

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.
Petitioners,

v.

BARCO N.V.
Patent Owner

U.S. Patent No. 11,258,676
IPR2024-1438

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 11,258,676**

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TABLE OF EXHIBITS

EXHIBIT	DESCRIPTION
EX-1001	U.S. Patent No. 11,258,676
EX-1002	Declaration of Kevin C. Almeroth, Ph.D.
EX-1003	Curriculum Vitae of Kevin C. Almeroth, Ph.D.
EX-1004	File History of U.S. Patent No. 11,258,676
EX-1005	U.S. Patent Application Publication No. 2005/0210390 (“Ono”)
EX-1006	U.S. Patent Application Publication No. 2008/0074560 (“Ichieda”)
EX-1007	U.S. Patent Application Publication No. 2006/0069840 (“Corbett”)
EX-1008	U.S. Patent Application Publication No. 2011/0096138 (“Grimshaw”)
EX-1009	English Translation of Japanese Patent Application Publication No. 2008-165007 (“Uchida”)
EX-1010	Japanese Patent Application Publication No. 2008-165007
EX-1011	Certification for English Translation of Japanese Patent Application Publication No. 2008-165007
EX-1012	U.S. Provisional Application No. 61/255,326 (“Grimshaw Provisional”)
EX-1013	WIPO International Patent Application Publication No. 2010/025557 (“Hill 557”)
EX-1014- EX-1019	RESERVED
EX-1020	U.S. Patent Application Publication No. 2010/0087139 (“Glass”)
EX-1021	U.S. Patent Application Publication No. 2009/0198839 (“Banerjee”)
EX-1022	U.S. Patent Application Publication No. 2011/0115689 (“Sugiyama”)
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EX-1026	U.S. Patent Application Publication No. 2009/0172219 (“Mardiks”)
EX-1027	U.S. Patent Application Publication No. 2010/0295994 (“Kaplan”)
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EX-1030	EP Patent Application Publication No. 2107463 (“Deforche”)
EX-1031	English Translation of Japanese Patent Application Publication No. 2007-208606 (“Maeda”)
EX-1032	RESERVED
EX-1033	U.S. Patent Application Publication No. 2002/0196378 (“Slobodin”)
EX-1034	U.S. Patent Application Publication No. 2002/0174254 (“Kita”)
EX-1035- EX-1049	RESERVED
EX-1050	Imation Wireless Projection Link User Guide
EX-1051	EZAir Press Release, “EZAir Wireless PC to TV Solutions Now Available Across Europe,” March 16, 2011
EX-1052	Warpia Product Brief, “Wireless USB PC to TV Audio/Video Display Adapter,” 2009
EX-1053	Q-Waves Product Overview, “Quicklink TV,” November 2010
EX-1054	IOGear Installation Guide, “Wireless USB to VGA Kit,” 2008
EX-1055	JP Patent Application Publication No. 2007-208606
EX-1056	Certification for English Translation of JP Patent Application Publication No. 2007-208606
EX-1057	U.S. Patent Application Publication No. 2005/0036509 (“Acharya”)
EX-1058	U.S. Patent Application Publication No. 2011/0038005 (“Ochai”)
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EXHIBIT	DESCRIPTION
EX-1066	Portion of ctrl. no. 90/014,087 file history

I. INTRODUCTION

Yealink (USA) Network Technology Co., Ltd. and Yealink Network Technology Co., Ltd. (collectively “Petitioners” or “Yealink”) request review of claims 1, 4-5, 8, 14, 16, 18-20 of U.S. Patent No. 11,258,676 (“the ’676 patent”) assigned to Barco N.V. (“Patent Owner” or “Barco”). For the reasons below, the Board should find the challenged claims unpatentable.

II. MANDATORY NOTICES

A. Real Parties-in-Interest

The real parties-in-interest are Yealink (USA) Network Technology Co., Ltd. and Yealink Network Technology Co., Ltd.

B. Related Matters

The ’676 patent is at issue in *Barco, Inc. et al v. Yealink (USA) Network Technology Co., Ltd. et al*, 2:2023-cv00521 (EDTX), filed November 14, 2023 (“EDTX case”).

C. Counsel and Service Information

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Petitioners consent to electronic service.

III. PAYMENT OF FEES

The PTO is authorized to charge any fees due to Deposit Account No. 30827.

IV. GROUNDS FOR STANDING

Yealink certifies the '676 patent is available for IPR and Yealink is not barred or estopped from requesting IPR.

V. PRECISE RELIEF REQUESTED

Petitioners request cancellation of claims 1, 4-5, 8, 14, 16, and 18-20 of the '676 patent based on the following grounds:

- Ground I – Claims 1, 5, 8, 18, and 20 are rendered obvious by the combination of Ono and Deforche
- Ground II – Claim 14 is rendered obvious by Ono
- Ground III – Claims 4, 16, and 19 are rendered obvious by Ono, Deforche, and Grimshaw
- Ground IV – Claims 1, 4-5, 8, 16, and 18-20 are rendered obvious by Uchida, Deforche, and Grimshaw

- Ground V – Claim 14 is rendered obvious by Uchida and Grimshaw

The '676 patent claims benefit of priority to a provisional application filed on September 14, 2011. (EX-1001, 1:7-20). For purposes of this Petition only, Petitioners treat September 14, 2011, as the priority date for the challenged claims. Each of the asserted references qualify as prior art, as detailed below.

Prior Art Reference	Statutory Basis	Publication Date/Filing Date
Ono (EX-1005)	102(b)	September 22, 2005
Grimshaw (EX-1008)	102(a) / 102(e)	April 28, 2011 / October 27, 2010
Uchida (EX-1009)	102(b)	July 17, 2008 ¹
Deforche (EX-1030)	102(b)	October 7, 2009

Grimshaw qualifies as prior art under §102(a) based on its publication date and under §102(e) based on its filing date. Additionally, Grimshaw is entitled to claim the benefit of priority to U.S. Provisional Patent Application No. 61/255,326, filed October 27, 2009. (EX-1012). As explained below, (i) the portions of Grimshaw relied on as prior art are supported by the provisional application, and (ii) at least one claim of the reference patent is supported by the provisional application.

¹ This is the publication date for JP Patent Application Publication No. 2008-165007 (EX-1010). All citations are to its English Translation (EX-1009). EX-1011 is the corresponding certificate of certified translation.

Dynamic Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d 1375, 1381-82 (Fed. Cir. 2015). Therefore, Grimshaw qualifies as prior art as of October 27, 2009.

Claim 1 from as-filed U.S. Patent Appl. No. 12/913,608	Example Support in U.S. Appl. No. 61/255,326 (EX-1012)
A communication system for integration with a piece of furniture, comprising:	1:47, 1:13-14, 2:2-5, 15:3-9; Figures 1-3 (communication system 10 integrated with a piece of furniture 26)
a plurality of user modules,	2:2-5, 15:3-9, Figures 1-3 (user modules 14, 16, 18, 20)
each of the user modules includes a button;	6:2-13, 7:26-29, 15:3-9, Figure 3 (button 344, 354, 364, 374 on each user module)
a network connection; and	2:29-30, 15:3-9, Figure 3 (network connection 390)
a control module being electronically coupled to both the user module and the network connection	2:7-22; 4:22-27, 15:3-9, Figure 3 (control module 12 coupled to user modules and network connection)
wherein activation of a button on a user module causes the control module to give at least some control of the network connection to the user module with the activated button.	5:16-19; 6:2-27; 8:29-9:7; 13:8-14:8, 15:3-9, Figure 4

Ono, Grimshaw, and Kaplan were not considered during prosecution of Application No. 17/121,919 (which led to the '676 patent). (*See generally* EX-1004). Although Uchida and Deforche were cited during prosecution, Uchida was a foreign language document and, further, all three references were among more than 200 cited references and not otherwise mentioned. (*Id.*)

VI. THE '676 PATENT

A. Admissions of Prior Art Techniques

The '676 patent recognizes an “explosion of communication electronic communication tools” and acknowledges the known desirability for tools allowing greater participation in meetings. (EX-1001, 1:35-37; 2:36-55). One prior system used a USB dongle to effectively turn an electronic device into an audience-participation device. (EX-1020, abstract). Specifically, a linkable response unit couples to a laptop and wirelessly transfers information via transceiver to a base station, which in turn may be displayed on a screen. (EX-1020, ¶¶13, 18, 20, 30). The dongle includes keypad/buttons to trigger this transmission. (*Id.*, ¶33).

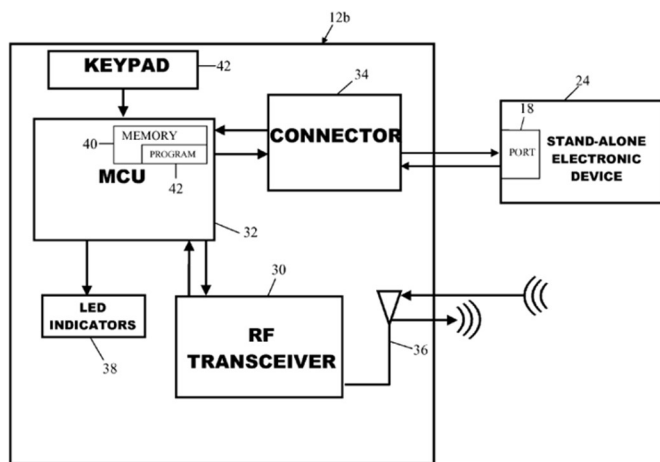


FIG. 2

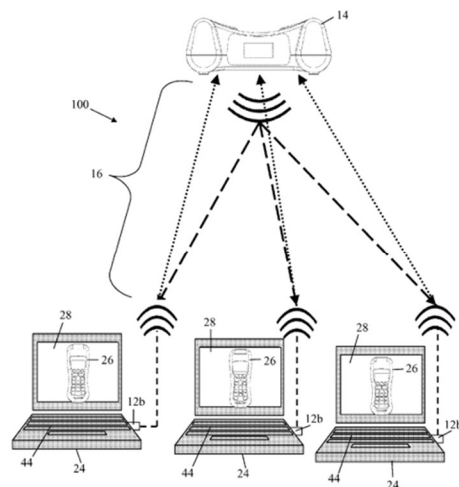


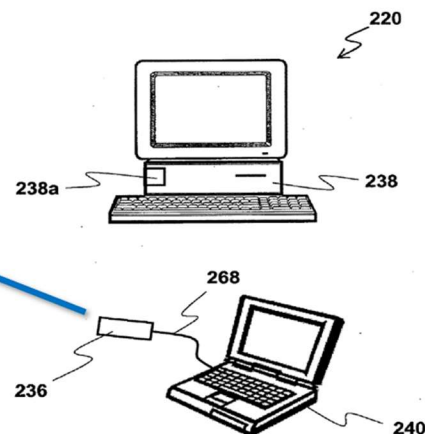
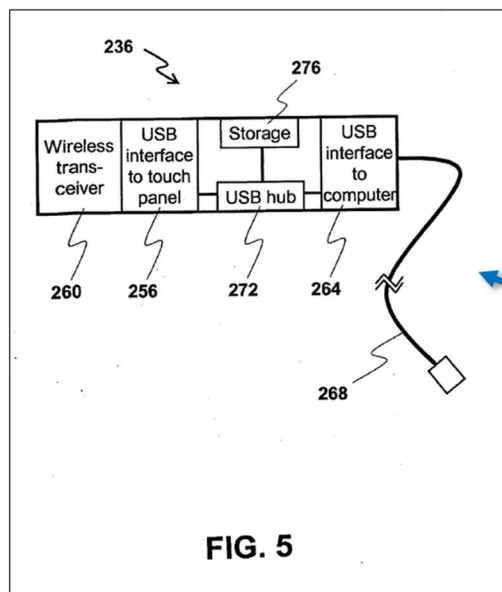
FIG. 3

(EX-1020, FIGs. 2-3).

The '676 patent recognizes common techniques for transferring content of a computer to a projector. (EX-1001, 3:29-41). “The most common ways are to use a cable that connects the display adapter of the graphics card to the video input of the

projector [method 1] or to use a software that captures the display contents and sends it over a wired or wireless network to a remote base unit connected to the projector [method 2].” (*Id.*, 3:30-35). A known alternative was “to use a special device connected to the display adapter of the graphics card that captures, encodes and streams the display content over a wired or wireless network [method 3].” (*Id.*, 3:38-41).

The ’676 patent concedes that a “well-known USB interface of the computer for extracting the display content of the computer” and transmitting to a projector. (*Id.*, 4:55-62 (citing U.S. 2009/0198839 (EX-1021 (“Banerjee”)) and U.S. 2011/0115689 (EX-1022 (“Sugiyama”))). Banerjee describes a plug-and-play device 236 that “captures ... screen display data generated at the remote computer 240 and allows screen sharing between the remote computer 240 and the master computer 238.” (EX-1021, ¶39).



