it is uncontested that Ono’s image display apparatus includes coupling the processing device to the wireless communication network via the peripheral device, and we find that fact persuasively supported by the cited Ono evidence of record. *See* Ex. 1005 ¶¶ 35, 39–42, 50–57, 61, 62 (“by . . . inserting the plurality of wireless connection modules 44 into the respective other USB jacks, the user of the image display apparatus 1 may connect the image display apparatus 1 and the plurality of information terminal apparatuses 2A, 2B, and 2C to the wireless network”), 68, 76, 88, 144, Figs. 1, 2; *see also* Ex. 1002 ¶ 133.

Regarding “running a client application stored on the peripheral device to obtain screen scraped data,” our analysis begins with what relevant information Ono discloses/suggests to a skilled artisan. We find that Ono suggests to a skilled artisan that the disclosed image display apparatus includes a processing device that is configured to run a client application to obtain screen scraped data. For context, it is important to note initially that we agree with Petitioner that the background knowledge of a skilled artisan at the time of the invention included a recognition that obtaining screen scraped data was a known technique used to capture an image displayed on one device that a user wanted to wirelessly transmit to another device for display. *See* Ex. 1002 ¶¶ 41, 134. In fact, as Petitioner correctly highlights, the ’676 patent itself suggests as much by identifying prior art reference Slobodin as being representative of a skilled artisan’s knowledge regarding the use of screen scraping to capture, transmit, and present a displayed

image. *See* Pet. 24; Pet. Reply 11; Ex. 1001, 13:59–62; Ex. 1033 ¶¶ 11–12, 73; Ex. 1002 ¶¶ 41, 134.

Now, with that context, we turn to the cited evidence from Ono that Petitioner contends at least suggests to a skilled artisan that the disclosed processing device is configured to run a client application to obtain screen scraped data. *See* Pet. 24 (citing Ex. 1005 ¶¶ 41, 54–55, 58, 73, 76, 88, 144, Fig. 1.); Pet. Reply 10–11. Ono describes information terminal apparatus 2A as being capable of “encrypt[ing] image information that is to be projected and displayed on the screen 5 by the projector 60 of the image display apparatus 1 and transmits it to the communications module 40 of the projector 60 through the communications module 44A” and that “it is assumed that image information to be sent out to the image display apparatus 1 by [information terminal apparatus 2A] is selected and displayed on the liquid crystal display apparatus.” Ex. 1005 ¶¶ 41, 73. Ono explains further that information terminal apparatus 2A is configured “to transmit and receive data to and from the projector 60 of the image display apparatus 1,” including “transmit[ing] the image information signal displayed on the liquid crystal display apparatus [] to the wireless connection module 40 of the projector 60 from the wireless connection module 44.” *Id.* ¶¶ 76, 88. We find this evidence from Ono, when viewed in the context of the background knowledge of a skilled artisan emphasized above, to suggest persuasively that the disclosed processing device is configured to run a client application to obtain screen scraped data.

However, rather storing the client application on the peripheral device as claim 1 recites, Ono discloses storing it on a separate USB memory from which it is installed onto the information terminal apparatus with the other drivers and information needed to establish connectivity with the wireless

connection module 44. *See* Ex. 1005 ¶¶ 54–55, 76, Figs. 1, 4. We find nevertheless that Deforche persuasively evidences why there would have been a motivation for a skilled artisan at the time of the invention to modify Ono’s configuration to run the screen scraping client application stored on the peripheral device.

Deforche shows that, at the time of the invention, the proposed modification was a known technique for improving the connectivity of wireless modems, which like Ono’s wireless connection modules 44 rely on the installation of drivers and/or applications onto the connected processing device to function properly. *See* Ex. 1030 ¶¶ 1–2, 4, 9, 15, 28, 30, 34, 46, 52, Fig. 2; Ex. 1002 ¶¶ 135–137; Ex. 1005 ¶ 55; Ex. 1083 ¶¶ 21–23.

Deforche teaches that, in a preferred embodiment, a “wireless modem device stores at least one application and is provided for launching said application as a portable application, meaning that the application keeps its data (cache) in the memory of the wireless modem device and no traces are left on the computer device.” Ex. 1030 ¶ 15. Therefore, because Ono’s wireless connection modules 44 are precisely the kind of disadvantaged devices (i.e., devices that need a user to have the rights required to install drivers and applications) that Deforche explains can be improved by the technique taught, a skilled artisan would have been motivated to apply Deforche’s technique to Ono’s devices to obtain the same benefits (i.e., avoid the need for a user to have the rights need to install drivers and applications). *See id.*

Patent Owner’s arguments do little to diminish the strength of Petitioner’s evidence or demonstrate flaws with its contentions. In particular, when Patent Owner argues that Ono does not disclose a processing device that runs an application to obtain screen scraped data, Patent Owner appears to only focus on whether Ono identifies specifically

the use of a screen scrapping application. We find this approach unavailing because it fails to account for how Ono's teachings would be reasonably understood by a skilled artisan in this particular field; especially given the established background knowledge possessed by a skilled artisan related to the recognized use of screen scraped data for transmitting displayed image data over a wireless network to be displayed by another device. And we find Patent Owner's argument against Petitioner's proposed modification of Ono, in view of Deforche, to be similarly unavailing because it fails to account for what Ono and Deforche reasonably disclose and suggest *as whole* and is limited improperly to what amounts to a bodily incorporation argument of Ono's driver and configuration information into the connectivity technique that Deforche teaches to improve devices like Ono's wireless connection module.

Furthermore, giving the appropriate weight to Patent Owner's objective evidence of nonobviousness (*see infra* §II.J), Petitioner's evidence from Ono and Deforche yet again outweighs any doubt created. Ono and Deforche demonstrate more persuasively that modifying Ono in the manner recited would have been nothing more than a skilled artisan applying a known alternative for storing the client application used to obtain screen scraped data. As a result, we determine that Petitioner shows by a preponderance of the evidence that the combination of Ono and Deforche disclose and suggest element 1(c) and that a skilled artisan would have known to combine those references in the manner claimed with a reasonable expectation of success.

d) routing the screen scraped data between the processing device and the wireless communications network via the means for communication for display on the one or more first displays of the base node, wherein the generic communication protocol is used for

transferring the screen scraped data for display between the processing device and the peripheral device; and

In addition to referencing the evidence and analysis provided for elements 1(a)–1(c), Petitioner contends that Ono discloses the recited configuration “routing screen scraped data (e.g., ‘image data from LCD 21’) between the processing device (e.g., ‘information terminal apparatus 2A, 2B, 2C’) and the wireless communications network” through the wireless network “for display on the one or more first displays of the base node (e.g., projector and screen of the image display apparatus).” Pet. 27–28 (citing Ex. 1005, ¶¶ 39, 41–42, 54–55, 73, 76, 88, 162, Fig. 4; Ex. 1002 ¶¶ 138–140). Patent Owner does not dispute these contentions. *See generally* PO Resp.

On this record, and absent any argument or evidence to the contrary, we determine that Petitioner’s evidence and analysis shows persuasively that Ono discloses element 1(d).

e) obtaining electronic access to the one or more first displays for display of the screen scraped data;

Petitioner contends that each of the processing devices (e.g., information terminal apparatus 2A, 2B, 2C) via their respective peripheral devices (e.g. the wireless connection modules 44A, 44B, 44C) are disclosed by Ono as obtaining electronic access to the display of the base node (e.g. image display apparatus 1) for displaying screen scraped data. Pet. 28–29 (citing Ex. 1005 ¶¶ 35, 39–42, 50–57, 61–62, 76, 88, 144, Figs. 1, 9; Ex. 1002 ¶ 141). In particular, Petitioner highlights that Ono teaches that “if the user inserts the wireless connection module 44 into the USB jack (slot) on the information terminal apparatus 2A, connection configuration for the wireless network will be completed, and transmission and reception of data

with the projector 60 of the image display apparatus 1 that is already running will be carried out via the wireless network.” *Id.* (citing Ex. 1005 ¶ 55). Patent Owner does not dispute these contentions. *See generally* PO Resp.

On this record, and absent any argument or evidence to the contrary, we determine that Petitioner’s evidence and analysis shows persuasively that Ono discloses element 1(e).

*the method further comprising:
displaying the screen scraped data on the one or more first
displays in accordance with a set of rules, one of the rules being a
forcing rule, wherein the forcing rule is that display on the one or
more first displays of new screen scraped data is obtained by the
action of only one participant involved in the meeting, without
requiring the agreement of another participant, the new screen
scraped data of any participant for display overrides or replaces
any data displayed on the one or more first displays from the same
or another participant of the meeting.*

For this last claim element of claim 1, Petitioner points to Ono’s description of the disclosed system’s ability to use a remote controller 69 associated with the image display apparatus 1 to identify and connect a particular information terminal apparatus. Pet. 29 (citing Ex. 1005 ¶¶ 41, 78, 82–90, 112–126, Figs. 1, 3, 9, 13; Ex. 1002 ¶ 142). Petitioner contends that “through the remote controller 69, the image display system 10 can switch among a plurality of PCs connected to a network and select the display content from the desired PC to be displayed easily on projection screen 5.” *Id.* at 30 (citing Ex. 1005 ¶ 144). Hence, according to Petitioner, “the remote control can be used by one participant for forcing display of new screen data from the information terminal apparatus that overrides or replaces any data displayed on the display module without requiring the agreement of another participant” and, “[i]n this way, a user can forcibly switch between the different PCs to display on the projections screen the

desired content.” *Id.* at 30–31 (citing Ex. 1002 ¶¶ 143–147; Ex. 1005 ¶¶ 7, 36–39, 64–70, 77–78, 144, Figs. 1, 3). Patent Owner does not dispute these contentions. *See generally* PO Resp.

On this record, and absent any argument or evidence to the contrary, we determine that Petitioner’s evidence and analysis shows persuasively that Ono discloses this last claim element of claim 1.

Conclusion

After considering holistically all of the evidence and arguments presented by the parties, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 1 is unpatentable as being obvious in view of the combination of Ono and Deforche.

2. Dependent Claim 5

Petitioner contends that claim 5, which depends from claim 1, is unpatentable as being obvious in view of Ono and Deforche. Pet. 32. In particular Petitioner contends: “Ono discloses that [the disclosed] communication module is a USB-type device” and “Deforche coupled with a [skilled artisan’s] knowledge suggests presenting a peripheral device (e.g., wireless communications module 44) as a mass storage device to make use of a ‘pre-installed’ USB mass storage device driver.” *Id.* (citing Ex. 1005 ¶ 54; Ex., 1030 ¶¶ 9–10; Ex. 1002 ¶ 148). Patent Owner does not dispute these contentions. *See generally* PO Resp. On this record, and absent any argument or evidence to the contrary, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 5 is unpatentable as being obvious in view of the combination of Ono and Deforche.

3. *Dependent Claim 8*

Petitioner contends that claim 8, which depends from claim 1, is unpatentable as being obvious in view of Ono and Deforche. Pet. 32–33. Petitioner contends Ono discloses “*transferring of the data for display to a defined network node* (e.g., projector 60) *without user entry of configuration details* (e.g., ‘configuration information 48’).” *Id.* (citing Ex. 1005 ¶¶ 55, 56–63; Ex. 1001, 7:24–29; Ex. 1034 ¶¶ 14–17, Figs. 3, 18; Ex. 1002 ¶ 149). Patent Owner does not dispute this contention. *See generally* PO Resp. On this record, and absent any argument or evidence to the contrary, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 8 is unpatentable as being obvious in view of the combination of Ono and Deforche.