(EX-1021, FIGs. 4-5; *see also* Ex-1002, ¶¶38-74).²

B. The Purported Invention

The '676 patent purports to improve problems with previous meeting technologies. (EX-1001, 5:6-18). Yet, the '676 patent's claims are simply directed to a system that wirelessly communicates media content between an electronic device and a display via a peripheral device and base node—much like the acknowledged prior art. (*See id.*, 4:55-67, 32:40-36:29; EX-1002, ¶¶75-79; §X).

Notably, the examiner stated the reason for allowance was that “prior art of record [does] not teach or suggest ... a forcing rule that displays new screen information by only one participant of the meeting, without requiring the agreement of other participants, that overrides or replaces the displays of one or more of other participants.” (EX-1004, 22-29). The examiner did not reject the allowed claims based on prior art. (*See generally*, EX-1004). Despite the assertions to the contrary, all features recited in the challenged claims were already well known. (EX-1002, ¶¶38-76, 92-259).

C. Summary of Prosecution History

The examiner issued a first-office-action allowance, stating stated that the prior art did not teach,

² All color elements are added annotations throughout unless otherwise noted.

rules for the meeting system that includes a forcing rule that displays new screen information by only one participant of the meeting, without requiring the agreement of other participants, that overrides or replaces the displays of one or more of other participants. (EX-1004, 24-29).

However, in a reexamination of a related patent, the Office found a similar claim unpatentable, but ultimately allowed amended claims that included an actuator similar to the claims in the '676 patent. (See EX-1066, 1-12 (notice of intent to issue reexamination certificate and response to final office action)).

VII. LEVEL OF ORDINARY SKILL IN THE ART

In the EDTX case, Barco alleges that a person having ordinary skill in the art at the time of the alleged invention (“POSITA”) would have had at least a M.S.E.E. or C.S. and five years of work in a related field. Additional educational experience could substitute for some of the work experience. Petitioners adopt Barco’s definition solely for the purposes of this proceeding. (EX-1002 at ¶¶36-37).

VIII. CLAIM CONSTRUCTION

The claim construction process has not yet begun in the EDTX case, and thus Patent Owner has not provided a position on the various “means” recited in the challenged claims. Some of the terms below presumably invoke 35 U.S.C. § 112(f) because each “means” limitation does not recite sufficient structure for performing

the recited function.³ *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). Per 37 C.F.R. § 42.104(b)(3), Petitioner understands it is obligated to identify the “specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function” for any limitations that invoke § 112(f). *See* Consolidated Trial Practice Guide (“CTPG”), 45. Even if these limitations were found to not evoke § 112(f), the claimed “means” must be construed broadly enough to capture the specifically disclosed examples and equivalents. (See also Ex-1002, ¶¶80-91)

A. “*means for communication*” (claim 1)

The term “*means for communication*” is presumably means-plus-function language referring to an interface using the generic communication protocol of claim 1. The “*means for communication*” appears to relate to the following passages in the specification:

[O]ne of the pre-installed generic drivers of the operating system on the relevant computer 31, 36 is exploited for setting up

³ Although Petitioner contends in the parallel litigation that the “means” limitations are indefinite because the ’676 patent specification lacks sufficient structure corresponding to the recited functions, Petitioner identifies structure sufficient for comparison with the prior art. *See DraftKings Inc. v. AG 18, LLC*, IPR2022-1447, Paper 12 at 25 (PTAB Mar. 14, 2023).

communication from the computer device 31, 36 to the network 50 via the connection unit 47 (optionally 49)...the connection unit 47, (optionally 49) operated as a peripheral device communicates with the relevant processing device 31, 36 by using a generic communication protocol provided by the pre-installed generic driver. (EX-1001, 20:35-50).

The structure is therefore software or hardware for communicating data to the communications network.

B. “*arbitrary media content*” (claims 16)

The term “‘arbitrary media content’ refers to the fact that a user may generate, create or select any media content that is appropriate to display.” (*Id.*, 13:50-52).

C. “*coupled*” (claims 14, 16)

The term “coupled” “should not be interpreted as being restricted to direct connections only.” (*Id.*, 15:25-32).

D. “*wireless communications network*” (claims 1, 4, 16)

The term “‘wireless communication network’ can be any network that does not use cable links between nodes,” *e.g.*, WLAN or any other wireless communication network. (*Id.*, 14:1-7).

E. “*setting up, by means of the pre-installed generic driver*” (claims 1, 5)

The term “pre-installed generic driver” means “a driver which is installed on a processing device such as a computer as a standard driver, *e.g.* is installed with the

installation of the operating system.” (*Id.*, 14:20-23). If this is a MPF limitation for performing the function of setting up, the structure is the driver software.

F. “screen scraping” (claims 1, 14)

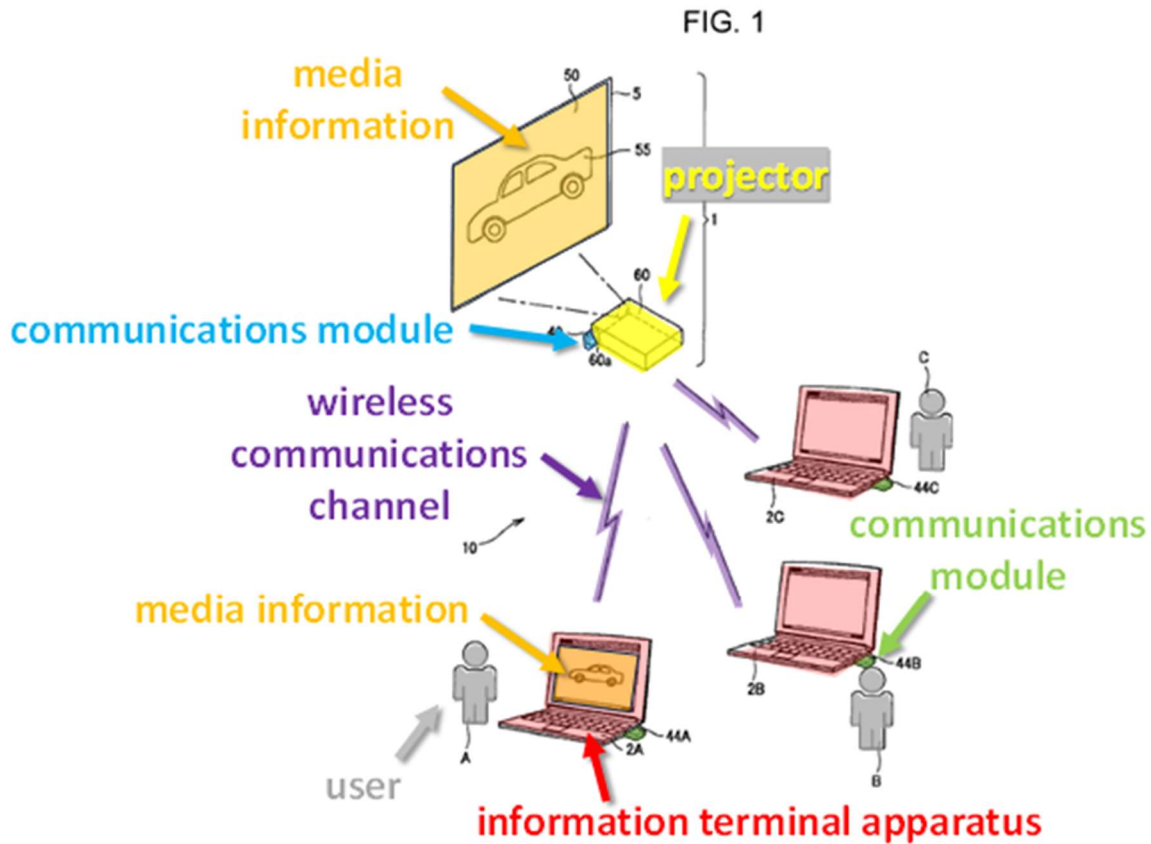
“Screen scraping” refers to “reading the video frame buffers and processing them, rather than just rendering them on a display.” (*Id.*, 13:59-61).

IX. OVERVIEW OF THE PRIOR ART

Dr. Almeroth discusses the following references and additional background references in his declaration. (EX-1002 at ¶¶92-115).

A. Ono (EX-1005)

Like the ’676 patent, Ono describes display system including display apparatus (*e.g.*, projector and screen) that receives images transferred from multiple information terminal apparatus (*e.g.*, personal computers (PCs)) connected via a wireless network. (EX-1005, ¶2). The system can switch among PCs and display information from the PC chosen. (EX-1005, ¶7). Ono’s system uses a communications module 44 and wireless network to connect to communications module 40 coupled to an image display apparatus 1. (EX-1005, ¶36).



(EX-1005, FIG. 1).

B. Uchida (EX-1009)

Like the '676 patent, Uchida describes connecting an image projection device to a computer device via a wireless communication channel. (EX-1009, abstract). Uchida uses a wireless device, such as a USB dongle, which connects to computer device through a USB connector. (EX-1009, ¶39). Using the wireless device, Uchida's system is able to transmit image data from the computer device, through the wireless device, and to the image projection device where the image may thereafter be projected onto the screen of the image projection device. (*Id.*) Further,

Uchida discloses that wireless device has a storage unit capable of storing wireless setting information and an image transfer application, which automatically configures the wireless settings of the computer device to connect to the image projection device and transfer image data. (EX-1009, ¶42, 48).

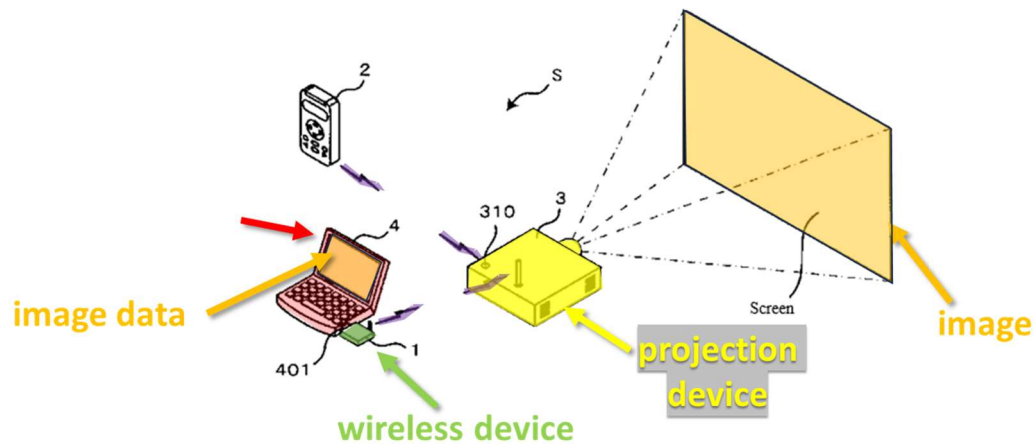


FIG. 1 (Ex. 1009)

(EX-1009, FIG. 1).

C. Deforche (EX-1030)

Deforche discloses a wirelessly transferring data using “at least one pre-installed generic driver providing a generic communications protocol (7) for communication between the host computer device and a standard class of computer peripheral devices.” (EX-1030, abstract, ¶10). In operation, the “[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.” (EX-1030, ¶9). Deforche recognized that this method provided an advantage to users of avoiding the “need for a specific driver for the communication between the wireless modem device and the computer device” to be downloaded/installed, increasingly important for users with restricted user rights, i.e., user rights do not allow for installation of the necessary driver to the device. (EX-1030, ¶9). A further advantage noted by Deforche in its disclosed method is that the method leaves “zero footprint, i.e. the wireless modem device “leaves no trace ... on the computer device.” (EX-1030, ¶16).

D. Grimshaw (EX-1012)

Grimshaw discloses a wireless presentation system that includes separate user modules having buttons or actuators that allows a user to begin presenting. (*See, e.g.*, EX-1008, ¶¶4, 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, FIG. 1).

X. GROUNDS OF UNPATENTABILITY

A. Ground I – Claims 1, 5, 8, 18, and 20 are rendered obvious by the combination of Ono and Deforche

1. Rationale to Combine

Ono discloses using a driver to wirelessly transfers images from participants' PCs to a projector. (EX-1005, ¶¶2, 53-55). Like Ono, 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. (EX-1030, ¶¶9, 30; EX-1002, ¶¶116-17). It 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. A person of ordinary skill in the art likely would have used the pre-installed Windows drivers, and Deforche demonstrates that. The combination of Ono and Deforche would have created the predictable result of a PC communicating with a peripheral device using an operating system's pre-installed generic drivers.

2. Claim 1

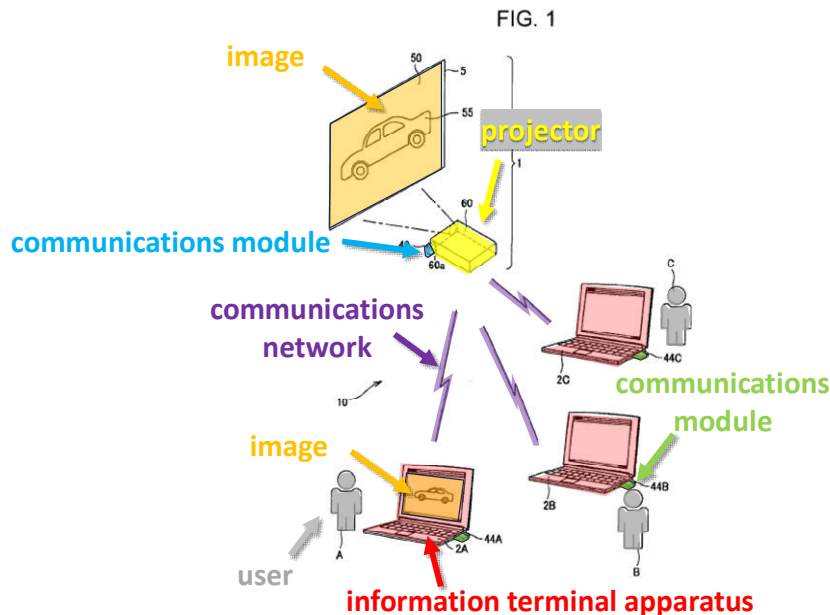
- a. **1(a):** *A method for connecting one or more processing devices, [limitation 1(b)], to a wireless communications network having a base node with one or more first displays,*

Ono discloses *a method for connecting one or more information terminal processing devices*⁴ (e.g., apparatus 2A, 2B, 2C), *to a wireless communications network having a base node* (e.g., wireless communication module 40, control section (CPU) 61, integrated in image display apparatus 1) *with one or more first displays* (e.g., image display apparatus 1 with projector 60 and display screen 50).⁵ (See, e.g., EX-1005, ¶¶36 (“The image display system 10 is a 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.”), 37-

⁴ Petitioner presents the claim limitations in italics throughout the petition.

⁵ The identification of structure corresponding to the claim elements, throughout this Petition, is exemplary only. Additional or alternative components could be identified. For example, projector 60 might alternatively be identified as a “base node” with a “first display.” Similarly, Ono teaches alternatives to the projector and screen as an image display apparatus and hence a “first display.” (See EX-1005, ¶0162; EX-1002, ¶¶xxx).

41, FIGs. 1-2, 9, 13; *see also* FIGs. 6-17 (similar embodiment but with access point 3); EX-1001, 29:54-60; EX-1002, ¶118).



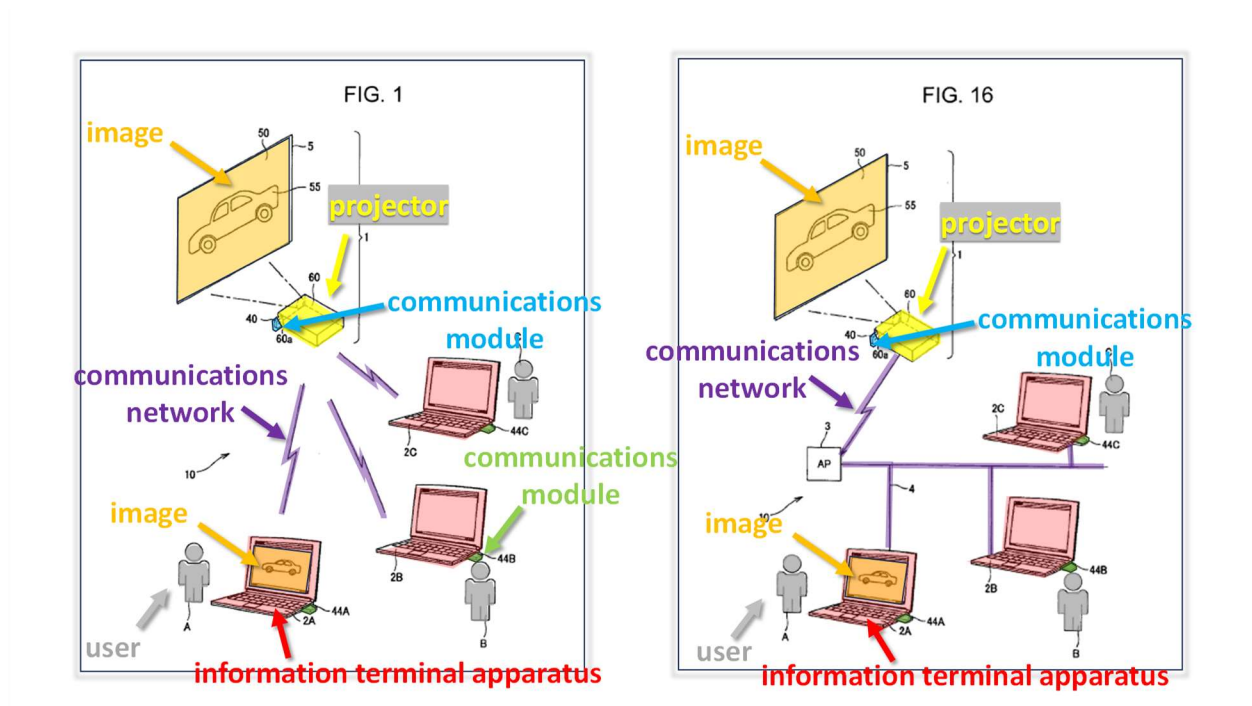
(EX-1005, FIG. 1).

The '676 patent explains that “*base node*” may be integrated with the projector. *See* EX-1001, 29:54-60. Also, limitation 1(i) requires that the displays are “*of the base node*.” Therefore, the base node may include each of the projector 60, communication module 60a, and screen 5.

b. 1(b): each processing device being a user device of one participant in a meeting with a plurality of participants

Ono discloses *each processing device* (e.g., information terminal apparatus 2A, 2B, 2C) *being a user device of one participant in a meeting with a plurality of*

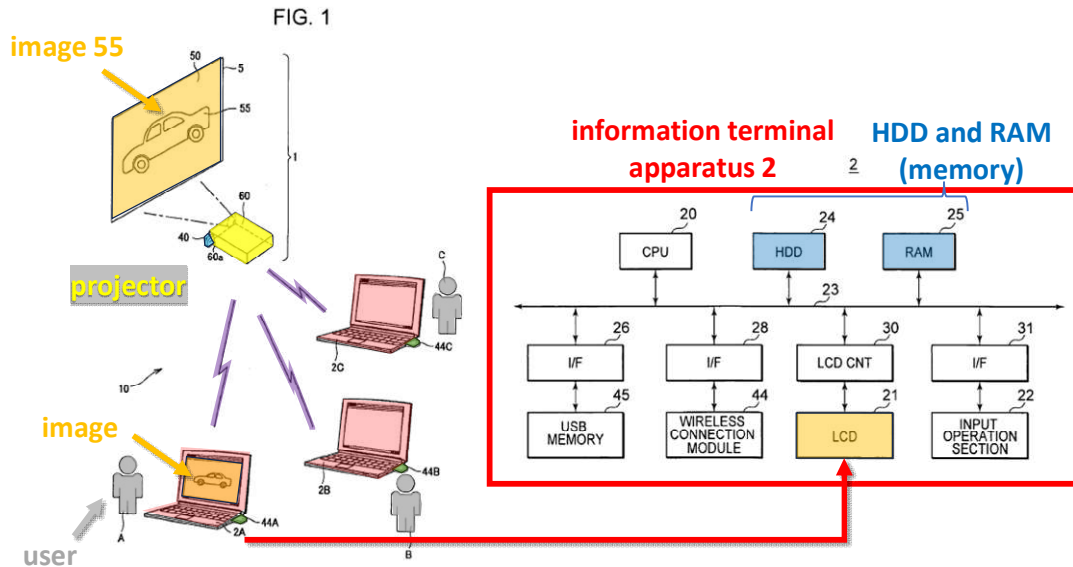
participants (e.g., users A, B, C). (EX-1005, ¶¶39, 144 (“there are a plurality of presenters to present in a given order”), 161, FIGs. 1, 16; EX-1002, ¶119).



(EX-1005, FIGs. 1, 16)

- c. **1(c): 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:**

Ono discloses *each of the one or more processing devices* (e.g., terminals 2A, 2B, 2C) *having a memory* (e.g., hard disk drive 24 or RAM 25), *a second display* (e.g., a liquid crystal display (LCD) 21). (See, e.g., EX-1005, ¶¶50, 73-74, FIGs. 1, 7).



(EX-1005, FIGs. 1, 7)

A POSITA would have understood, from Ono in view of Deforche, that information terminal apparatus 2A, 2B, 2C obviously included *an operating system with at least one pre-installed generic driver (e.g., USB mass storage or HID drivers) providing a generic communications protocol (e.g., well-known standard USB protocols) for communication between the processing device and a class of peripheral devices*. (See, e.g., EX-1005, ¶¶53-55, 58, 60-62, 73, 76, 88, FIG. 7; EX-1030, ¶¶9, 30; see also EX-1027, ¶¶47-45, 58-59; EX-1006, ¶133, EX-1021, ¶¶3-4 (“Plug-and-play devices are well known ... the most common being USB”), 4 (“Many operating systems possess a number of pre-loaded drivers for generic plug-and-play device classes, such as USB mass storage”); EX-1026, ¶1-3 (“Universal Serial Bus (USB) standard provides communication protocols for interfacing

between a host and its peripheral devices.... [such as] a key board, a compact disc (CD) player, or a USB flash drive’’)).

Ono does not specifically disclose what type of driver it uses to communicate scraped data between the terminal and the wireless transmitter, but Deforche teaches that the driver can be a “*pre-installed generic driver.*” (EX-1030, ¶¶10, 28-30, 34-41, 52, EX-1002, ¶¶120-24). Therefore, the combination of Ono and Deforche teach this limitation.

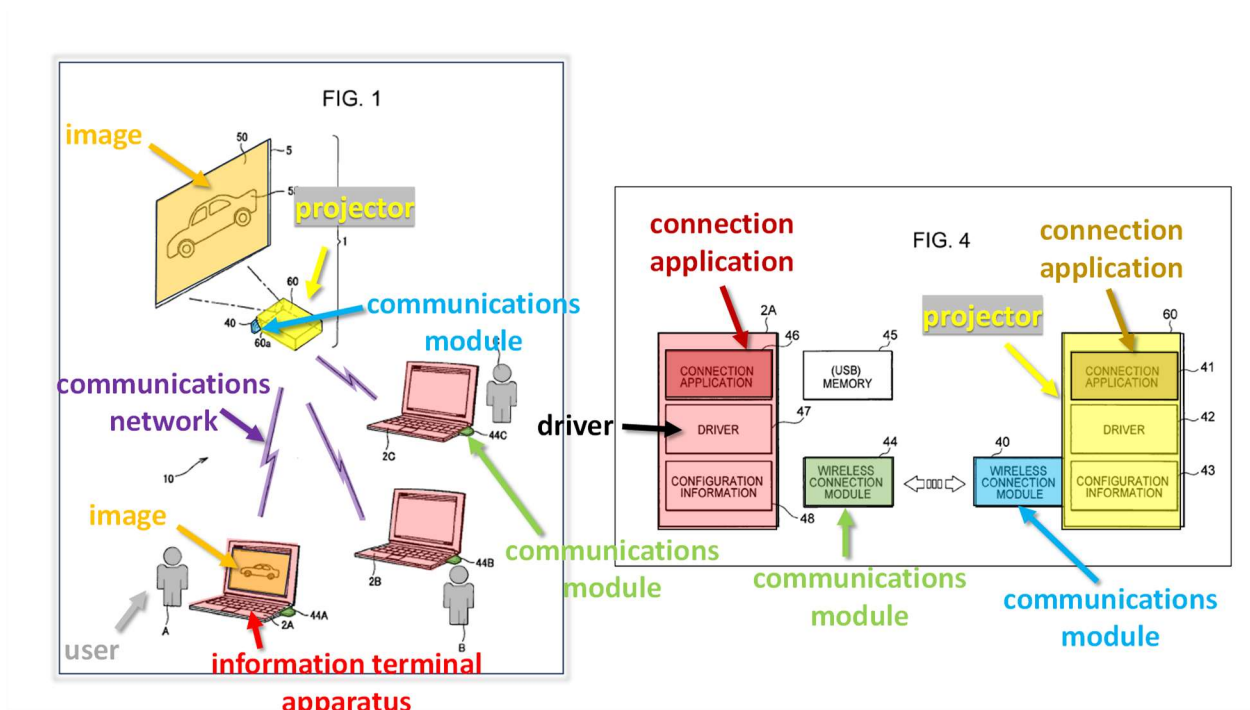
d. 1(d): *the method comprising the following steps for each processing device: coupling a peripheral device to the processing device*

Ono discloses *coupling* (via a USB slot) *a peripheral device* (e.g., wireless communication modules 44A, 44B, 44C) *to the processing device*. (See, e.g., EX-1005, ¶¶54, 55, 62 (“inserting the plurality of wireless connection modules 44 into the respective other USB jacks, the user ... may connect ... the plurality of information terminal apparatuses 2A, 2B, and 2C to the wireless network”), FIGs. 1, 4, 16; EX-1002, ¶125).

e. 1(e): *the peripheral device having a wireless transceiver*

Ono discloses *the peripheral device having a wireless transceiver* (e.g., that wireless communication modules 44A, 44B, 44C “transmitting and receiving request signals, response signals, rejection signals and the like for the connection and disconnection of communications with the communications module 40 of the

projector 60.” (EX-1005, ¶¶39, 52, 54 (“the wireless connection module 44 [is] of a USB [] type, ... having functions similar to those of the wireless connection module 40” 83-90, FIGs. 1, 4, 9; EX-1002, ¶¶126-27)).