4. *Dependent Claim 18*

Petitioner contends that claim 18, which depends from claim 1, is unpatentable as being obvious in view of Ono and Deforche. Pet. 33. Petitioner contends that “Deforche discloses *running said program does not require installation of the program or configuration of the processing device.*” *Id.* (citing Ex. 1030 ¶¶ 15 (“the wireless modem device stores at least one application and is provided for launching said application as a portable application, meaning that the application keeps its data (cache) in the memory of the wireless modem device and no traces are left on the computer device.”), 18, 26–27, 30–31, 47; Ex. 1002 ¶ 150).

Patent Owner repeats an argument already made in the context independent claim 1—namely, that “Ono requires installation of the connection application and configuration of the processing device.” PO Resp. 31 (citing PO Resp. 25–26; Ex. 1005 ¶ 55; Ex. 2004 ¶¶ 88–89, 106). However, we again reject this argument because it focuses only on

what Ono teaches individually, rather than on what Ono and Deforche together reasonably disclose or suggest, and because the argument appears to improperly rely on bodily incorporation of Ono's driver and configuration information into the connectivity technique that Deforche teaches to improve devices like Ono's wireless connection module.

On this record, and absent any additional argument or evidence from Patent Owner, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 18 is unpatentable as being obvious in view of the combination of Ono and Deforche.

5. Dependent Claim 20

Petitioner contends that claim 20, which depends from claim 1, is unpatentable as being obvious in view of Ono and Deforche. Pet. 33. As support, Petitioner refers back to its contentions for the claim 1 recited element "running a client application stored on the peripheral device to obtain screen scraped data" and for claim 18. *Id.* Other than raising the same argument that it raises for claim 18, Patent Owner does not dispute Petitioner's showing. PO Resp. 31. On this record, and absent any additional argument or evidence from Patent Owner, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 20 is unpatentable as being obvious in view of the combination of Ono and Deforche.

F. Ground 2: Claim 14

Petitioner contends that Ono, in view of admitted background knowledge of a skilled artisan, renders claim 14 obvious. Pet. 13 (citing Ex. 1002 ¶ 152). Petitioner contends that "[c]laim 14 is like independent claim 1" (Pet. Reply 14) and, as a result, Petitioner provides an element-by-element mapping of claim 14 to Ono that, for some elements, simply refers

to the cited evidence from Ono provided for claim 1. *See* Pet. 33–38. In particular, Petitioner contends that the same recited Ono evidence provided for the “forcing rule” limitation recited in claim 1 discloses or suggests equally the “forcing rule” limitation recited in claim 14. *Id.* at 38. Those respective “forcing rule” limitations each recite:

Claim 1	Claim 14
displaying the screen scraped data on the one or more first displays in accordance with a set of rules, one of the rules being a forcing rule, wherein the forcing rule is that display on the one or more first displays of new screen scraped data is <i>obtained by the action of only one participant</i> involved in the meeting, without requiring the agreement of another participant, the new screen scraped data of any participant for display overrides or replaces any data displayed on the one or more first displays from the same or another participant of the meeting	displaying the media content on a display in accordance with a set of rules one of the rules being a forcing rule, whereby the forcing rule determines that the displaying of media content on the display is <i>obtained by a user action on any one of the user devices</i> involved in the meeting, without requiring the agreement of another participant, the media content from the any one of the user devices overriding or replacing any data displayed on the display by the same or another participant of the meeting

Ex. 1001, 33:4–14 (claim 1), 34:40–50 (claim 2) (emphasis added). As the above side-by-side comparison illustrates, although significant similarities exist between the two “forcing rule” limitations, there are differences. Patent Owner highlights those differences, *for the first time*, in its Sur-reply and argues that the difference between the “forcing rule” limitations in claims 1 and 14 results in a deficiency of evidence to show Ono discloses or suggests all of the limitations of claim 14 and is, therefore, dispositive of Ground 2. PO Sur-reply 15.

Before addressing the alleged deficiency, however, we address the fact that Patent Owner failed to raise this argument until its Sur-reply. Ordinarily, we do not consider *new* arguments raised for the first time in Patent Owner’s Sur-reply. See Board’s Consolidated Trial Practice Guide (“Trial Guide”), 84 Fed. Reg. 64,280, (Nov. 2019), 74 (“While replies . . . can help crystalize issues for decision, *a reply . . . that raises a new issue or belatedly presents evidence may not be considered.*” (emphasis added)).⁶ But here, this issue is rendered moot because, even disregarding Patent Owner’s new argument, we must confront the same issue because Petitioner bears the burden of establishing the unpatentability of the challenged claims and its burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware*, 800 F.3d at 1378. And the issue raised belatedly by Patent Owner boils down to merely whether Petitioner’s cross-reference to the Ono evidence provided for the “forcing rule” limitation in claim 1 is sufficient to carry its burden for the similar limitation in claim 14. Thus, regardless of whether that issue was properly raised by Patent Owner, the issue is nevertheless one that we must address to determine whether Petitioner has carried its burden, which cannot be waived. For the reasons that follow, we find that Petitioner has not carried its burden for claim 14, which is dispositive of Ground 2.

As previously noted, for the “forcing rule” limitation of claim 14, Petitioner simply refers to the evidence and reasoning that it provided for the similar limitation in claim 1. Pet. 38 (citing Pet. 29–31; Ex. 1002 ¶ 162). Within the referenced portions related to the “forcing rule,” Petitioner contends that Ono’s “remote control can be used by one participant for *forcing display of new screen data from the information terminal apparatus*

⁶ Available at www.uspto.gov/TrialPracticeGuideConsolidated.

that *overrides or replaces any data displayed on the display module without requiring the agreement of another participant.*” *Id.* at 30–31 (Ex. 1002 ¶¶ 143–147; Ex. 1005 ¶¶ 7, 36–39, 64–70, 77–78, 144, Figs. 1, 3). Of particular interest here for claim 14 is that both Petitioner’s theory and evidence rely solely on Ono’s disclosure of a configuration that will force display of the new screen scraped data that was obtained by a participant’s actions on the ***remote control***. *See id.* Petitioner’s expert does the same. Ex. 1002 ¶¶ 143–147.

As we have already determined, that evidence is persuasive for claim 1’s recited forcing rule. We reached that determination because claim 1 only requires the “new screen scraped data” to be “obtained by the action of only one participant,” without any restriction to the action taken by that participant to obtain the new screen scraped data. Ex. 1001, 33:6–9. Claim 14, on the other hand, adds a further limitation requiring the recited “forcing rule” to determine “that the displaying of media content on the display is *obtained by a user action on any one of the user devices* involved in the meeting” and identifies expressly that “the processing device” is a “user device.” *Id.* 34:28–29, 34:43–46. Petitioner does not account for this difference in the scopes of the “forcing rule” limitations in claims 1 and 14. There is no evidence or supported reasoning offered by Petitioner in the Petition, however, that Ono’s disclosure that the new screen scraped data that was obtained by a participant’s actions on the ***remote control*** also demonstrates a forcing rule that causes the forced display of media content that was “obtained by a user action on any one of the user devices [(e.g., a user’s processing device)],” as recited by claim 14. This deficiency is dispositive of Petitioner’s obviousness contention in view of Ono alone for claim 14.

On this record, therefore, we determine that Petitioner has not carried its burden of proving by a preponderance of the evidence that claim 14 is unpatentable as being obvious in view Ono.

G. Ground 3: Claims 4, 16, 19

Petitioner contends that Ono, Deforche, and Grimshaw render claims 4, 16, and 19 unpatentable as being obvious. Pet. 38–50. We address each claim in turn below.

1. Dependent Claim 4

4. The method of claim 1, wherein the peripheral device has an actuator, the method further comprising a user action on the actuator that triggers transfer of the data for display from the processing device to the wireless transceiver and from there to the wireless communications network.

Petitioner identifies the configuration and operation of Ono’s remote controller 69 as disclosing “*an actuator, the method further comprising a user action on the actuator that triggers transfer of data for display from the processing device to the wireless transceiver (wireless communications module 4[4]) and from there to the wireless communications network (e.g., pressing up or down selection key on the operation section of the remote controller 69 and pressing the confirm (enter) key).*” Pet. 39 (citing Ex. 1005 ¶¶ 44–48, 66–71, 77–78, 80–89, Figs. 3, 6, 8, 9; Ex. 1002 ¶¶ 165–169). Petitioner identifies that Ono’s remote controller 69 enables a user to “select a particular PC and then presses the confirm (enter) key,” which “triggers a connection process between the selected information terminal apparatus and the image display apparatus.” *Id.* at 40 (citing Ex. 1005 ¶¶ 66–72, 77–78). This “results in the transfer of the image information from the wireless connection module 44 to the wireless network and communications module 40 via the network” and “[o]nce received, the

image information is displayed on screen 5.” *Id.* (citing Ex. 1005 ¶¶ 60–70, 77–78, 80–89, Fig. 9). Petitioner acknowledges, however, that “Ono does not disclose that the peripheral device has an actuator,” as recited by claim 4.

Petitioner turns to Grimshaw, which “discloses similar *actuators* (e.g., buttons 344, 354, 364, 374) on respective [] *peripheral devices* (e.g., user modules 14, 16, 18, 20) that *trigger transfer of data for display* (e.g., ‘user selected arbitrary media content’) from a user module to the control module 12 for display on the display module 22.” Pet. 40 (citing Ex. 1008 ¶¶ 5, 19 (“[T]he users of modules 14, 16, 18, 20 can take control of the display module 22 by respectively engaging buttons 344, 354, 364, 374, which causes switch controller 318 to pass the data signals from the selected user module on to the display module.”), 20, 27–28, Figs. 1–4; Ex. 1012⁷). Petitioner contends that a skilled artisan “would have understood that buttons 344, 354, 364, 374 constitute actuators coupled to the user modules 14, 16, 18, 20.” *Id.* at 41 (citing Ex. 1002 ¶¶ 165–169).

Petitioner contends that a skilled artisan “looking to implement an image projection system like that of Ono would have found it obvious to employ a technique and components as described by Grimshaw in addressing the problem where multiple users are ‘vying for control’ of a shared display.” Pet. 41 (citing Ex. 1008 ¶ 19). Furthermore, according to Petitioner, “Grimshaw teaches that it would have been a simple modification to Ono to provide an actuator on Ono’s peripheral devices instead of the remote controls” because “each user can activate their device and take control of the presentation,” which is “the predictable result of actuators on

⁷ For Exhibit 2012, Petitioner cites to 5:8–6:17, 8:29–9:20, and Figures 1–4, but those citations do not correspond to that exhibit.

Ono's peripheral devices.” *Id.* at 38–39 (citing Ex. 1005 ¶¶ 4–6, 28, 37; Ex. 1002 ¶¶ 163–164).