(EX-1005, FIGs. 1, 4).

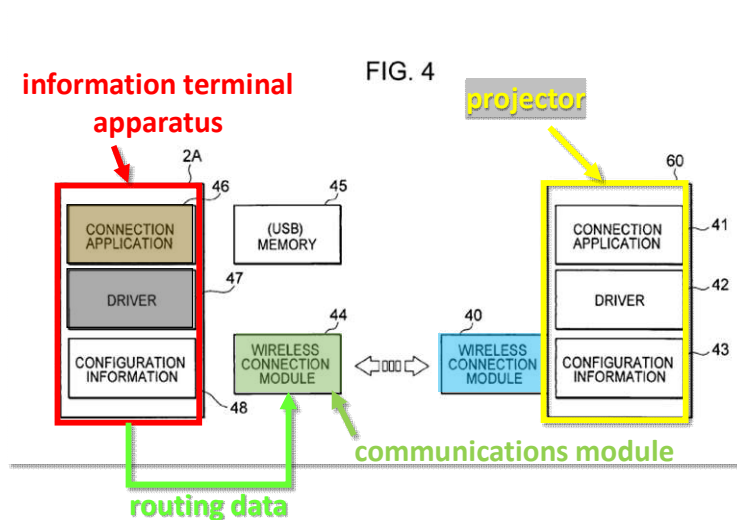
- f. 1(f):** *setting up, by means of the pre-installed generic driver of the operating system, a means for communication between the peripheral device and the processing device*

Ono discloses *setting up ... a means for communication between the peripheral device and the processing device*:

[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 (EX-1005, ¶¶55, *see also* ¶¶62, 76; EX-1002, ¶¶128-132).

The 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.

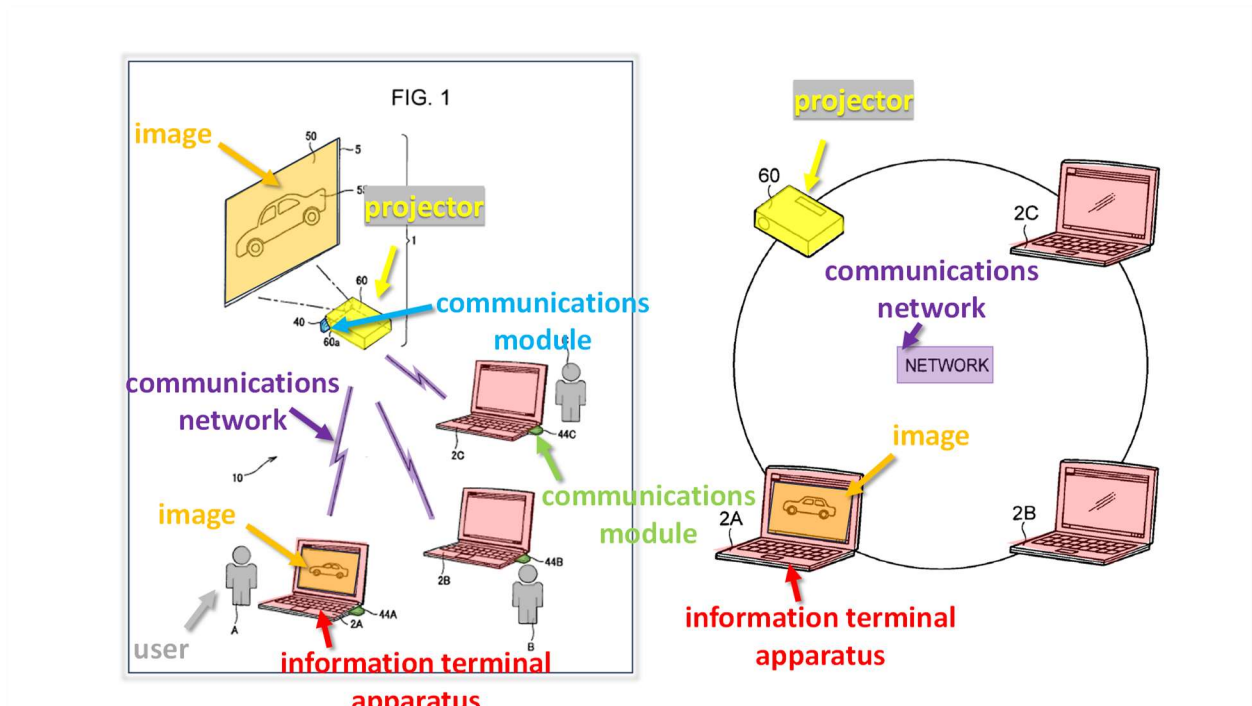


(EX-1005, FIG. 4)

Further, doing this *by means of the pre-installed generic driver of the operating system* was well known and obvious in view of Deforche (*See, e.g.,* EX-1030, ¶¶9, 30).

g. 1(g): coupling the processing device to the wireless communications network via the peripheral device

Ono discloses *coupling the processing device to the wireless communication network via the peripheral device*. (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; EX-1002, ¶133).

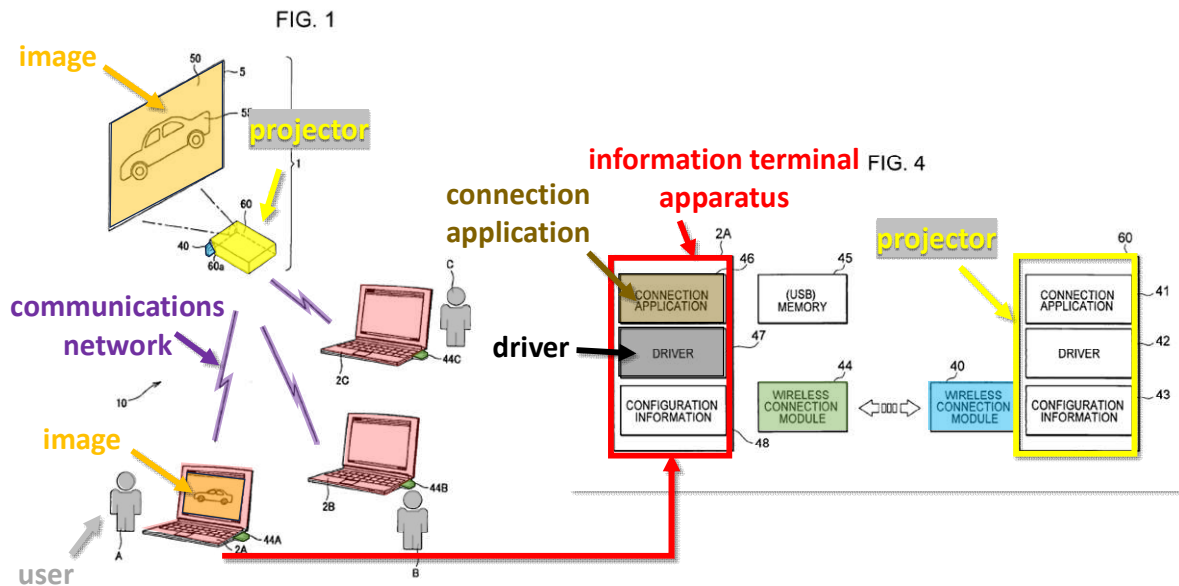


(EX-1005, FIGs. 1, 2)

h. 1(h): *running a client application stored on the peripheral device to obtain screen scraped data*

Ono discloses *running a client application ... to obtain screen scraped data*. (EX-1005, ¶¶41, 54-55, 58, 73, 76, 88 (“the CPU 20 of the selected information terminal apparatus 2A transmits the image information signal displayed on the liquid crystal display apparatus 21 to the wireless connection module 40 of the projector 60 from the wireless connection module 44 via the I/F 28”), 144, FIG. 1.). A POSITA would have recognized from Ono’s disclosure that the content of the transmitted image data is “screen scraped data.” (EX-1002, ¶¶134-37). Further, the ’676 patent admits that screen scraping was known in the art (EX-1001, 13:59-62) and could have been predictably implemented in an image display system like that of Ono using known techniques, as described in Slobodin, which is directed to wireless transmission of screen scraped data to a projector. (See, e.g., EX-1033, ¶¶11-12).

Ono discloses that the client application is stored on a separate USB memory 45, not on *the peripheral device*: “image display apparatus 1 may come with a USB memory 45 in which a connection application 46, a driver 47 and configuration information 48 ... are stored.” (EX-1005, ¶¶54-55, 76, FIGs. 1, 4).



(EX-1005, FIGS. 1, 4)

Although Ono's connection application 46 is stored on a USB memory 45 (as opposed to USB-type wireless information communications module 44), that would have been simply a matter of design choice. At the time of the alleged invention, a POSITA 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.

Indeed, Deforche discloses a wireless USB dongle (*i.e.*, transmitter 120/transceiver 450) using *a client application* stored on the transceiver. (EX-1030, ¶¶34, 46, 52).

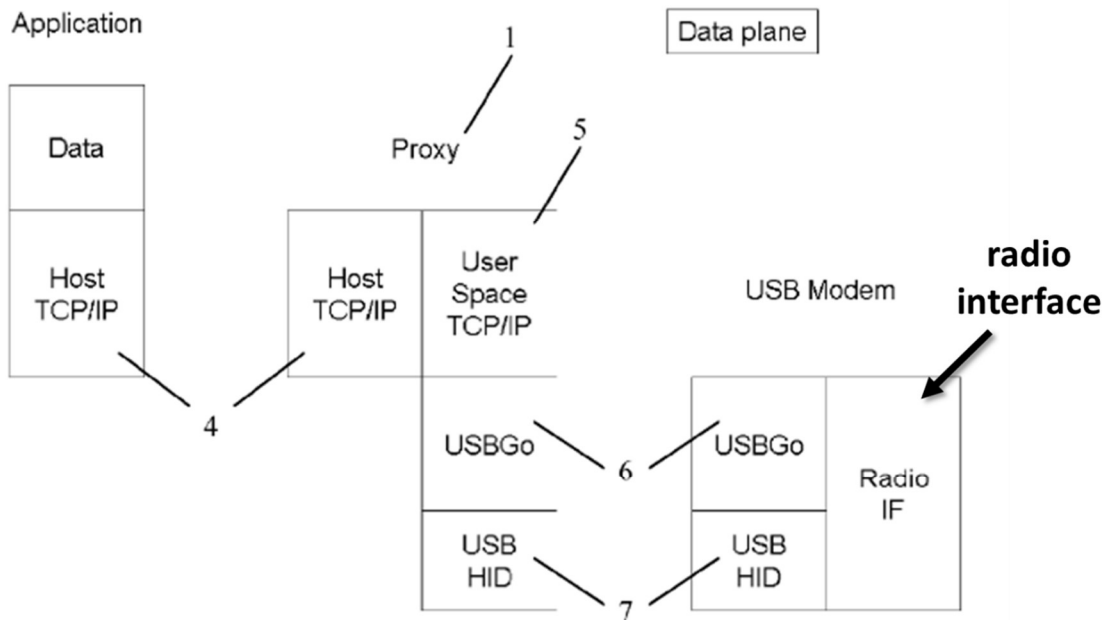


Figure 2

(EX-1030, FIG. 2).

Deforche explains,

In 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.