Patent Owner responds by arguing that (1) there is no motivation to combine Ono with Grimshaw and (2) there is no disclosure by either reference of an actuator coupled to the peripheral device that triggers the transfer of data for display. *See* PO Resp. 35–40. First, Patent Owner asserts that no motivation would have existed for a skilled artisan to make the proposed modification because Ono aims to provide a system for allowing a user to switch between information terminals apparatuses *from the side* of the image display apparatus. *See id.* at 35–38. Patent Owner explains:

[B]y forcing the functions of the selector section into the communications module the Petition ignores the objective of Ono to provide a system where selection of the information terminal is “performed from the side of the image display apparatus.” Ex. 1005 ¶ 8; Ex. 2004 ¶ 122. Rather than allow the image display apparatus to provide the selection functionality, which is the primary objective of Ono, the Petition proposes eliminating that functionality, which, contrary to Dr. Almeroth’s conclusory opinions that anything “could” be possible, a POSITA would not have been motivated to do.

There is no explanation in the challenge of how Ono could be modified to incorporate controls of the remote into the wireless communication modules while maintaining its explicit goal of providing a system where “selecting a desired information terminal apparatus therefrom can be performed from the side of the image display apparatus.” Ex. 1005 ¶ 8.

Id. at 38.

Patent Owner argues next that neither Ono nor Grimshaw discloses an actuator that triggers the transfer of content. PO Resp. 39–40. For Ono, Patent Owner asserts that the actuator of remote controller 69 simply “generates a connection *request signal*,” which “may be either accepted or

rejected by the information terminal apparatus”; thus, the connection request signal “does not trigger the transfer of content, it requests the transfer of content, with intervening steps involved until the content is either transferred or not transferred.” *Id.* at 39 (citing Ex. 1005 ¶¶ 45, 83, 91, Figs. 9–15; Ex. 2004 ¶¶ 124–125. Patent Owner states, “[m]erely opening the door for further decision trees, some of which may and some of which may not lead to the transfer of content cannot be said to ‘trigger’ the transmission of anything.” *Id.* at 39–40 (citing Ex. 2004 ¶ 125). And regarding Grimshaw, Patent Owner contends that its module buttons similarly do not trigger content transfer because “data arrives at the switch control regardless of whether the button has been pressed or not (assuming there is a connection to the computer)” and the actuator buttons of the module “merely instruct the switch controller which data signal should be routed to the display.” *Id.* at 40 (citing Ex. 1008 ¶ 19; Ex. 2004 ¶¶ 127, 129).

In its Reply, Petitioner argues that Patent Owner focuses improperly on “Ono and Grimshaw alone as failing to teach the limitation, ignoring the combination proposed by the Petition.” Pet. Reply 18. Petitioner asserts that “Ono indisputably illustrates a process that begins with a user pressing a button followed by an ‘image transfer’ from a PC to a projector” and that “[t]he fact that a connection might fail in some circumstances is irrelevant.” *Id.* at 19. And “Grimshaw supports the idea that Ono can have a button ‘at each information terminal apparatus.’” *Id.* (citing Ex. 1083 ¶¶ 37–38). Petitioner asserts that “[t]here is no technical reason why Grimshaw would not have been implemented such that pressing buttons 344–374 ‘triggers transfer of said user selected arbitrary media content from said processing device to a transmitter and to the wireless communications network’ at least because Ono describes that option” when it states that the remote control

makes it “unnecessary for each presenter to carry out output on/off operations at each information terminal apparatus.” *Id.* at 20 (citing Ex. 1083 ¶¶ 39–42); Ex. 1005 ¶ 161.

In its Sur-reply, Patent Owner argues that a skilled artisan “would not modify Ono based on Grimshaw when Ono itself renders it ‘unnecessary for each presenter to carry out output on/off operations at each information terminal apparatus in accordance with the order.’” PO Sur-reply 16 (citing Ex. 1005 ¶ 161). Patent Owner states “Ono fails to render obvious this limitation because its input device does not trigger the transfer of content—not because its transmissions may fail.” *Id.* at 17. Patent Owner states that Ono is clear that its remote control “merely generates a connection request signal which requires subsequent action to occur before content can be transferred” and, therefore, the connection request signal “does not trigger the transfer of content, it requests a process that has multiple subsequent steps and interactions that ultimately could lead to the transfer of content, but not as a result of any user action.” *Id.* at 18 (citing Ex. 1005 ¶¶ 45, 83). Likewise, Patent Owner asserts, “Grimshaw does not disclose the transfer of content, but instead instructs the switch controller which data signal should be routed to the display.” *Id.* at 19 (citing Ex. 1008 ¶19; Ex. 2004 ¶¶ 127, 129).

After studying and weighing the evidence, in view of both parties’ arguments, we find Petitioner’s evidence to show more persuasively that Ono, in view of Grimshaw, discloses and/or suggests a user action on an actuator of the peripheral device to trigger the transfer of data for display from the processing device to the wireless transceiver and from there to the wireless communications network. *See* Pet. 39–41. We are persuaded Ono and Grimshaw together demonstrate that the recited configuration and steps

are simply an arrangement of old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement.

Ono shows an image display system with an actuator or input device (e.g., the buttons on remote controller 69) that can be used to trigger the transfer of data for display from the processing device (e.g., information terminal apparatus 2A) to the wireless transceiver (e.g., communication module 44A) and from there to the wireless communications network. Ex. 1005 ¶¶ 44–48, 66–71, 77–78, 80–89, Figs. 3, 6, 8, 9; Ex. 1002 ¶¶ 165–169. We disagree with Patent Owner that Ono fails to show a “trigger” because there are intervening steps between the user activating the actuator and the transfer of data for display from the processing device through its wireless transceiver to the wireless communication network. *See* PO Resp. 39–40; PO Sur-reply 18. Ono makes clear that the intervening steps are associated with establishing a channel of communication that, once established, enables the selected information terminal apparatus to *automatically* transmit via its wireless transceiver to the wireless communication network image data for display at projector 60. Ex. 1005 ¶¶ 83–88, Fig. 9. As a result, the alleged intervening steps are actually part of the established process for transferring image data from an information terminal apparatus to the base node’s projector. By activating the actuator, the user has initiated the process for transferring image data to the base node’s display, which is all the plain meaning of “trigger” requires. Therefore, we do not find Patent Owner’s argument commensurate with the scope of the claim.

Although, in Ono, the actuator is part of remote controller 69, rather than wireless connection module 44 (i.e., the peripheral device), Grimshaw

evidences persuasively that a skilled artisan would have recognized the peripheral device to be another place within the image display system that the actuator could be located. Grimshaw teaches that, when there are multiple participants in a conference that are vying for control of the base node's display module, a known solution is to have an actuator on the peripheral device connected to the participant's processing device that can be engaged to take control and transfer image data from the processing device to the base node's projector via the peripheral device. Ex. 1008 ¶ 19. Given that Ono's image display system is for multiple participants, by modifying Ono's wireless communication module 44 to have an actuator similar to the one Ono discloses for remote controller 69, a skilled artisan would have recognized that it would give Ono's wireless peripheral device the same benefit of allowing a participant the ability to take control and transfer image data from the processing device to the base node's projector via the wireless peripheral device. That modification is simply an arrangement of old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement.

Patent Owner's argument that a skilled artisan would not have been motivated to make that modification to Ono's disclosed image display system because it would not allow for the selection of a desired processing device to be performed from the side of the base node's projector carries light weight. As an initial matter, there is no basis to find that Ono's image display system, as modified, is incapable of also making a selection from the side of the base node's projector using the disclosed remote controller 69, as Patent Owner suggests. And Grimshaw suggests that it was not uncommon for image display systems like Ono's to place actuator controls for the base

node's projector in both a remote control usable from the side of the projector and peripheral devices connected to each participant's processing device. Ex. 1008 ¶¶ 12, 19, 31, Fig. 1. Ono's statement that remote controller 69 makes it "unnecessary for each presenter to carry out output on/off operations at each information terminal apparatus" to present image data on the base node's projector (Ex. 1005 ¶ 161) does not suggest that a skilled artisan would not have modified the peripheral devices to give each presenter that ability. While that statement may represent a recognized benefit of the remote controller 69, it does not indicate that Ono's system should never allow the presenters to control the transfer of their image data, or that providing such control would undermine the remote controller's ability to provide that benefit—operation of remote controller 69 would still make it unnecessary for each presenter to engage the actuator on the peripheral device, as modified.

Therefore, after considering holistically all of the evidence and arguments presented by the parties, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 4 is unpatentable as being obvious in view of the combination of Ono, Deforche, and Grimshaw.

2. Claims 16 and 19

The subject matter of claim 16 is substantially similar to combined claims 1 and 4. *Compare* Ex. 1001, 32:40–33:14 (claim 1), 33:31–35 (claim 4) *with id.* at 34:65–36:3 (claim 16). The subject matter of claims 18 and 19 are the same, except they depend from claims 1 and 16, respectively. *Compare* Ex. 1001, 36:17–19 *with id.* at 36:20–22. Accordingly, for claims 16 and 19, Petitioner sets forth an element-by-element analysis that largely relies on the same evidence and arguments presented for claims 1, 4, and 18

for the corresponding elements. *See* Pet. 15–31, 33, 41–50. Patent Owner responds that Petitioner’s contentions for claims 16 and 19 likewise fail for the same reasons that the contentions for claims 1 and 4 fail. *See* PO Resp. 39, 41. On this record, and absent any additional argument or evidence from Patent Owner, we therefore determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claims 16 and 19 are unpatentable as being obvious in view of the combination of Ono, Deforche, and Grimshaw for the same reasons provided for claims 1, 4, and 18.

H. Ground 4: Claims 1, 4, 5, 8, 16, and 18–20

Petitioner contends that claims 1, 4, 5, 8, 16, and 18–20 would have been obvious over Uchida, Deforche, and Grimshaw. Pet. 50–79. We address each contention below.

1. Independent Claim 1

Petitioner contends that claim 1 is unpatentable as obvious over Uchida and Deforche and provides a detailed mapping of the teachings of Ono and Deforche to the elements of claim 1. *See* Pet. 50–79. We find Petitioner’s contention persuasive for the following reasons.

1. A method for connecting one or more processing devices, each processing device being a user device of one participant in a meeting with a plurality of participants, to a wireless communications network having a base node with one or more first displays, the one or more processing devices each having a memory, a second display and an operating system with at least one pre-installed generic driver providing a generic communications protocol for communication between the processing device and a class of peripheral devices, the method comprising the following steps for each processing device:

Petitioner maps the components of Uchida’s image projection system to the recited components as follows: image projection device 3 is the recited base node with a first display, computer device 4 is the recited

processing device having a memory, a second display, and an operating system, and wireless device 1 is the recited peripheral device, as illustrated in Petitioner's annotated version of Figure 1 (reproduced below). *See* Pet. 51–53 (citing Ex. 1009 ¶¶ 3, 12, 36, 37, 39–59, 112, 148–158, 166, 176, 186, Figs. 1–3, 14, 16, 17, 18; Ex. 1002 ¶¶ 200–201).