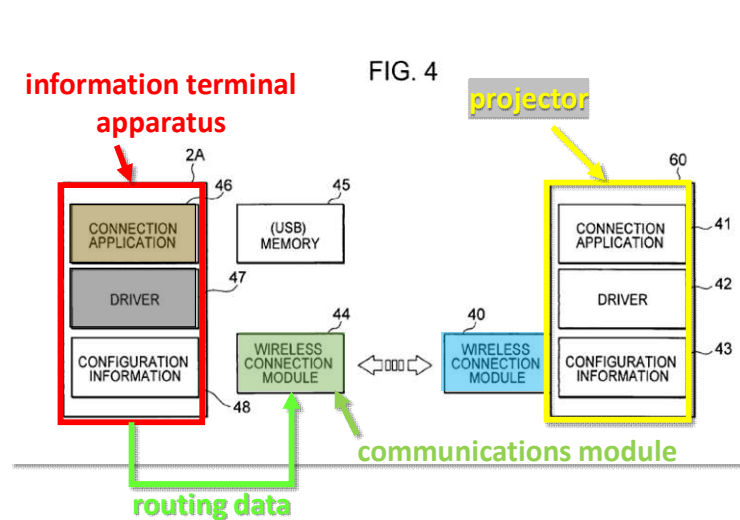
(EX-1030, ¶9).

A POSITA 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. (EX-1002, ¶¶134-37). Therefore, a POSITA would

have found it obvious to include, as part of the methods described by Ono, running a client application (such as the connection application) stored on the peripheral device (such as wireless communication module 44) to obtain screen scraped data. A POSITA could have made such a modification using techniques taught by Deforche (*e.g.*, including presenting the USB device as a USB mass storage device) and would have had a reasonable expectation of success in achieving the claimed combination.

i. 1(i): *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*

Ono discloses *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 via the means for communication for display on the one or more first displays of the base node* (*e.g.*, projector and screen of the image display apparatus). (EX-1005, ¶¶39, 41-42, 54-55, 73, 76, 88 (“the CPU 20 of the selected information terminal apparatus 2A transmits the image information signal displayed on the liquid crystal display apparatus 21 to the wireless connection module 40 of the projector 60 from the wireless connection module 44 via the I/F 28”), 162; *See* Section X.A.2.f (limitation 1(f)) (regarding “*means for communication*” claim construction); EX-1002, ¶¶138-140).



(EX-1005, FIG. 4)

- j. **1(j): wherein the generic communication protocol is used for transferring the screen scraped data for display between the processing device and the peripheral device**

The analysis for limitations 1(c)-(d) and (f)-(i) explains how the combination of Ono and Deforche teach this limitation.

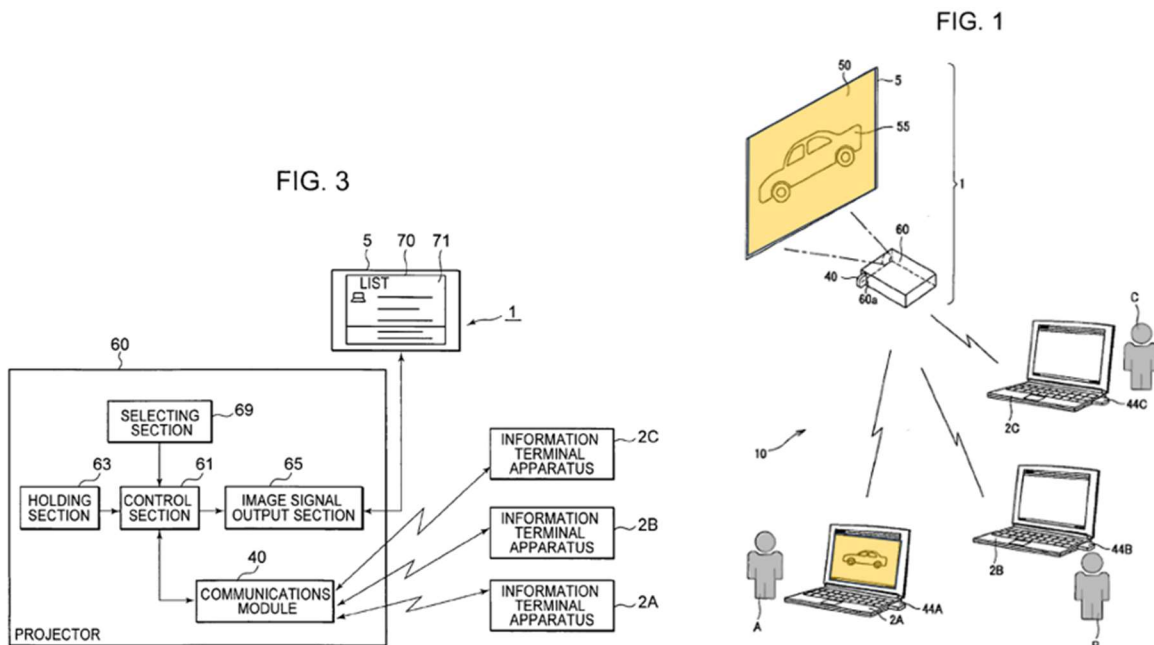
- k. **1(k): obtaining electronic access to the one or more first displays for display of the screen scraped data**

Ono discloses *obtaining electronic access to one or more first displays screen scraped data*. (EX-1005, ¶¶35, 39-42, 50-55 (“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”), 56-57, 61-62, 76, 88, 144, FIGs. 1, 9; Section X.A.2.a (discussing limitation 1(a)); EX-1002, ¶141).

1. 1(l): displaying the screen scraped data on the one or more first displays in accordance with a set of rules

Ono discloses *displaying the screen scraped data on the one or more first displays in accordance with a set of rules*. (See, e.g., EX-1005, ¶¶41, 78 (“When the user selects from the list 71 the information terminal apparatus s/he wants to connect with by pressing the up or down selection key on the operation section of the remote controller 69 and presses the confirm (enter) key, the image display apparatus 1 connects with the selected information terminal apparatus.”), 82-90, 112-126, FIGs. 1, 3, 9, 13; Section X.A.2.h (discussing limitation 1(h)); EX-1002, ¶142).



(EX-1005, FIGs. 1, 3).

- m. **1(m):** *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.*

Ono discloses using a remote controller 69 to select an information terminal apparatus (2A, etc). to display an image 55 based on the image data from the display (LCD) 21. Thus, 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.

[I]images can be switched and displayed on the screen 5 with ease.
[J]ust through operations from the remote controller 69 of the image display apparatus 1, it is possible to switch the information terminal apparatus whose image is to be projected onto the screen 5, even in cases where, for example, there are a plurality of presenters to present in a given order, it becomes unnecessary for each presenter, in accordance with the order, to perform an output on/off operation at each information terminal apparatus. (EX-1005, ¶144 (emphasis added)).

Hence, 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. (EX-1002, ¶¶143-47; *see additionally*, EX-1005, ¶¶7, 36-39, 64-70, 77-78, 144, FIGs. 1, 3). As Ono discloses, the user simply presses a button on the remote controller 69, which brings a list 71 of the connected PCs:

When the user selects from the list 71 the information terminal apparatus s/he wants to connect with by pressing the up or down selection key on the operation section of the remote controller 69 and presses the confirm (enter) key, the image display apparatus 1 connects with the selected information terminal apparatus. (EX-1005, ¶78).

In this way, a user can forcibly switch between the different PCs to display on the projections screen the desired content. Ono and Deforche disclose only a couple of design options of the many options discussed in the prior art. (*See additionally*, EX-1013, ¶¶2, 31, 48-49, FIG. 2; EX-1008, ¶¶19-20; 23-27, FIG. 1; EX-1057, ¶¶36, 43-44; 51-57).

Once PC 2B is connected, “the transfer of image information from the [PC] 2B to the projector 60 is begun, and the projector 60 of the image display apparatus 1 projects and displays on the screen 5 the image from the information terminal apparatus 2B.” (EX-1005, ¶125). Thus, the projector displays new “screen scraped data” from the information terminal apparatus 2B. (EX-1002, ¶¶143-47).

3. **Claim 5:** *The method of claim 1, wherein step b) is selected from:
presenting the peripheral device to the processing device as a human interface device and wherein the pre-installed generic driver is a human interface device driver;
presenting the peripheral device to the processing device as a mass storage device and wherein the pre-installed generic driver is a mass storage device drive;
presenting the peripheral device to the processing device as a mass storage device and wherein the pre-installed generic driver is a mass storage device drive.*

Ono discloses that communication module is a USB-type device. (EX-1005, ¶54; EX-1002, ¶148). Deforche coupled with a POSITA'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. (*See, e.g.*, EX-1030, ¶¶9-10; Sections I.A.2.c, f, h limitations 1(c), 1(f), 1(h))).

4. **Claim 8⁶**

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")*.

[T]he 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

⁶ The relevant claim language is in italics below but not listed in the header to save space.

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. (EX-1005, ¶¶55, *see also* 56-63; EX-1001, 7:24-29; EX-1034, ¶¶14-17 and FIGS. 3, 18; EX-1002, ¶149).

5. Claim 18

Deforche discloses *running said program does not require installation of the program or configuration of the processing device*. (See, e.g., 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.”), *see also* 18, 26-27, 30-31, 47; EX-1002, ¶150).

6. Claim 20

See Sections X.A.2.h (Ground I (limitation 1(h) and claim 18); EX-1002, ¶151).

B. Ground II – Claim 14 is rendered obvious by Ono in view of applicant-admitted prior art

1. Rationale to combine

Ono (and a POSITA’s knowledge/Applicant Admitted Prior Art) renders obvious claim 14. (EX-1002, ¶152). Ono discloses screen scraping as disclosed in the ’676 patent (EX-1005, FIG. 1, ¶73). To the extent that Ono does not disclose

screen scraping, the '676 patent acknowledges that screen scraping was known in the art. (EX-1001, 13:59-62). Therefore, the person of ordinary skill in the art would have understood that Ono's disclosure of reproducing an image from a PC onto a projector display was screen scraping (EX-1005, FIG. 1, ¶73), at least in view of the admission from the '676 patent that screen scraping was known.

2. Claim 14

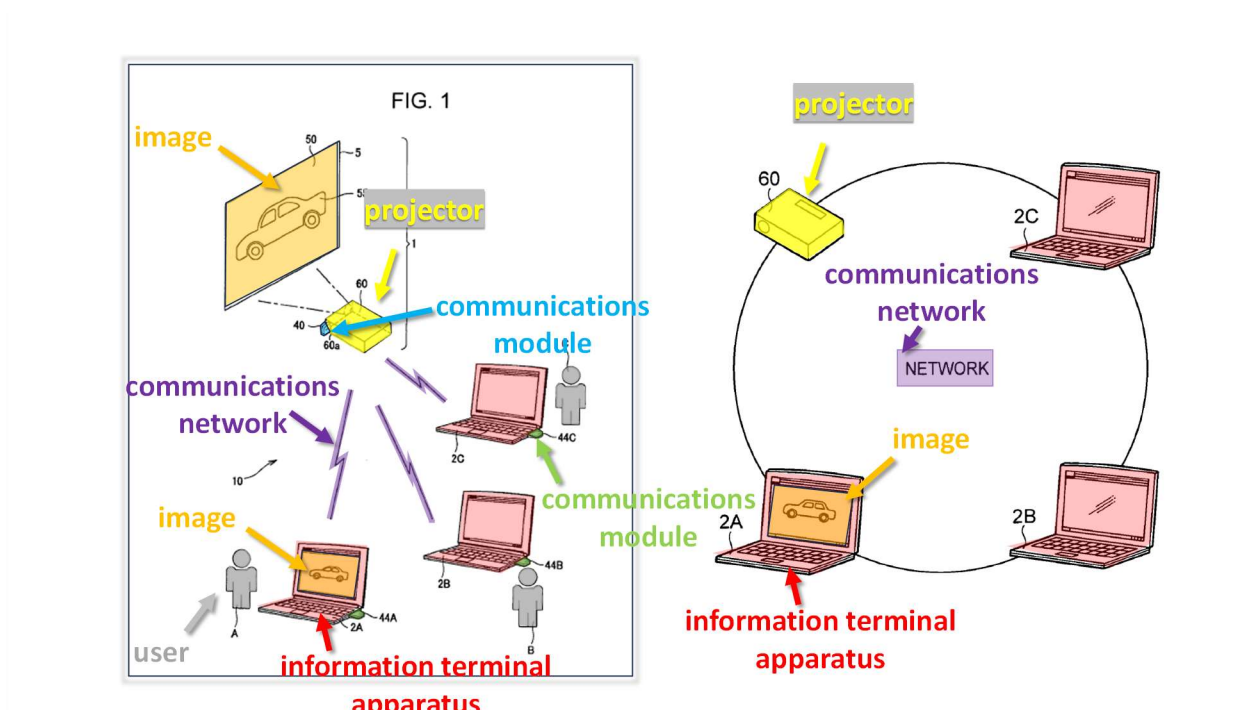
- a. **14(pre): *A method for providing communication connectivity from a processing device, the processing device being a user device of a participant in a meeting with a plurality of participants, the method comprising the following steps***

See Section X.A.2.a-b (limitation 1(a)-(b)). This claim is very similar to claim 1 but does not include the pre-installed generic driver disclosed by Deforche. (*See also* EX-1002, ¶¶154-55).

- b. **14(a): *the method comprising the following steps: setting up a communications network between a base node of the communications network and a peripheral device coupled to the processing device***

Ono discloses *setting up a communications network between a base node (e.g., image display apparatus 1) of the communications network and a peripheral device (e.g., “wireless communication modules 44A, 44B, 44C”) coupled to the processing device (e.g., information terminal apparatuses 2A, 2B and 2C coupled via interface (I/F) 28).* (EX-1005, ¶¶39 (“Communications modules 44A, 44B and 44C, such as wireless connection modules are also used for transmitting image

information to the projector 60”), 54, 55, 62 (“[I]nserting 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”), FIGs. 1, 2, 4, 16; Section X.A.2.d-e, g (Limitations 1(d)-(e), (g); EX-1002, ¶¶156).



(EX-1005, FIGs. 1, 2)

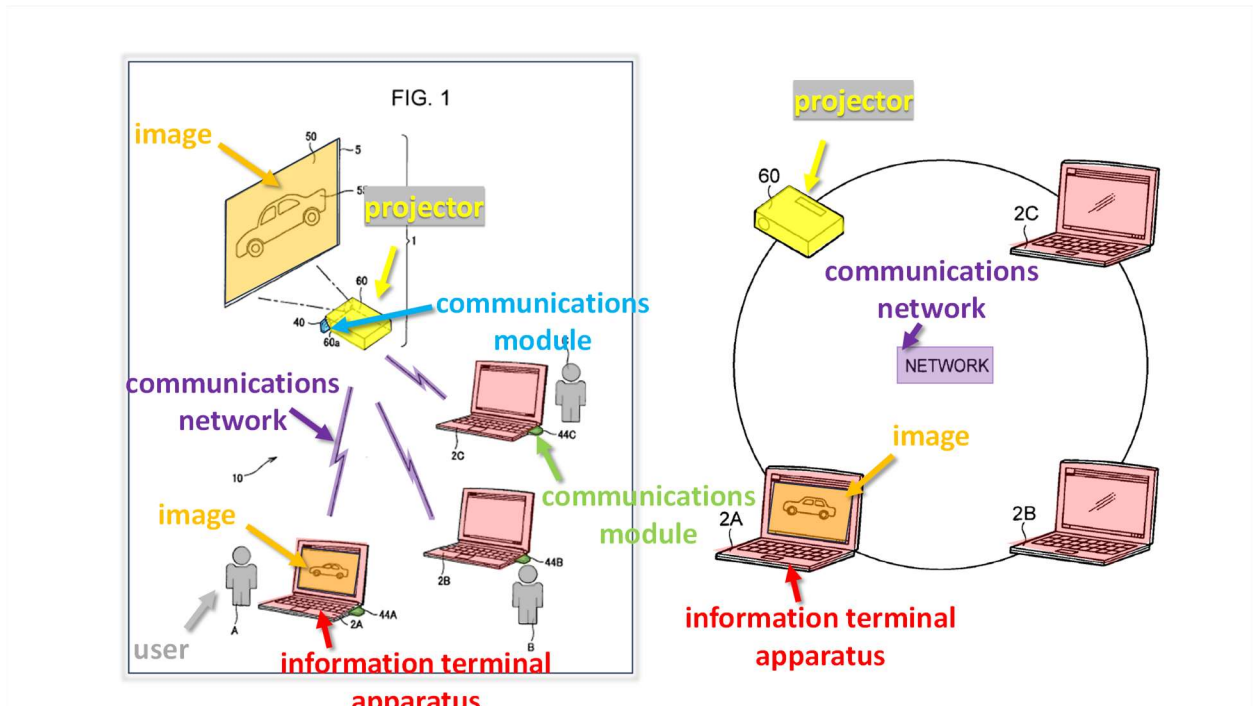
- c. **14(b):** *transferring media content between the processing device and the peripheral device the media content being screen scraped data from a screen of the processing device; transmitting the media content from the peripheral device to the communications network; receiving media content from the communications network at the base node*

Ono discloses *transferring media content between the processing device and the peripheral device*. (EX-1005, ¶¶39 (Communications modules 44A, 44B and

44C, such as wireless connection modules, are also attached to the body of the information terminal apparatuses 2A, 2B and 2C, respectively, via a slot.... In addition, they are also used for transmitting image information to the projector 60”), 54, 55 (“[I]f the user inserts the wireless connection module 44 into the USB jack (slot) on the information terminal apparatus 2A, ... transmission and reception of data with the projector 60 of the image display apparatus 1 ... will be carried out via the wireless network”), 62, FIGs. 1, 4, 16; EX-1002, ¶¶157-161). FIG. 1 of Ono illustrates that the *media content is scraped data from a screen of the processing device*, illustrating PC 2A displaying a car and the same image being projected onto the display screen 50. (See also, EX-1005, ¶73 (“[I]t is assumed that image information to be sent out to the image display apparatus 1 is selected and displayed on the liquid crystal display apparatus LCD 21.”)). Indeed, the ’676 patent contains applicant-admitted prior art that screen scraping was known in the art (EX-1001, 13:59-62) and could have been predictably implemented in an image display system like that of Ono using known techniques, as described in Slobodin, which is directed to wireless transmission of screen scraped data to a projector (see, e.g., EX-1033, ¶¶11-12).

Ono discloses *transmitting the media content from the peripheral device to the communications network that is received at the base node*. (EX-1005, ¶¶11 (“an image display apparatus [] receives a transfer of image information via the network

from the above-mentioned one or more information terminal apparatuses and displays on a display section an image”), 35, 38-42, 50-57 (“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”) 61, 62, 68, 76, 88-89, FIGs. 1-3, 6, 7, 9, 16).



(EX-1005, FIGs. 1, 2)

- d. **14(f): *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 obtained by a user action on any one of the user devices 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.***

See Sections VII.A.2.1-m (limitations 1(l)-(m); Ex-1002, ¶162).

C. Ground III – Claims 4, 16, and 19 are rendered obvious by Ono, Deforche, and Grimshaw

1. Rationale to combine

See Section X.A.1 regarding rationale to combine Ono and Deforche.

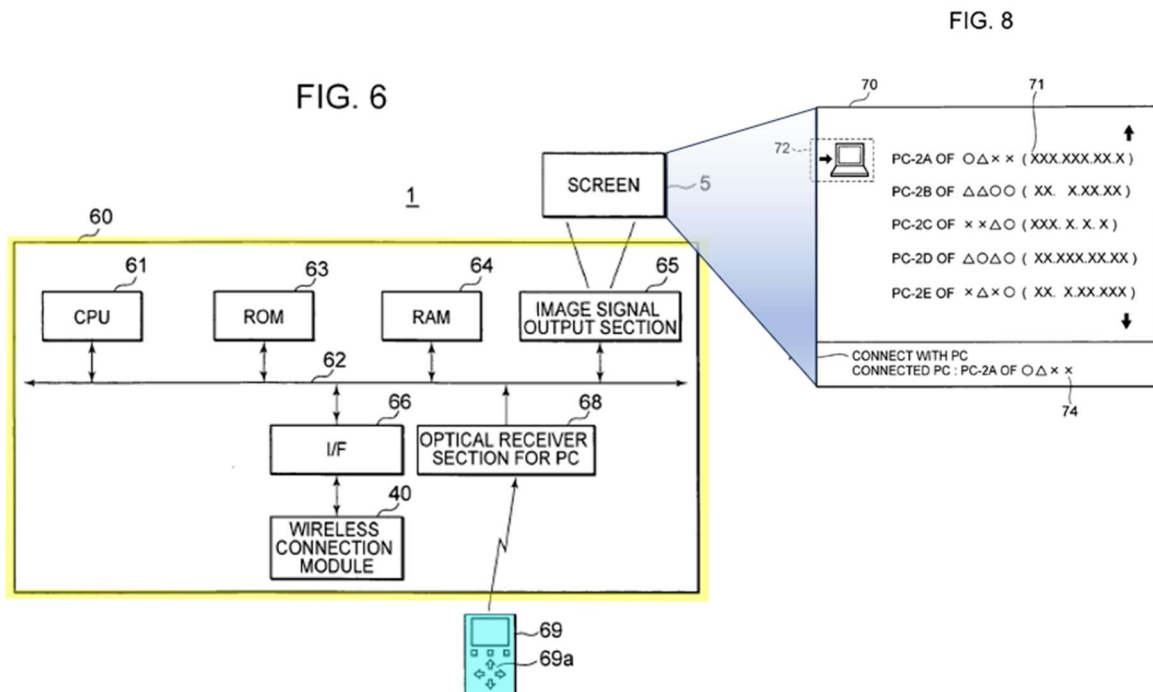
Ono discloses using a driver to wirelessly transfers images from participants' PCs to a projector. (EX-1005, ¶¶2, 53-55). Like Ono, Grimshaw discloses a presentation communication system. (EX-1008, abstract). They are all, therefore, part of the same field of endeavor.

Grimshaw also teaches actuators for users to transmit their scraped screen data to a display, and that the actuators are on a peripheral device. (EX-1008, ¶¶5, 19-20, 27-28, FIGs. 1-4). Ono teaches a similar actuator, but it is on the remote control. (EX-1005, ¶¶44-48, 66-71, 77-78, 80-89, FIGs. 3, 6, 8, 9). Therefore, 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. Grimshaw explains that

this known method is beneficial because each user can activate their device and take control of the presentation. (*Id.*, ¶¶4-6, 28, 37 EX-1002, ¶¶163-64). The combination would achieve the predictable result of actuators on Ono's peripheral devices.

2. Claim 4

Ono discloses *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 40) 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).* (EX-1005, ¶¶44-48, 66-71, 77-78, 80-89, FIGs. 3, 6, 8, 9; EX-1002, ¶¶165-69).



(EX-1005, FIGs. 6, 8).

Ono discloses that remote controller 69 can call up list 71 of available PCs (FIG. 8) for connection to the image display apparatus. (EX-1005, ¶¶66-72, 77-78). The user presses the up/down selection key on remote controller 69 to select a particular PC and then presses the confirm (enter) key when the user reaches the desired PC. (EX-1005, ¶¶66-72, 77-78). This selection triggers a connection process between the selected information terminal apparatus and the image display apparatus, which 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. Once received the image information is displayed on screen 5. (EX-1005, ¶¶66-70, 77-78, 80-89, FIG. 9; *see also* §§VIII.A.1(a), VIII.A.1(b)).

Additionally, Ono discloses that, once the desired PC is connected, remote controller 69 may fast-forward/rewind images on the PC screen and, in conjunction therewith, the images projected on screen 5. A POSITA would have understood this fast-forwarding/rewinding to trigger additional transmissions of image information. (EX-1005, ¶70). However, Ono does not disclose that *the peripheral device has an actuator*.

However, Grimshaw discloses similar *actuators* (e.g., buttons 344, 354, 364, 374) on respective *the 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.

(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-1012, 5:8-6:17, 8:29-9:20, FIGs. 1-4; *See* Section X.A.2.m (limitation 1(m))). A POSITA would have understood that buttons 344, 354, 364, 374 constitute actuators coupled to the user modules 14, 16, 18, 20. (EX-1002, ¶¶165-69).