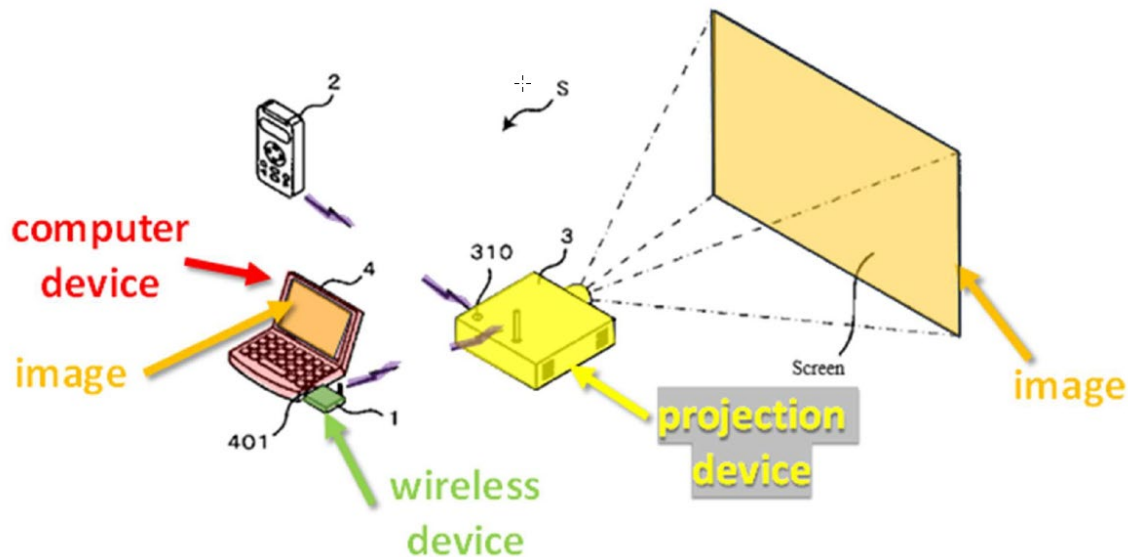


Figure 1 is an overall configuration diagram of the image projection system S that Uchida discloses, which has been annotated by Petitioner to identify each of the computer (red), wireless (green), and projection (yellow) devices. Ex. 1009 ¶ 195. Petitioner contends that a skilled artisan would have readily understood that computer device 4 may be used by one participant in a meeting with a plurality of participants. Pet. 52 (citing Ex. 1009 ¶¶ 3, 12 (discussing “when an image projection device is shared among multiple groups”), 36–37, 58, 112, 186).

Petitioner contends that a skilled artisan “would have understood that the most common operating systems included standard drivers to communicate with various peripheral devices.” Pet. 53 (citing Ex. 1002 ¶¶ 203–205). Petitioner highlights that “Uchida discloses that computer device 4 was able to recognize wireless device 1 as a CD-ROM when

connected—indicating that the operating system of computer device 4 included a standard USB mass storage driver which was able to communicate with CD-ROMs using a corresponding USB protocol.” *Id.* (citing Ex. 1009 ¶¶ 78, 136; Ex. 1021 ¶¶ 39–42; Ex. 1058 ¶¶ 125 (“The USB mass storage driver 202 is software to control mass storages such as a hard disk drive, CD-ROM, DVD-ROM, CD-R, DVD-R, USB memory, and the like.”), 132 (“Microsoft Windows(R) operating system 101 supports a USB device of mass storage class on a standard basis.”)). As a result, Petitioner states that a skilled artisan “would have understood Uchida to disclose a computer device 4 including an operating system with mass storage device driver (e.g., ‘pre-installed generic driver’) which including the use of a corresponding protocol (e.g., a ‘generic communications protocol’) for communication between a class of peripheral devices, such as mass storage devices.” *Id.* at 54.

Additionally, Petitioner contends that Deforche establishes a known technique for utilizing an operating system’s pre-installed generic driver to provide a generic communications protocol for communication between the computer device 4 and wireless device 1. Pet. 55. Petitioner notes that Deforche teaches that its disclosed technique enable for the “setting up, by means of a pre-installed generic driver of the operating system on the computer device, a modem/host communication interface [] for communication between the wireless modem device and the computer device.” *Id.* (citing Ex. 1030, code (57), ¶¶ 9–11, 17–18, 31). Petitioner contends that a skilled artisan “would have found it obvious to implement these teachings from Deforche in setting up wireless communication through a peripheral device using a pre-install generic driver” and “would have had a reasonable expectation of success in implementing such a solution.” *Id.*

Petitioner contends that “[i]t would have been obvious to modify Uchida’s similar device using the well-known method of using the pre-installed generic Window’s drivers, as disclosed by Deforche, to communicate information to Uchida’s USB peripheral devices” because “[t]he combination of Uchida and Deforche would have created the predictable result of a PC communicating with a peripheral device using an operating system’s preinstalled generic drivers.” Pet. 50.

In response, Patent Owner argues that there is no motivation to combine Uchida and Deforche because “Uchida relies on installation of a driver and software applications to function.” PO Resp. 41. In Uchida, Patent Owner notes, “[w]hen the USB connector is first connected, the device driver, wireless settings application, and image transfer application are installed.” *Id.* at 42 (citing Ex. 1009 ¶ 48). Patent Owner argues that “there is no disclosure in Uchida of how its system functions without using the driver, image transfer application, and image projection application.” *Id.* (citing Ex. 2004, ¶ 140; Ex. 1009). Patent Owner concludes that a skilled artisan “would not be motivated to combine Deforche, which is directed to a zero-footprint system, with Uchida, a system that relies on installation of a connection application, driver, and configuration information, as there is no basis to conclude Uchida even could be implemented as a zero-footprint system.” *Id.* (citing Ex. 2004 ¶ 141).

After studying and weighing the evidence, in view of both parties’ arguments, we find Petitioner’s evidence compelling to show that Uchida discloses a processing device, including a memory, a second display and an operating system that communicates with a peripheral device, and that the processing device is used by a user in a meeting with a plurality of participants to connect to a wireless communications network having a base

node with a display, which Patent Owner does not dispute (*See generally* PO Resp.); Petitioner's evidence is also compelling to show Deforche discloses and suggests that there were advantages to be gained by utilizing a generic communications protocol established by the processing device's pre-installed generic drivers to enable communications between the processing device and the peripheral device (Ex. 1030 ¶¶ 2–3, 4, 9). And even after giving the appropriate weight to Patent Owner's objective evidence to the contrary (*see infra* §II.J), Petitioner's evidence from Uchida and Deforche outweighs any doubt created. Uchida and Deforche demonstrate more clearly and directly (i.e., more persuasively) that a skilled artisan would have known to configure Uchida in the manner recited, and described by Deforche, to provide a wireless modem device that avoids the need for a user to install a driver onto the processing device (and avoid having the necessary authorization to do so) to establish communications between the modem/processing devices.

We are persuaded that Petitioner's evidence from Uchida discloses an operating system with at least one pre-installed generic driver providing a generic communications protocol for communication between the processing device and a class of peripheral devices. Pet. 53 (citing Ex. 1002 ¶¶ 203–205; Ex. 1009 ¶¶ 78, 136; Ex. 1021 ¶¶ 39–42; EX-1058 ¶¶ 125, 132). Patent Owner does not appear to dispute this fact, however. *See generally* PO Resp. 41–42. Instead, Patent Owner's dispute appears to be with the combination of Uchida and Deforche to disclose or suggest utilizing one of those pre-installed generic drivers providing a generic communications protocol for communication between the computer device 4 and wireless device 1. *See id.*

Patent Owner correctly identifies that a difference between Uchida's image projection system S and the one used for the recited method is that Uchida's system does not disclose using a pre-installed generic driver to provide a generic communications protocol to enable communications between the processing device and its respective peripheral device. *See* Ex. 1009 ¶ 48. Uchida teaches a wireless device that cannot be used with a processing device to which the user does not have administrator rights. This is because wireless device 1 requires a device driver program and a wireless setting application program stored in the program storage unit of the wireless device 1 to be installed on computer device 4 to establish a communications protocol between the two devices, rather than relying on the processing device's pre-installed generic drivers to establish that communications protocol. *Id.* Nevertheless, we disagree with Patent Owner that this difference is dispositive of Petitioner's contention.

To the contrary, we find that difference establishes why a skilled artisan would have known to modify Uchida's wireless device, in view of Deforche, to have the recited configuration. Deforche teaches expressly that skilled artisans recognized that there were disadvantages with wireless modem configurations, like Uchida's, that require installation of an appropriate driver before applications running on the computer device can use the functionality of the wireless modem to connect to wireless networks. Ex. 1030 ¶¶ 2–3. And Deforche teaches a configuration specifically for wireless modem devices to avoid those disadvantages by utilizing a pre-installed generic driver of the processing device's operating system to set up a modem/host communication interface through which the two devices can communicate with each other. *Id.* ¶¶ 4, 9. Because “[d]ata traffic from the computer device towards the wireless communication network and vice

versa is routed over this modem/host communication interface and uses the generic communication protocol provided by the preinstalled generic driver,” Deforche states that the configuration “has the advantage that the need for a specific driver for the communication between the wireless modem device and the computer device can be avoided” and “the advantage that a user can use the wireless modem device on a computer device on which he has no administrator rights, i.e. a computer device on which his user rights are restricted so that he cannot install a specific driver for the wireless modem device.” *Id.* ¶ 9.

Deforche establishes compellingly that utilizing an operating system’s pre-installed generic driver to provide a generic communications protocol for communications between the processing device and a peripheral device was a known configuration for improving wireless modem devices, such as Ono’s, that require administrator rights and a specific driver to be installed to enable communications between the wireless modem device and the processing device. Therefore, we find Deforche provides compelling evidence that a motivation existed at the time of the invention for a skilled artisan to modify Ono’s peripheral device in the manner recited with a reasonable expectation of success. *See Intel Corp.*, 61 F.4th at 1380.

a) coupling a peripheral device to the processing device, the peripheral device having a wireless transceiver;

For this limitation, Petitioner contends that “Uchida discloses *coupling a peripheral device* (e.g., wireless device 1) *to the processing device* (e.g., computer device 4)” and that “Uchida discloses *the peripheral device* (e.g., wireless device 1) *having a wireless transceiver* (e.g., wireless communication unit 107).” PO Resp. 56–57 (citing Ex. 1009, ¶¶ 39 (“The computer device 4 connects the USB connector 105 . . . so that the wireless

device 1 functions as a wireless unit and transmits image data to the image projection device 3 via the wireless device 1.”), 47–48, 53, 62, 66, 68 (“The wireless communication unit 107 has an antenna 110, an RF unit 111, and a baseband unit 112, and is capable of transmitting and receiving data based on the wireless LAN standard.”), 176, Figs. 1–3, 5; Ex. 1002 ¶ 206–207). Patent Owner does not dispute these contentions. *See generally* PO Resp.

On this record, and absent any argument or evidence to the contrary, we determine that Petitioner’s evidence and analysis shows persuasively that Ono discloses element 1(a).