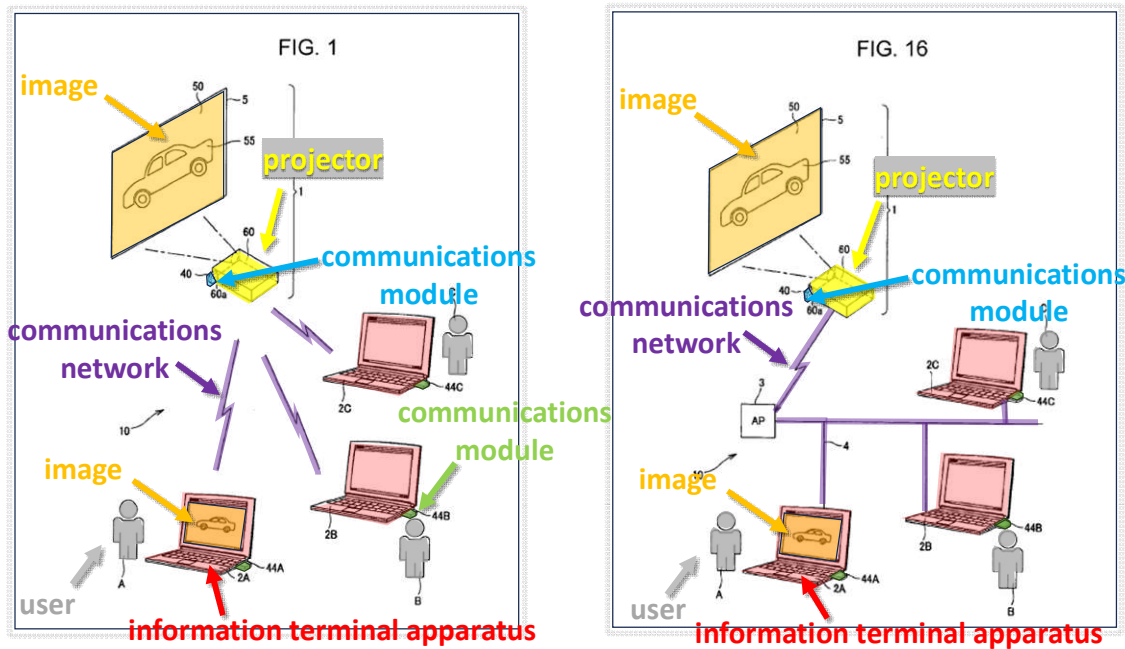
A POSITA looking to implement an image projection system like that of Ono would have found it obvious to employ a technique and components as described by Grimshaw in addressing the problem where multiple users are “vying for control” of a shared display. (EX-1008, ¶19).

3. Claim 16

a. 16(pre): *An electronic meeting tool for communicating arbitrary media content, being data for display, from users at a meeting*

Ono discloses *an electronic meeting tool (e.g., image display system 10) for communicating arbitrary media content, being data for display, from users at a meeting* (EX-1005, ¶36 (“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.”), FIG. 1; *see also* FIGs. 16, 17 (similar

embodiment but with access point 3)). Ono's first embodiment is equally applicable to the embodiment illustrated in Figures 16 and 17. (EX-1002, ¶¶170-76).

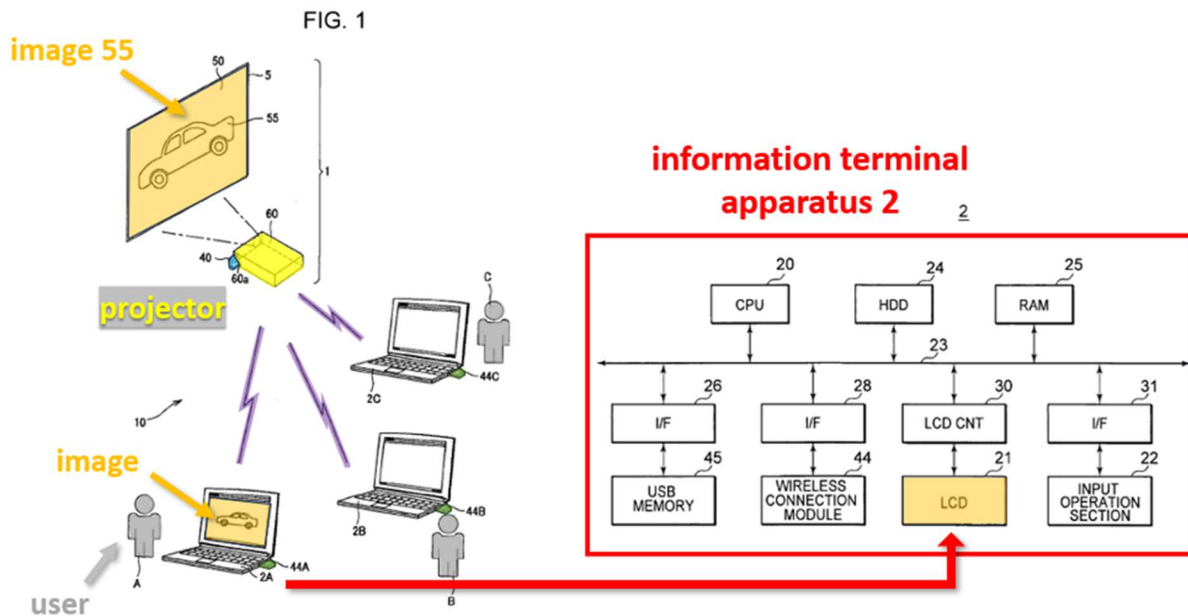


(EX-1005, FIGs. 1, 4).

Ono's image display system enables display of an image 55 based on the image data of display 21 of the user's information terminal apparatus (*e.g.*, "data for display"). Said differently, Ono's system displays what is on a user's computer screen and, therefore, Ono's image information is thus consistent with description of "*user selected arbitrary media content*" provided by the '676 patent.

For example, when the information terminal apparatus 2A and the projector 60 are connected (step S8), "the CPU 20 of the selected information terminal apparatus 2A transmits the image information signal displayed on the liquid crystal

display apparatus 21 to the wireless connection module 40 of the projector 60 from the wireless connection module 44 via the I/F 28.” (EX-1005, ¶¶88; *see also*, ¶¶73, 77-89, FIGs. 7, 9). Ono further discloses that “the projector 60 receives the image information ... and projects and displays the image from the information terminal apparatus 2A on the screen 5.” (EX-1005, ¶¶89; *see also*, FIG. 1). The same can be said for information terminal apparatus 2B and 2C, and reasonably extends to others in a meeting. (*See, e.g.*, EX-1005, ¶¶36, 39).

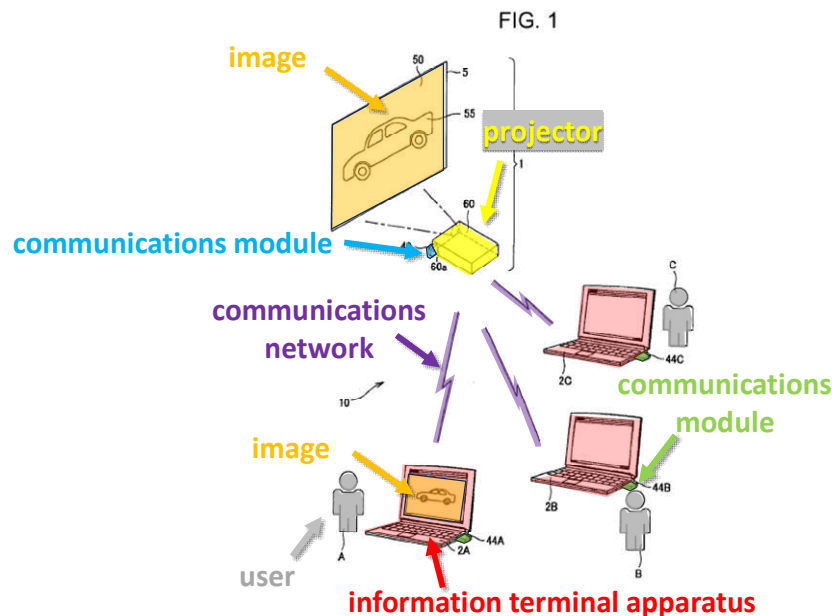


(EX-1005, FIGs. 1, 7)

A POSITA would have understood image display system 10 to be an electronic meeting tool for communicating arbitrary media content, being data for display, from users at a meeting. (Ex 1002, ¶¶xxx).

b. 16(a): the tool comprising a base unit of a wireless communications network, the base unit being coupled to one or more first displays

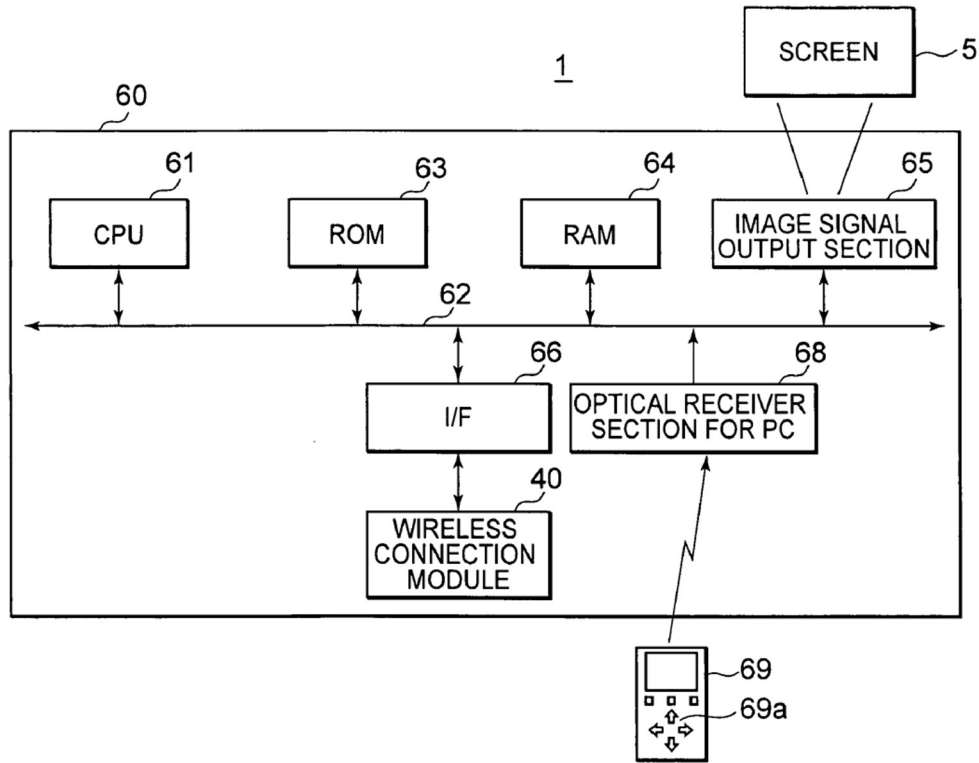
Ono discloses that image display apparatus 1 *comprises a base unit (e.g., projector 60) of a wireless communications network ... coupled to one or more first displays (e.g., screen 5).* (EX-1005, ¶¶42 (“The image display apparatus 1 is comprised of the screen 5 and the projector 60, receives ... image information that is sent from the above-mentioned three information terminal apparatuses 2A, 2B and 2C via the network, and displays an image based on the image information on the screen 5”), 43, 65, 89, FIGs. 1-3, 6, 7, 9; EX-1002, ¶177).



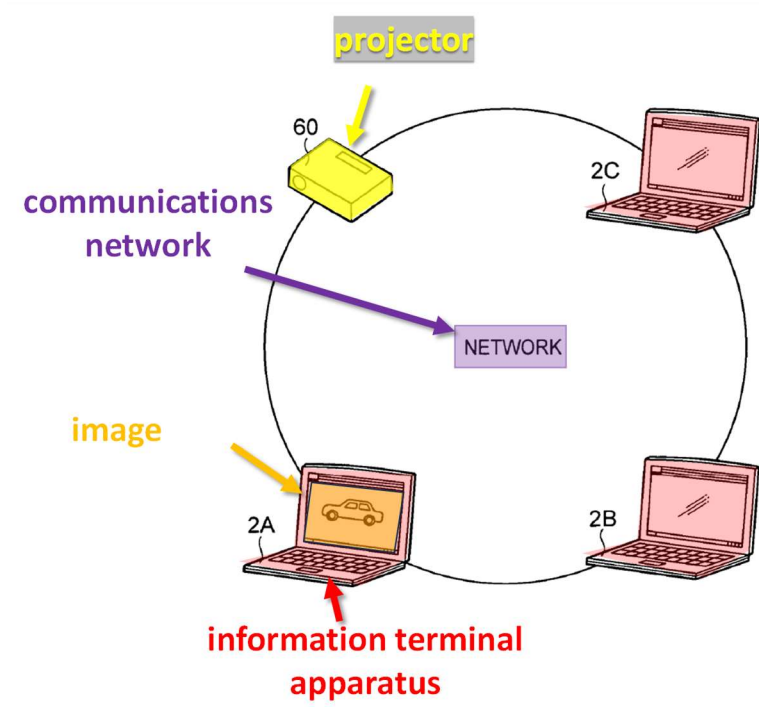
(EX-1005, FIG. 1)

- c. **16(b): *the base unit being adapted to receive user selected arbitrary media content from a processing device via the wireless communications network, and to control display of the user selected arbitrary media content on the one or more first displays***

Ono discloses the *base unit* (e.g., “projector 60”) *being adapted to receive user selected arbitrary media content* (e.g., image information) *from the processing device* (e.g., information terminal apparatus 2) *via the wireless communications network, and to control display of the user selected arbitrary media content on the one or more first displays* (e.g., image data on screen 5). (EX-1005, ¶¶11, 37-38, 41 (“The projector 60 of the image display apparatus 1 receives, through the communications module 40, the above-mentioned encrypted image information wirelessly transmitted from the information terminal apparatus 2A via the above-mentioned wireless communications channel, and projects it onto the display screen 50 of the screen 5”), 43-48, 65-70 (explaining how projector 60 controls display), FIGs. 1-3, 6, 7, 9; *see also* Section X.C.2.b (limitation 16(a))). The control section 61 controls display of the image information (e.g., “user selected arbitrary media content”) on the screen 5. (EX-1005, ¶89; EX-1002, ¶¶178-79).