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

Petitioner contends that “Uchida in view of Deforche discloses *setting up, by means of a pre-installed generic driver* (e.g., a standard USB mass storage driver) *of the operating system, a means for communication between the peripheral device and the processing device.*” Pet. 57 (citing Ex. 1030 ¶ 30; Ex. 1009 ¶ 66, Figs. 5–7, 17–18). Petitioner identifies that Uchida explains, “[w]hen wireless device 1 is connected to the computer device 4, communication is setup between the USB connector 401 of the computer device 4 and the USB connector 105 of the wireless device 1.” *Id.* (citing Ex. 1009 ¶¶ 39, 48, 66, 76–79, 150, 163–165). Uchida also indicates that “[c]ommunication through USB interface function unit 120 (which corresponds to the USB connector 105 and the USB connection circuit 106 in [Figure] 5) is ‘based on the USB standard.’” *Id.* at 58 (citing Ex. 1009 ¶ 77). Petitioner contends that a skilled artisan “would have understood that a USB mass storage device driver (already installed with the operating system of computer device 4) recognizes wireless device 1 as a CD-ROM

device and is thus able to setup communication via a corresponding USB protocol (which is required by the USB standard).” *Id.* (citing Ex. 1009 ¶ 163; Ex. 1002 ¶¶ 208–210).

Turning to Deforche, Petitioner highlights that “Deforche recognizes that ‘[u]sually, a user needs to install proprietary drivers before he/she can use a USB network device,’” but still it proposes an alternative technique that enables use of the device “using ‘USB class drivers supported without any extra installation in all OSes.” Pet. 59 (citing Ex. 1030 ¶ 30). “In particular, Deforche proposes using a ‘pre-installed generic driver of an operating system installed on the computer device [] for setting up a modem/host communication interface by means of which the wireless modem device and the computer device can communicate with each other.”” *Id.* (citing Ex. 1030 ¶ 9). Petitioner contends “Deforche explains that a generic driver can nevertheless be used to setup a communication interface using a generic driver and by using a generic communication protocol.” *Id.* (citing Ex. 1030 ¶ 11). Petitioner notes that, in one example, “Deforche describes a USB modem may present itself as a ‘MSD+HID generic device,’ including presenting itself as a USB mass storage device (MSD) with a CD-ROM.” *Id.* (citing Ex. 1030 ¶¶ 34, 40–41).

Petitioner contends that, “when Uchida describes the operating system recognizes the wireless device as a CD-ROM, a [skilled artisan] would have understood that the operating system of computer device 4 is setting up communication with the wireless device using a mass storage driver.” Pet. 59–60. In the alternative, Petitioner contends “Deforche’s techniques could also set up communication with a wireless modem device, like Uchida’s wireless device 1,” and that technique “set[s] up, by means of a pre-installed generic driver of the operating system on the computer device, a

modem/host communication interface [] for communication between the wireless modem device and the computer device.” *Id.* at 60 (citing Ex. 1009, code (57), ¶¶ 9–11, 17–18, 31). As a result, Petitioner contends, implementing Deforche’s solution in setting up wireless communication through a peripheral device using a pre-install generic driver would have been an obvious application with a reasonable expectation of success. *Id.*

In its Response, Patent Owner argues that “the Petition fails to identify the appropriate means for communication.” PO Resp. 46. The reasoning for this argument is as follows: “the Petition identifies a USB mass storage driver, but not the driver which sets up the means for communication. Instead, *Uchida* relies on a specific device driver which is installed by the wireless device when it is first connected.” “This is not a pre-installed generic driver.” *Id.* at 46–47 (citing Pet. 57–60; Ex. 1009 ¶ 48; Ex. 2004 ¶¶ 135, 152). Patent Owner concludes, “Ground 4 fails with respect to at least this limitation.” *Id.* at 47.

In its Reply, Petitioner notes that Patent Owner’s expert has conceded that Deforche teaches this limitation, and Patent Owner “ignores the Petition’s argument that it would have been obvious to use Deforche’s teachings of ‘*setting up, by means of a preinstalled generic driver of the operating system on the computer device, a modem/host communication interface.*’” Pet. Reply 23 (citing Ex. 1072, 72:13–73:13). Petitioner states, “Uchida specifically discloses using a driver to set up a means for communication, and there is no reason why that driver cannot be Deforche’s ‘*pre-installed generic driver.*’” *Id.* (citing Ex. 1009 ¶¶ 9, 48, 79–83, 153, 165–165, Figs. 7, 18; Ex. 1083 ¶ 47).

In its Sur-reply, Patent Owner asserts that Petitioner is trying to “improperly shift[] the burden, as the Petition must establish that a pre-

installed generic driver would be capable of performing the function of Uchida's driver and of the claims; the Petition does neither." PO Sur-reply 22. Patent Owner asserts further that Uchida's implementation with a custom driver supports the finding that a pre-installed generic driver is not capable of the same function without undue experimentation, if use of a pre-installed generic driver is the first option considered by a skilled artisan. *Id.*

After studying and weighing the evidence, in view of both parties' arguments, we find Petitioner's evidence compelling to show that Uchida, in view of Deforche, discloses and/or suggests setting up, by means of the pre-installed generic driver of the operating system, a means for communication between the peripheral device and the processing device. Uchida teaches expressly a process for setting up communications between computer device 4 and wireless device 1 for communicating data therebetween. *See* Ex. 1009 ¶¶ 39, 48, 66, 76–79, 150, 163–165. And as part of that process, a user installs a driver on the information terminal apparatus to establish a protocol for the computer device 4 and wireless device 1 to communicate data. *Id.* Thus, Uchida clearly discloses setting up an interface between the peripheral device and the processing device using a communication protocol that allows for data communications therebetween.

We agree with Patent Owner, however, that Uchida's set-up process differs from the one recited because it does not utilize the pre-installed generic drivers of the operating system to establish an interface with a generic communication protocol to provide data communications. Ex. 1009 ¶ 48. Nevertheless, Deforche demonstrates that such a difference is nothing more than an obvious modification and not a patentable distinction. *See* Ex. 1030, code (57) ¶¶ 9, 30; Ex. 1072, 72:13–73:13.

Deforche demonstrates that there were known disadvantages with wireless modem devices, like the one Uchida discloses, that users cannot use on a foreign computer device because the user has no administrator rights and installation of the appropriate driver is not allowed. Ex. 1030 ¶ 3. Deforche teaches a technique for improving those wireless modem devices, which avoids the need for a user to have special privileges and enables the user to connect to any processing device. *Id.* ¶¶ 4, 28. In particular, Deforche teaches a technique for connecting a host computer device to a wireless communication network that includes the following steps:

(a) connecting a wireless modem device to the host computer device; (b) setting up, by means of a pre-installed generic driver of the operating system on the computer device, a modem/host communication interface [] for communication between the wireless modem device and the computer device; (c) connecting the host computer device to a wireless communication network via the wireless modem device; (d) routing data traffic [] between the host computer device and the wireless communication network over the modem/host communication interface [].

Ex. 1030, code (57). As a result, “[t]he generic communication protocol [provided by the pre-installed generic driver] is used in the modem/host communication interface [] for transferring the data traffic [] between the host computer device and the wireless modem device.” *Id.*; *see also id.* ¶¶ 9, 30. This is strong evidence that a skilled artisan would have been motivated to modify Uchida’s set up process to utilize the pre-installed generic drivers of the processing device to establish an interface using a generic communication protocol for data communications between the peripheral device and the processing device, as taught by Deforche, because doing so was recognized by skilled artisans to improve similar devices in the same way. *See Intel Corp.*, 61 F.4th at 1380. Additionally, the combination

unambiguously identifies the recited “means for communication,” which undermines completely Patent Owner’s argument.

Furthermore, giving the appropriate weight to Patent Owner’s objective evidence to the contrary (*see infra* §II.J), Petitioner’s evidence from Uchida and Deforche again outweighs any doubt created. Uchida and Deforche demonstrate more persuasively that modifying Uchida in the manner recited was nothing more than a skilled artisan applying a known way to provide a wireless modem device that avoids the need for a user to install a driver onto the processing device (and avoid having the necessary authorization to do so) to establish communications between the modem/processing devices. Therefore, we determine that Petitioner’s evidence shows by a preponderance of the evidence that the combination of Uchida and Deforche discloses element 1(b) and that a skilled artisan would have known to combine those references in the manner claimed with a reasonable expectation of success.

c) coupling the processing device to the wireless communications network via the peripheral device; running a client application stored on the peripheral device to obtain screen scraped data;

Petitioner contends “Uchida discloses *coupling the processing device* (e.g., computer device 4) *to the wireless communications network via the peripheral device* (e.g., wireless device 1) based on following description:

CPU 405 launches a wireless setting application (step S322) and reads the wireless setting information stored in the wireless device 1 via the USB connector 401 (step S323). The CPU 405 then configures the WLAN (Wireless LAN) network by executing the wireless configuration application (step S324). CPU 405 transmits the wireless setting information to the wireless device 1 via the USB connector 401, and the wireless device 1 configures the WLAN network according to this wireless setting information. When the processing of step S324

is completed, the CPU 405 determines whether wireless communication with the image projection device 3 is established via the wireless device 1.

Pet. 60–61 (citing Ex. 1009 ¶¶ 165–167; Ex. 102 ¶¶ 211–212). Additionally, Petitioner contends that “Uchida discloses *running a client application (e.g., image transfer application program) stored on the peripheral device to obtain screen scraped data (e.g., display image data).*” Pet. 61–62 (citing Ex. 1009 ¶¶ 20, 48 (“When the USB connector 105 of the wireless device 1 is connected to the USB connector 401 of the computer device 4, the computer device 4 installs . . . an image transfer application program”) 52, 78, 81, 167 (“[I]f it is determined that a network connection with the image projection device 3 has been established (step S325: YES), the CPU 405 launches an image transfer application (step S326).”), 148, 158, 169, claim 8, Figs. 6, 7, 18).

Patent Owner does not dispute these contentions. *See generally* PO Resp. And on this record, absent any argument or evidence to the contrary, we determine that Petitioner’s evidence and analysis shows persuasively that Uchida discloses element 1(c).

d) routing the screen scraped data between the processing device and the wireless communications network via the means for communication for display on the one or more first displays of the base node, wherein the generic communication protocol is used for transferring the screen scraped data for display between the processing device and the peripheral device; and

Petitioner contends that “Uchida discloses *routing the screen scraped data between the processing device and the wireless communications network via the means for communication for display on the one or more first displays of the base node (e.g., display on the image projections screen)*” through the following description: “CPU 405 transmits display

image data to the wireless device 1 via the USB connector 401, which then transmits the data from the wireless device 1 to the image projection device 3 via wireless communication,” and “[w]hen the image projection device 3 receives the display image data transmitted in this manner, it projects an image based on the display image data onto a screen.” Pet. 63 (citing Ex. 1009 ¶¶ 158; Ex. 1002 ¶ 17). And the generic communication protocol is used for transferring the screen scraped data for display between the processing device and the peripheral device for the reasons discussed in above element (b). *Id.* at 65 (“For the same reasons discussed regarding the Uchida-Deforche combination, a [skilled artisan] would have found it obvious to implement the use of a generic communication protocol as provided by a pre-installed generic driver.”).

Patent Owner does not dispute these contentions. *See generally* PO Resp. And on this record, absent any argument or evidence to the contrary, we determine that Petitioner’s evidence and analysis shows persuasively that Uchida discloses element 1(d).

e) obtaining electronic access to the one or more first displays for display of the screen scraped data;

Petitioner contends “Uchida discloses *obtaining electronic access to the one or more first displays* (e.g., image projection device 3 and screen) *for display of the screen scraped data.*” Pet. 65 (citing Ex. 1009 ¶¶ 48–52, 176 (“In this process, if it is determined that a network connection with the image projection device 3 has been established (step S325: YES), the CPU 405 launches an image transfer application (step S326)”); Ex. 1002 ¶ 220).

Patent Owner does not dispute these contentions. *See generally* PO Resp. On this record, and absent any argument or evidence to the

contrary, we determine that Petitioner's evidence and analysis shows persuasively that Uchida discloses element 1(e).

*the method further comprising:
displaying the screen scraped data on the one or more first
displays in accordance with a set of rules, one of the rules being a
forcing rule, wherein the forcing rule is that display on the one or
more first displays of new screen scraped data is obtained by the
action of only one participant involved in the meeting, without
requiring the agreement of another participant, the new screen
scraped data of any participant for display overrides or replaces
any data displayed on the one or more first displays from the same
or another participant of the meeting.*

For this last claim element of claim 1, generally referred to as the “forcing rule” limitation, Petitioner points to Uchida's description of image data being “sent from the computer device 4 to the image projection device 3 via the wireless device 1 by executing an image transfer application on the computer device 4, and the image projection device 3 projects an image based on the image data onto a screen,” and that Uchida generally discloses that “the displaying is in accordance with a set of rules, (e.g., the state of the transfer stop switch 140).” Pet. 65–66 (citing Ex. 1009 ¶¶ 52, 70–71, 136–146, 176, Figs. 1, 17–18; Ex. 1002 ¶ 221). For the specific forcing rule recited in claim 1, Petitioner relies on the combination of Uchida and Grimshaw as follows.

Petitioner notes that “Grimshaw is directed to a communication system that allows users in a meeting to share media content” and “addresses the ability of the users of the system to control what is displayed on a shared display.” Pet. 66 (citing Ex. 1008 ¶¶ 2, 19–20; Ex. 1002 ¶¶ 222–225). Petitioner also notes that Grimshaw shows a configuration in which a user module is coupled to each participant's computer and the user module connects the participant's computer to a shared display. *Id.* at 67 (citing

Ex. 1008 ¶¶ 5–6, 12, 19–20, 23–24, 26–27). A skilled artisan “would have recognized problems associate with multiple users in a meeting vying for control and sought out known design options and solutions,” and Petitioner contends that Grimshaw teaches such a solution. *See id.* (citing Ex. 1013 ¶¶ 2, 31, 48–49, Fig. 2; Ex. 1057 ¶¶ 36, 43–44, 51–57). That solution includes each user module having a button (i.e., an actuator or input device) that allows the user to forcibly switch control over the display module. *Id.* (citing Ex. 1008 ¶ 20). Petitioner contends that Grimshaw describes the forcing rule and its implementation as follows:

[a] user may engage or push a button 344, 354, 364, 374 on their user module . . . to take control of display module 22 (e.g., display module 22 could show whatever is currently being displayed on the screen of the laptop computer connected to the selected user module).

* * * *

In the example above, controller 324 reviews the status of buttons 344, 354, 364, 374, determines that user module 14 has been selected, and sends command signals to switch controller 318, video processor 316 and/or converter 320 instructing them to pass the data signals from the selected user module 14 to display module 22.

Id. at 67–68 (citing Ex. 1008 ¶ 20). Petitioner concludes that, from the above excerpts, Grimshaw describes the forcing rule that claim 1 recites. *Id.* at 68.

Petitioner contends that a skilled artisan “would have found it obvious to implement a method of connecting processing devices and displays (those of Uchida) according to a ‘forcing rule, as described by Grimshaw,” and “would have had a reasonable expectation of success in implementing such a solution (e.g., employing buttons to trigger transmission of images and override or replace prior image data) given the simplicity of such common

technology.” Pet. 68 (citing Ex. 1002 ¶¶ 222–225). Because Grimshaw discloses a presentation communication system that uses actuators on a peripheral device (i.e., the user modules) to enable a user to take control of the shared display and transmit their scraped screen data to the display, Petitioner contends that Grimshaw teaches using a known technique to improve a device similar to Uchida’s wireless device in the same way and explains the benefit of doing so is to allow each user to activate their device and take control of the presentation. *Id.* at 51 (citing Ex. 1008 ¶¶ 4–6, 12, 19–20, 23–24, 26–28, 37, Figs. 1–4). The combination, Petitioner contends, “would achieve the predictable result of actuators on Uchida’s peripheral devices” to perform the same function. *Id.* (citing Ex. 1002 ¶¶ 198–199).

In response, Patent Owner disputes that a skilled artisan would have combined Uchida with the actuator and the forcing rule taught by Grimshaw because Uchida teaches away. PO Resp. 42–46. Patent Owner argues that “Uchida was implemented in a way to specifically avoid the possibility of an individual being capable of presenting their screen without the consent of others and necessary configuration required, which is the essence of a forcing rule.” *Id.* at 43 (citing Ex. 2004 ¶¶ 133, 142). As support, Patent Owner asserts that control functions of the projector in Uchida are managed by the remote control, which “includes a number of operation buttons including the start-up control button 231, update button 232, cross key 233, left arrow key 234, right arrow key 235, enter key 236, information transmission button 237 for transmitting wireless setting information, a hold button 238, and a wireless information setting button 239 for updating the settings.” *Id.* at 44 (citing Ex. 1009 ¶ 92; Ex. 2004 ¶ 144). Patent Owner focuses on the start-up control button 231 of the remote control device 2, which is used to issue start and stop instructions to the image projection

device to control its operation, and asserts that it demonstrates that the “actual control of presentation information is centralized to the remote control device.” *Id.* (citing Ex. 1009 ¶¶ 13, 45; Ex. 2004 ¶145). In operation, Patent Owner explains,

When transmission from multiple computer devices is desired, the same wireless setting information is shared to the multiple wireless devices before they are connected to the computer devices. However, the same start-up control button 231 would be used to start and stop the image projection system. Only one user has control—the user holding the remote control device.

Id. at 44–45 (citing Ex. 1009 ¶¶ 13 (“a remote control device that remotely controls the operation of the image projection device”), 45, 58; Ex. 2004 ¶146).

Patent Owner argues that “[t]his centralization is consistent with Uchida’s intention to avoid inadvertent transmission of image data” and a skilled artisan “would not consider decentralizing the image sharing process, but instead would have maintained this centralized control at the remote control device.” PO Resp. 45 (citing Ex. 2004 ¶¶ 147–148; Ex. 1009 ¶ 31 (“Thus, even if an image projection device is used for a conference such as a presentation it is possible to prevent image data from being mistakenly sent from a computer device that has previously used the image projection device and then sent from the image projection device.”)). Patent Owner asserts that “[a]llowing any other user to override a presenter, as the ’676 Patent is designed to do, would counteract the steps taken by Uchida to avoid erroneous image transmission from unintended users.” *Id.* (citing Ex. 1009, ¶¶ 12–13, 28; Ex. 2004 ¶ 148).

After studying and weighing the evidence, in view of both parties’ arguments, we find Petitioner’s evidence compelling to show that Uchida, in

view of Grimshaw, discloses and/or suggests the forcing rule limitation of claim 1. Because Uchida is directed to an image display system that provides a display shared by multiple users, like Grimshaw, Uchida faced similar problems associated with having multiple users in a meeting vying for control of the shared display. *See* Ex. 1009 ¶¶ 3, 12, 28; Ex. 1008 ¶¶ 19–20. Grimshaw provides a known solution is to provide an input/actuator device coupled to the user’s computer that, when engaged, enables the user to forcibly switch control over the display module to present the material displayed on the user’s computer device. Ex. 1008 ¶¶ 19–20. Grimshaw, thus, suggests the desirability of the proposed combination because Grimshaw teaches a known technique for improving a device similar to Uchida’s wireless device in the same way and explains that the benefit gives each user a means to locally exercise control over the shared display and force the display of the image data associated with that user’s computer. And we are persuaded that modifying Uchida’s wireless device in the manner claimed and suggested by Grimshaw would have been simply an application of a known technique used to improve similar devices to obtain the recognized benefit associated with such a modification.

Patent Owner notably does not dispute that the combined teachings of Uchida and Grimshaw disclose the forcing rule limitation, but instead disagrees only with whether a skilled artisan would have been motivated to modify Uchida in such a manner because Uchida allegedly seeks to centralize control. Patent Owner’s argument is unavailing. Although the solution Uchida discloses may result in more centralized control, we do not agree that fact would have discouraged a skilled artisan from following the path set out in Grimshaw, or would have led away from that path. This is so because Uchida itself suggests that its proposed solution is compatible with

also providing a user with the ability to control the presentation other image data—in fact, the wireless device in Uchida indisputably provides a means for enabling users to at least “inhibit the presentation” of image data from their display. *See* PO Resp. 47; Ex. 1009 ¶ 71. Patent Owner’s suggestion to the contrary lacks support because none of its evidence from Uchida actually mentions a need or desire for centralized control; instead, Patent owner relies on inferences and presumptions that are at best tenuously connected to the solution taught by Uchida.

Furthermore, giving the appropriate weight to Patent Owner’s objective evidence to the contrary (*see infra* §II.J), Petitioner’s evidence from Uchida and Grimshaw overcomes easily any doubt created. Uchida and Grimshaw demonstrate more persuasively that modifying Uchida in the manner recited was nothing more than a skilled artisan applying, with a reasonable expectation of success, a known way to give a user control over a shared display when multiple users in a meeting are vying for control of that display. Therefore, we determine that Petitioner’s evidence shows by a preponderance of the evidence that the combination of Uchida, Deforche, and Grimshaw discloses the recited forcing rule limitation of claim 1.

Conclusion

After considering holistically all of the evidence and arguments presented by the parties, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 1 is unpatentable as being obvious in view of the combination of Uchida, Deforche, and Grimshaw.

2. Dependent Claim 4

4. The method of claim 1, wherein the peripheral device has an actuator, the method further comprising a user action on the

actuator that triggers transfer of the data for display from the processing device to the wireless transceiver and from there to the wireless communications network.

Petitioner identifies the configuration and operation of Uchida's wireless device as disclosing "*the peripheral device (e.g., wireless device 1) has an actuator (e.g., image transfer stop switch 140) to allow the user to carry out a user action (e.g., slide the stop transfer switch 140) that triggers transfer of the data for display from the processing device to the wireless transceiver and from there to the wireless communications network.*"

Pet. 69 (citing Ex. 1009 ¶¶ 52–53, 65–72). Petitioner explains that "image transfer stop switch 140 slides between ON and OFF position," and "[w]hen the 'image stop' switch is in the ON position, the image transfer application transmits a request to the image projection device 3 via the wireless communication unit 107 to project a specific image on the image projection device 3." *Id.* Moreover, Petitioner contends that a skilled artisan "would have understood that reversing the slide switch back to OFF would resume (i.e., trigger image transfer)." *Id.* (citing Ex. 1002 ¶ 226). As a result, Petitioner contends that a skilled artisan "would have found it obvious to include an input device to allow individual users the ability to override or switch the source of the display via the wireless device," as suggested by Grimshaw. *Id.* at 70.

Grimshaw supports the proposed combination, Petitioner contends, by disclosing "buttons 344, 354, 364, 374 (e.g., 'input device') on respective user modules 14, 16, 18, 20 configured to allow the user to carry out engaging (e.g., 'user action') the button that triggers transfer of the data signal (e.g., 'user selected arbitrary media content') from a user module to the control module 12 for display on the display module 22." Pet. 70 (citing

Ex. 1008 ¶¶ 5, 19 (“the users of modules 14, 16, 18, 20 can take control of the display module 22 by respectively engaging buttons 344, 354, 364, 374, which causes switch controller 318 to pass the data signals from the selected user module on to the display module”), 20, 27–28, Figs. 1–4; Ex. 1012, 5:8–6:17, 8:29–9:20, Figs. 1–4). Petitioner contends that a skilled artisan “looking to implement an image projection system like that of Uchida would have found it obvious to employ a technique and components as described by Grimshaw in addressing the problem where multiple users are ‘vying for control’ of a shared display.” *Id.* (citing Ex. 1008 ¶ 19).

In response, Patent Owner argues that neither Uchida or Grimshaw disclose an input device that “triggers” the transfer of image data. *See* PO Resp. 47–48. For Grimshaw, Patent Owner relies on the same reasoning and evidence provided in response to Petitioner’s similar contention in Ground 2 addressing the same claim. *Id.* at 47. For Uchida, Patent Owner argues that “while [the image transfer stop switch] inhibits the presentation of data from the laptop, it has no impact on whether data is transmitted from wireless device 1 to projector 3.” *Id.* at 47–48 (citing Ex. 1009 ¶ 71; Ex. 2004 ¶ 156). Patent Owner asserts that “[t]he transfer stop switch is a safety, not a trigger”—“Uchida’s transfer stop switch[’s] primary purpose is to avoid unwanted image transfer.” *Id.* at 48 (citing Ex. 2004 ¶ 156–157; Ex. 1009 ¶¶ 12, 31 (“Thus, even if an image projection device is used for a conference such as a presentation . . . it is possible to prevent image data from being mistakenly sent from a computer device that has previously used the image projection device and then sent from the image projection device.”)). And “[e]ven if the image transfer stop switch stops all signal transfer from the wireless device, there is no evidence in Uchida that the image display would automatically resume when the signal transfer stop switch is turned off.” *Id.*

(citing Ex. 2004 ¶ 157). Accordingly, Patent Owner concludes, the combination of Uchida, Deforche, and Grimshaw fails to render the limitations of claim 4 obvious. *Id.*

In its Reply, Petitioner argues that it is incorrect to characterize Uchida’s transfer stop switch as not triggering content transfer. Pet. Reply 25. Petitioner highlights the testimony of Patent Owner’s expert that “when the toggle is turned back to ‘off,’ the image data coming from the wireless device is projected again.” *Id.* (citing Ex. 1072, 3:3–12). Additionally, Petitioner highlights Uchida’s disclosure that, after activating image transfer stop switch 140, the client computer “executes an image transfer application and transmits a request to the image projection device 3 . . . to project a specific image . . . on the image projection 50 device 3.” *Id.* (citing Ex. 1009 ¶ 71).

In its Sur-reply, Patent Owner counters by highlighting that Uchida describes the image transfer stop switch as “serv[ing] as an image transmission stop operation unit for instructing the image projection device 3 to stop transmitting the image data.” PO Sur-reply 23 (citing Ex. 1009 ¶ 71). In Patent Owner’s words, Uchida’s image transfer stop switch “does not trigger the transfer of content to the projector, rather it tells the projector to stop projecting any received content and instead share a black screen.” *Id.* (citing Ex. 1009 ¶ 71 (“When the CPU 405 of the computer device 4 receives the information, it executes an image transfer application and transmits a request to the image projection device 3 via the wireless communication unit 107 to project a specific image (here, a black screen image) on the image projection device 3.”)).

After studying and weighing the evidence, in view of both parties’ arguments, we find Petitioner’s evidence compelling to show that Uchida, in

view of Grimshaw, discloses and/or suggests the limitations of claim 4. First, related to Grimshaw, we again reject Patent Owner's arguments because Grimshaw evidences persuasively that a skilled artisan would have recognized the peripheral device to be another place within the image display system that the actuator could be located. Grimshaw teaches that, when there are multiple participants in a conference that are vying for control of the base node's display module, a known solution is to have an actuator on the peripheral device connected to the participant's processing device that can be engaged to take control and transfer image data from the processing device to the base node's projector via the peripheral device. Ex. 1008 ¶ 19. And Grimshaw suggests that it was not uncommon for image display systems like Uchida's to place actuator controls for the base node's projector in both a remote control usable from the side of the projector and peripheral devices connected to each participants processing device. Ex. 1008 ¶¶ 12, 19, 31, Fig. 1.

We likewise reject Patent Owner's argument that Uchida does not teach that its image transfer stop switch triggers transfer of the data for display. For example, as noted by Petitioner and suggested by the name given to the switch, it is a reasonable inference that, when the toggle is turned back to "off," the image data is trigger to be provided by computer device 4 through wireless device 1 to the base node for projection because, when the toggle is turned back to "on," the wireless device 1 is conversely triggered to stop providing image data from computer device 4 to the base node for projection. *See* Ex. Ex. 1009 ¶ 71.

Therefore, after considering all of the evidence of record, we determine that Petitioner has carried its burden of proving by a

preponderance of the evidence that claim 4 is unpatentable as being obvious in view of the combination of Uchida, Deforche, and Grimshaw.

3. *Dependent Claim 5*

Petitioner contends that claim 5, which depends from claim 1, is unpatentable because “Uchida discloses presenting the wireless device 1 (e.g., the ‘peripheral Device’) to computer device 4 (e.g., the ‘processing device’) as a mass storage device” and a skilled artisan “would have understood that the pre-installed generic driver is a mass storage device driver,” as demonstrated by Deforche. Pet. 71 (citing Ex. 1002 ¶ 227). Patent Owner does not dispute these contentions. *See generally* PO Resp. On this record, and absent any argument or evidence to the contrary, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 5 is unpatentable as being obvious in view of the combination of Uchida, Deforche, and Grimshaw.

4. *Dependent Claim 8*

Petitioner contends that claim 8, which depends from claim 1, is unpatentable because “Deforche discloses and/or suggests that *transferring of the data for display is to a defined network node* (e.g., image projection device 3) *without user entry of configuration details.*” Pet. 71 (citing Ex. 1009 ¶¶ 42, 166; Ex. 1002 ¶ 228). Patent Owner does not dispute this contention. *See generally* PO Resp. On this record, and absent any argument or evidence to the contrary, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 8 is unpatentable as being obvious in view of the combination of Uchida, Deforche, and Grimshaw.

5. *Dependent Claim 18*

Petitioner contends that “Deforche discloses *running said program does not require installation of the program or configuration of the processing device.*” Pet. 78 (citing Ex. 1030 ¶¶ 15 (“the wireless modem device stores at least one application and is provided for launching said application as a portable application, meaning that the application keeps its data (cache) in the memory of the wireless modem device and no traces are left on the computer device.”), 18, 26–27, 30–31, 47; Ex. 1002 ¶ 245).

Patent Owner repeats an argument already made in the context independent claim 1—namely, that the “Uchida, Deforche, and Grimshaw ground installation of a program or configuration of the processing device.” PO Resp. 48–49 (citing Ex. 1009 ¶ 48; Ex. 2004 ¶ 137). However, we again reject this argument because it focuses only on what Uchida teaches individually, rather on what the combination of Uchida, Deforche, and Grimshaw together reasonably discloses or suggests, and because the argument appears to improperly rely on bodily incorporation of Uchida’s driver and configuration information into the connectivity technique that Deforche teaches to improve devices like Uchida’s wireless connection module.

On this record, and absent any additional argument or evidence from Patent Owner, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 18 is unpatentable as being obvious in view of the combination of Uchida, Deforche, and Grimshaw.

6. *Dependent Claim 20*

Petitioner refers back to its contentions for the claim 16 (addressed below), which in turn refers to the claim 1 contentions for the recited element “running a client application stored on the peripheral device to

obtain screen scraped data.” Pet. 78; *see also id.* at 74–75. In particular, Petitioner contends that Uchida discloses *a program* (e.g., image transfer application) *adapted to be loaded onto the processing device* (e.g., computer device 4) *and to run on an operating system of the processing device . . . to obtain user selected arbitrary media content* (e.g., image data) *from the processing device.*” *Id.* at 74 (citing Ex. 1009 ¶¶ 48, 52, 54, 78, 81 (“When the image transfer application is installed on the computer device 4, it causes the computer device 4 to function as an image transmission means that controls the wireless device 1 and transmits the image data from the computer device 4 to the image projection device 3”), 83, 152, 156, 167, 176; Ex. 1002, ¶¶ 237–238).

Other than raising the same argument that it raises for claim 1—namely, that the “[t]he Uchida, Deforche, and Grimshaw ground requires installation of a program or configuration of the processing device,” Patent Owner does not dispute Petitioner’s showing. PO Resp. 48–49 (citing Ex. 1009 ¶ 48; Ex. 2004 ¶ 137). On this record, and absent any additional argument or evidence from Patent Owner, we determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 20 is unpatentable as being obvious in view of the combination of Uchida, Deforche, and Grimshaw.

7. Independent Claim 16 and Dependent Claim 19

The subject matter of claim 16 is substantially similar to combined claims 1 and 4. *Compare* Ex. 1001, 32:40–33:14 (claim 1), 33:31–35 (claim 4) *with id.* at 34:65–36:3 (claim 16). The subject matter of claims 18 and 19 are the same, except they depend from claims 1 and 16, respectively. *Compare* Ex. 1001, 36:17–19 *with id.* at 36:20–22. Accordingly, for claims 16 and 19, Petitioner sets forth an element-by-element analysis that largely

relies on the same evidence and arguments presented for claims 1, 4, and 18 for the corresponding elements. *See* Pet. 72–78. Patent Owner responds that Petitioner’s contentions for claims 16 and 19 likewise fail for the same reasons that the contentions for claims 1 and 4 fail. *See* PO Resp. 47–49. On this record, and absent any additional argument or evidence from Patent Owner, we therefore determine that Petitioner has carried its burden of proving by a preponderance of the evidence that claims 16 and 19 are unpatentable as being obvious in view of the combination of Uchida, Deforche, and Grimshaw for the same reasons provided for claims 1, 4, and 18.

I. Ground 5: Claim 14

Petitioner contends that the combination of Uchida and Grimshaw renders claim 14 obvious. Pet. 13 (citing Ex. 1002 ¶ 152). Petitioner contends that “[c]laim 14 is like independent claim 1 but does not require Deforche’s pre-installed generic driver” and, as a result, Petitioner provides an element-by-element mapping of claim 14 to that is largely duplicative of the one provided for claim 1. *See* Pet. 79–82. In particular, Petitioner contends that the same recited Uchida and Grimshaw evidence provided for the “forcing rule” limitation recited in claim 1 discloses or suggests equally the “forcing rule” limitation recited in claim 14. *Id.* at 81.

As previously noted, although significant similarities exist between the two “forcing rule” limitations, there are differences—namely, claim 14 adds a further limitation requiring the recited “forcing rule” to determine “that the displaying of media content on the display is *obtained by a user action on any one of the user devices* involved in the meeting” and identifies expressly that “the processing device” is a “user device.” Ex. 1001, 34:28–29, 34:43–46. Patent Owner highlights this difference, *for the*

first time, in its Sur-reply and argues that “[n]either Grimshaw nor Uchida disclose a user action on a user device which controls the display of content.” PO Sur-reply 24. Patent Owner does not otherwise challenge Petitioner’s contentions for claim 14, beyond those raised for claim 1. *See generally* PO Resp.; PO Sur-reply 24. As noted earlier, we do not consider *new* arguments raised for the first time in Patent Owner’s Sur-reply. *See* Trial Guide 74. Nevertheless, even had Patent Owner timely raised this argument, we do not find it to have merit in this instance.

In claim 1, Petitioner relies on a modified version of Uchida’s wireless device 1 for the “forcing rule” limitation of claim 14, Petitioner simply refers to the evidence and reasoning that it provided for the similar limitation in claim 1, which persuaded us that Uchida and Grimshaw disclose or suggest the forcing rule limitation. Pet. 65–68. Unlike the earlier situation when Petitioner relied on Ono’s remote controller 69 for this limitation, which is wholly separate and distinct part than the user’s processing device, Uchida makes clear that “[t]he wireless device 1 is a USB dongle that functions as *a wireless part of a computer device 4* and as a memory.” Ex. 1009 ¶ 39 (emphasis added). As such, we are persuaded that the evidence relied upon by Petitioner for the forcing rule limitation in claim 1 also establishes “that the displaying of media content on the display is *obtained by a user action on any one of the user devices* involved in the meeting,” as recited in claim 14 (emphasis added).

Therefore, on this record, and absent any additional argument or evidence from Patent Owner, we determine for the same reasons articulated for claim 1 that Petitioner has carried its burden of proving by a preponderance of the evidence that claim 14 is unpatentable as being obvious in view of the combination of Uchida and Grimshaw.

J. Objective Evidence

Patent Owner argues that the commercial success of those products that incorporate its patented technology and its competitors' licensing activities provide objective evidence of nonobviousness. *See* PO Resp. 49–70. Patent Owner provides an element-by-element analysis mapping of the challenged claims to its “Barco System.” *Id.* at 52–67. Patent Owner contends that “there is essentially no unclaimed feature in the accused products.” *Id.* at 52. Patent Owner provides “United States Net Sales Annual Totals” for 2015 up to the third quarter of 2024, which demonstrate significant sales and Patent Owner contends that those sales demonstrate “commercial success using its patented invention [and] is strong evidence that the claims of the ’676 Patent are nonobvious.” *Id.* at 67. Finally, Patent Owner identifies two licenses taken by its competitors and another competitor that allegedly “changed the design of their competing product rather than face liability for patent infringement.” *Id.* at 68–70.

Petitioner responds that Patent Owner's sales evidence for its Barco System lacks the necessary nexus to the claimed inventions at issue here because that system is “not coextensive with the claimed invention because it includes significant unclaimed features.” Pet. Reply 26–27. Petitioner highlights that it is undisputed that Patent Owner has several patents that are allegedly practiced by its Barco System and that Patent Owner concedes that each patent lays claim to significant features. *Id.* at 27–28. Petitioner notes further that Patent Owner relies exclusively on the presumption of a nexus to the claims at issue in this case and that Patent Owner offers no direct evidence showing any sale was the “direct result” of the claimed features. *Id.* at 28. Regarding Patent Owner's licensing evidence, Petitioner argues

that it is nothing more than evidence of “the mere existence of a license.”
Id. at 28–29.

After considering the parties’ arguments and the submitted objective evidence of nonobviousness, we are persuaded Patent Owner’s license evidence is entitled to some weight, but we give no weight to the product sales evidence.

*1. Nexus of the Sales Evidence to the
Commercial Success of the ’676 Patent*

Patent Owner asserts that claims of the ’676 patent are coextensive with Patent Owner’s ClickShare Products, which is formed of a ClickShare Button and a Barco Base. PO Resp. 49–70; PO Sur-reply 6. Patent Owner states:

Patent Owner identifies the ’676 Patent as practiced by the ClickShare Products on its website. Ex. 2017, 9; Ex. 2004, ¶160. 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.

PO Resp. 51.

Petitioner argues that Barco’s ClickShare product is not coextensive with the claimed invention because the ClickShare product includes a significant unclaimed feature. Pet. Reply 26–28.

Considering first the product sales evidence, we are persuaded that the Barco System is not coextensive with any of the challenged claims. Perhaps the most illustrative evidence of this point comes from Patent Owner. Patent Owner has correctly identified that this proceeding is related 1436-IPR, 1437-IPR, and 1439-IPR, which each address a different one of Patent

Owner's patents. Paper 9, 1–3. Notably, for our purposes here, in each of those proceedings Patent Owner similarly argues that there is objective evidence of nonobviousness. *See* 1436-IPR, Paper 21 at 47–66; 1437-IPR, Paper 15 at 39–56; 1439-IPR, Paper 20 at 47–74. And, in each of those related cases, Patent Owner provided an element-by-element analysis to show the exact same “Barco System” product practices the claimed invention of the respective patent at issue in the respective IPR, moreover, in each case Patent Owner likewise contends “there is essentially no unclaimed feature.” *See* 1436-IPR, Paper 21 at 49–63; 1437-IPR, Paper 15 at 41–52; 1439-IPR, Paper 20, 50–70. Furthermore, the sales evidence is identical (to the penny) in each of the related proceeding. *See* 1436-IPR, Paper 21 at 63; 1437-IPR, Paper 15 at 52; 1439-IPR, Paper 20, 70–71.

“A patent claim is not coextensive with a product that includes a ‘critical’ unclaimed feature that is claimed by a different patent and that materially impacts the product’s functionality.” *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1375 (Fed. Cir. 2019). Patent Owner’s representation in the other IPRs demonstrates that the patent claims in this case are not coextensive with the Barco System product because that product indisputably includes “critical” unclaimed features claimed by a different patent that materially impacts the product’s functionality. Thus, because Patent Owner has failed to demonstrate a nexus between the sales evidence and the claims at issue here and because Patent Owner has offered no persuasive evidence directly linking the sales evidence to the claims, we do not give any patentable weight to the product sales evidence offered by Patent Owner.

2. *Acquiescence in Industry*

Patent Owner argues that industry acquiescence demonstrates secondary considerations of nonobviousness. PO Resp. 68–70.

Patent Owner first argues that licensing of the '676 patent by Creston shows industry acquiescence and shows nonobviousness of the claimed invention. PO Resp. 68–7; PO Sur-reply 4–6.

Petitioner argues that the mere existence of the Creston license is insufficient to show nonobviousness because there is no evidence that Creston entered the license because it believed that Barco's patents were valid or enforceable. Pet. Reply 28–19.

“[T]he mere fact of licensing, without more, is generally not a strong indication of nonobviousness if it cannot also be shown that the licensees did so out of respect for the patent rather than to avoid litigation expense.” *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1038 (Fed. Cir. 2017). As the Federal Circuit has long recognized, it is often “cheaper to take licenses than to defend infringement suits.” *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 908 (Fed. Cir. 1985)

Patent Owner provides insufficient evidence to show that Creston licensed the '676 patent because Creston believed that that '676 patent was valid or enforceable. The Creston license involves three patent families and 20 patents total. PO Sur-reply 4; Ex. 2011, 15. The '676 patent is among the 20 licensed patents (Ex. 2011, 15) and Patent Owner provided no evidence to show the weight or importance of the '676 patent to the license. Petitioner's other evidence persuades us that, to the contrary, the Creston license was part of an agreement driven by business factors, interests, and benefits beyond the patents themselves. *See* Ex. 1091, 73:7–74:3, 105:8, 106:1; Ex. 1090, 58:7–12.

We have reviewed Patent Owner’s arguments concerning *Ancora Techs., Inc. v. Roku, Inc.*, 140 F.4th 1351 (Fed. Cir. 2025), but find them misplaced. PO Resp. 50, 69; PO Sur-reply 2–3. Unlike here where Creston’s license covers a significant number of patents, *Ancora* analyzed a licenses to a single patent and held that “[l]icenses to the challenged patent ... do not require a nexus with respect to the specific *claims* at issue.” *Ancora* at 1362 (emphasis added). We do not agree with Patent Owner that *Ancora* stands for the proposition that all licenses, regardless of the circumstances of the licensing, are strong evidence of nonobviousness. We give little weight to the Creston’s license of the ’676 patent.

Patent Owner also argues that “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 ’676 Patent.” PO Resp. 73 (citing Ex. 1001, Title Page; Ex. 2020, 2; Ex. 2021). We give little weight to the Consent Judgment and Permanent Injunction, as it did not involve the ’676 patent. *See generally* Ex. 2021.

Patent Owner further argues that “Sahara Presentation Systems changed the design of their competing product rather than face liability for patent infringement.” PO Resp. 70 (citing Ex. 2021 (“Barco ended its case against Sahara Presentation Systems after obtaining that its Clevershare products were materially redesigned to avoid patent infringement.”)). Exhibit 2021 is a Patent Owner’s Press Release titled “Barco successfully enforces ClickShare IP against competitors in the U.S.” The Press Release asserts that because of Patent Owner’s lawsuit, certain competitors agreed to

withdraw their product from the United States market. *See generally* Ex. 2021. The Press Release does not mention the '676 patent. *Id.* We, thus, give little weight to the Press Release.

Patent Owner finally argues that Defendants' Opposed Motion for Ongoing Royalty in the related Texas Litigation (Ex. 2036) is strong evidence of nonobviousness because Petitioner asked the court for a compulsory license to the '676 patent. Paper 56. Petitioner disputes that its Motion is evidence of nonobviousness because the Motion was filed to avoid needless future litigation. Paper 57 (citing Ex. 2036, 3). The Motion indicates that "Yealink admitted that its WPP20 and WPP30 wireless presentation pods (or, dongles) infringed the asserted patents and withdrew them from the U.S. market" and that Petitioner now wishes to reintroduce dongles to the market and asks the court to determine an ongoing royalty for selling the WPP30, specifying a royalty rate for the dongle alone. *See generally* Ex. 2036. We, thus, give some weight to the Motion.

3. Conclusion as to Secondary Considerations

We have considered all of Patent Owner's arguments and evidence concerning secondary considerations. We give Patent Owner's evidence regarding its revenue and profits from the ClickShare product line little weight. We give some weight to Patent Owner's evidence of licensing. We, however, do not find the licensing evidence outweighs Petitioner's showing of obviousness.

III. CONCLUSION⁸

Based on the fully developed trial record, Petitioner has demonstrated by a preponderance of the evidence that claims 1, 4, 5, 8, 14, 16, and 18–20 of the '676 patent are unpatentable.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1, 5, 8, 18, 20	103(a)	Ono, Deforche	1, 5, 8, 18, 20	
14	103(a)	Ono		14
4, 16, 19	103(a)	Ono, Deforche, Grimshaw	4, 16, 19	
1, 4, 5, 8, 16, 18–20	103(a)	Uchida, Deforche, Grimshaw	1, 4, 5, 8, 16, 18–20	
14	103(a)	Uchida, Grimshaw	14	
Overall Outcome			1, 4, 5, 8, 14, 16, 18–20	

IV. ORDER

In consideration of the foregoing, it is

ORDERED that claims 1, 4, 5, 8, 14, 16, and 18–20 of the '676 patent have been shown to be unpatentable; and

⁸ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

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

IPR2024-01438
Patent 11,258,676 B2

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