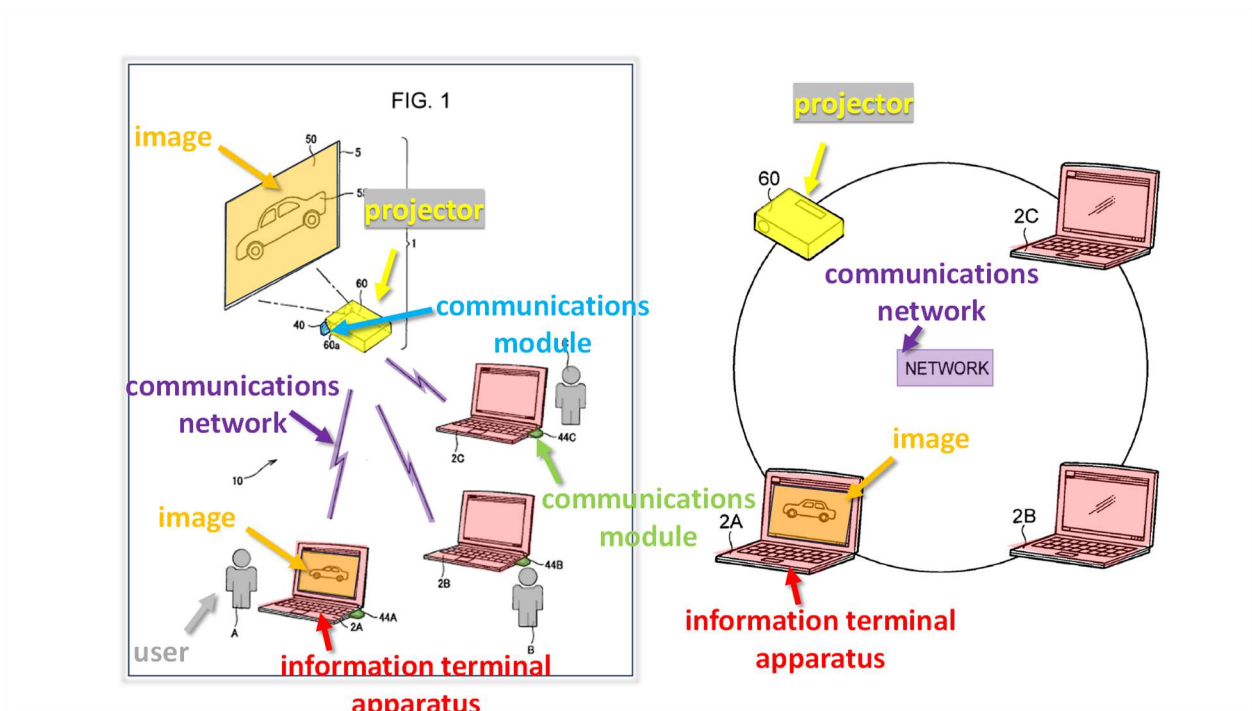
(EX-1005, FIG. 6).



(EX-1005, FIG. 2).

- d. **16(c): at least one peripheral device adapted to communicate the user selected arbitrary media content from the processing device to the base unit via the wireless communications network**

Ono discloses *at least one peripheral device (e.g., wireless communications module 44) adapted to communicate the user selected arbitrary media content (e.g., image information) from the processing device (e.g., information terminal apparatus 2) to the base unit (e.g., projector 60) via the wireless communications network.* (EX-1005, ¶¶39, 55 (“[I]f the user inserts the wireless connection module 44 into the USB jack (slot) on the information terminal apparatus 2A, ... 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”), 144, FIGs. 1, 2, 16; EX-1002, ¶180).



(EX-1005, FIGs. 1, 4)

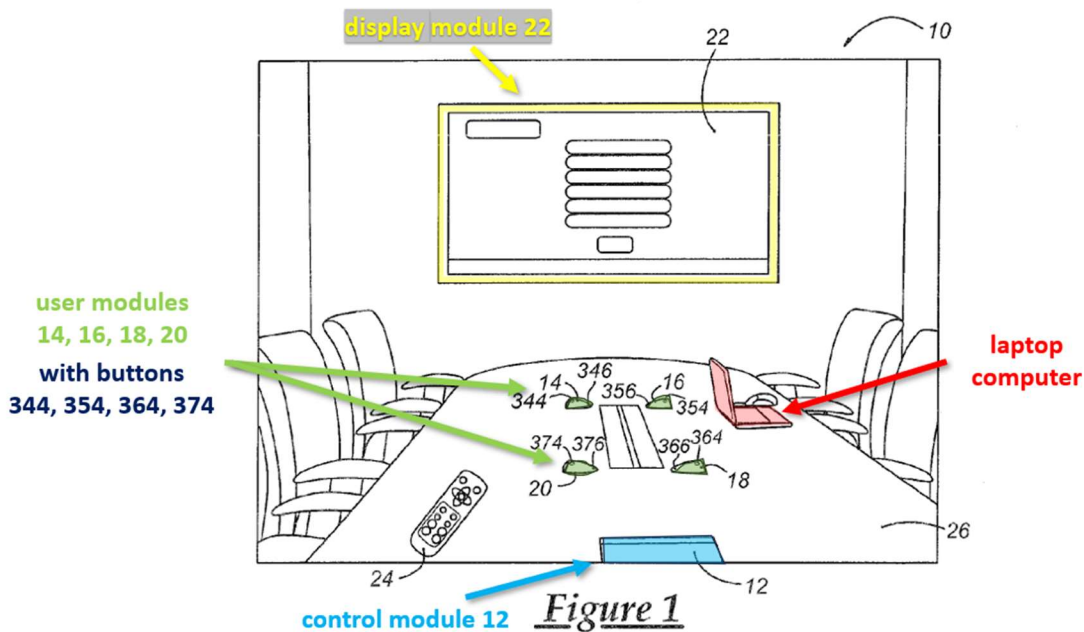
- e. **16(d): a program adapted to be loaded onto the processing device and to run on an operating system of the processing device, said program being adapted to obtain user selected arbitrary media content from the processing device**

The combination of Ono and Deforche discloses the claimed *program* in the same way it discloses the “client application” in limitation 1(h) above. See Section X.A.2.h.

- f. **16(e): an input device to allow the user to carry out a user action that triggers transfer of said user selected arbitrary media content from said processing device to a transmitter and to the wireless communications network, the input device being an actuator coupled to the peripheral device**

Ono discloses the input device. *See* claim 4 (Section X.A.3). Ono does not disclose, *the input device being an actuator coupled to the peripheral device*; however, Grimshaw does (*e.g.*, buttons 344, 354, 364, 374). (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-1012, 5:8-6:17, 8:29-9:20, FIGs. 1-4; *See* Section X.A.2.m (Limitation 1(m)); EX-1002, ¶¶182-195). A POSITA would have understood that buttons 344, 354, 364, 374 constitute actuators coupled to the user modules 14, 16, 18, 20.

A POSITA would have appreciated the known desire to provide the user with means to control transmission of information on a wireless peripheral device. For example, Grimshaw describes user modules, each which connect to a user's laptop to a shared display and are distributed around a meeting table. (EX-1008, abstract, ¶¶2, 4, 19-20, 27-28, FIGs. 1-3; EX-1012, 1:4-7, 5:8-24, 5:25-6:17, 8:29-9:20, FIGs. 1-3. Each module includes buttons to allow the user to override the input to a display with the content currently being displayed on the screen of their own laptop. (*Id.*) So where multiple meeting participants are vying for control over a shared display screen, a push of a button allows the user to transfer contents of that user's laptop screen. (*Id.*).



(EX-1008, FIG. 1).

g. Limitation 16(f, g)

See limitations 1(l), 1(m). (*See, e.g.,* Section X.A.2.1-m; EX-1002, ¶196).

4. Claim 19: *The electronic meeting tool according to claim 16, wherein running said program does not require installation of the program or configuration of the processing device.*

See limitation 16(d). (*See, e.g.,* Sections X.A and X.C (claim 18 and limitation 1(h) and 16(d)); EX-1002, ¶197).

D. Ground IV – Claims 1, 4-5, 8, 16, and 18-20 are rendered obvious by Uchida, Deforche, and Grimshaw

1. Rationale to combine

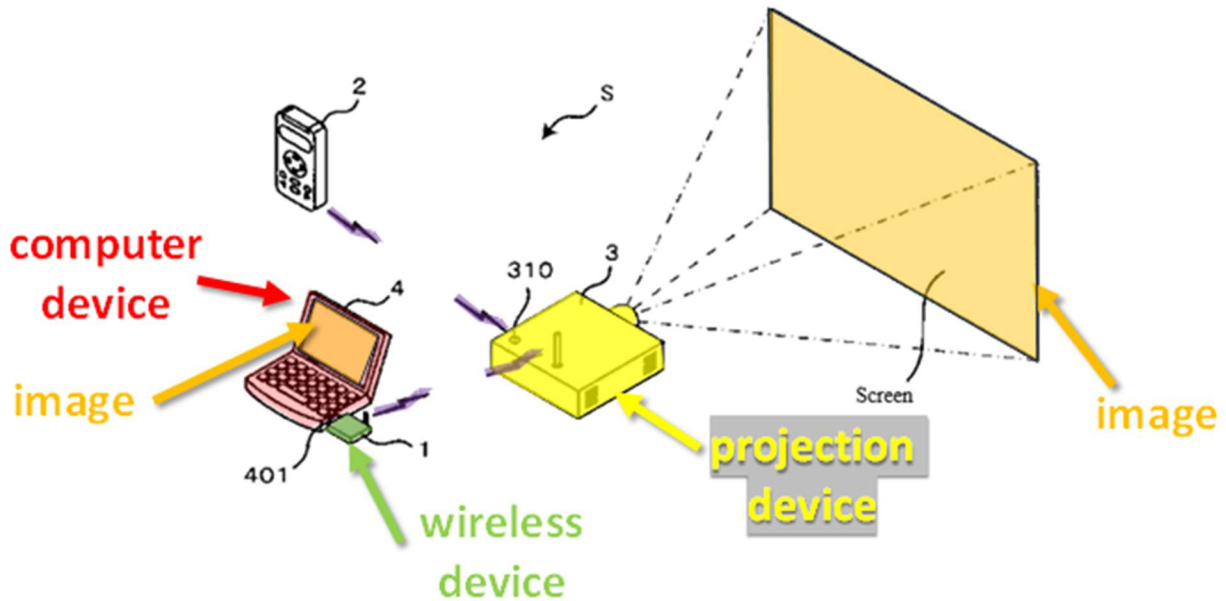
Uchida discloses using a driver to wirelessly transfers images from participants' PCs to a projector. (EX-1009, abstract). Like Uchida, Deforche discloses wirelessly transferring data and describes using the well-known Windows operating system having pre-installed generic drivers to run an application stored on a peripheral device. (EX-1030, ¶¶9, 30). It 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. A person of ordinary skill in the art likely would have used the pre-installed Windows drivers, and Deforche demonstrates that. The combination of Uchida and Deforche would have created the predictable result of a PC communicating with a peripheral device using an operating system's pre-installed generic drivers.

Grimshaw also discloses a presentation communication system. (EX-1008, abstract). Grimshaw teaches actuators for users to transmit their scraped screen data to a display, and that the actuators are on a peripheral device for a user to take control. (EX-1008, ¶¶5-6, 12, 19-20, 23-24, 26-27, FIGs. 1-4). Therefore, Grimshaw teaches using a known technique to improve a similar device in the same way. Grimshaw explains that this known method is beneficial because each user can activate their device and take control of the presentation. (*Id.*, ¶¶4-6, 28, 37). The combination would achieve the predictable result of actuators on Uchida's peripheral devices. (EX-1002, ¶¶198-99).

2. Claim 1

a. Limitation 1(a)

Uchida discloses *connecting one or more processing devices (e.g., computer device 4) devices ... to a wireless communications network (e.g., LAN) having a base node (e.g., image projection device 3) with one or more first displays (e.g., screen)*. (EX-1009, ¶¶39-59, 153-158, 166, 176, FIGs. 1-3, 14, 17, 18; EX-1002, ¶¶200-201).



(EX-1009, FIG. 1).

b. Limitation 1(b)

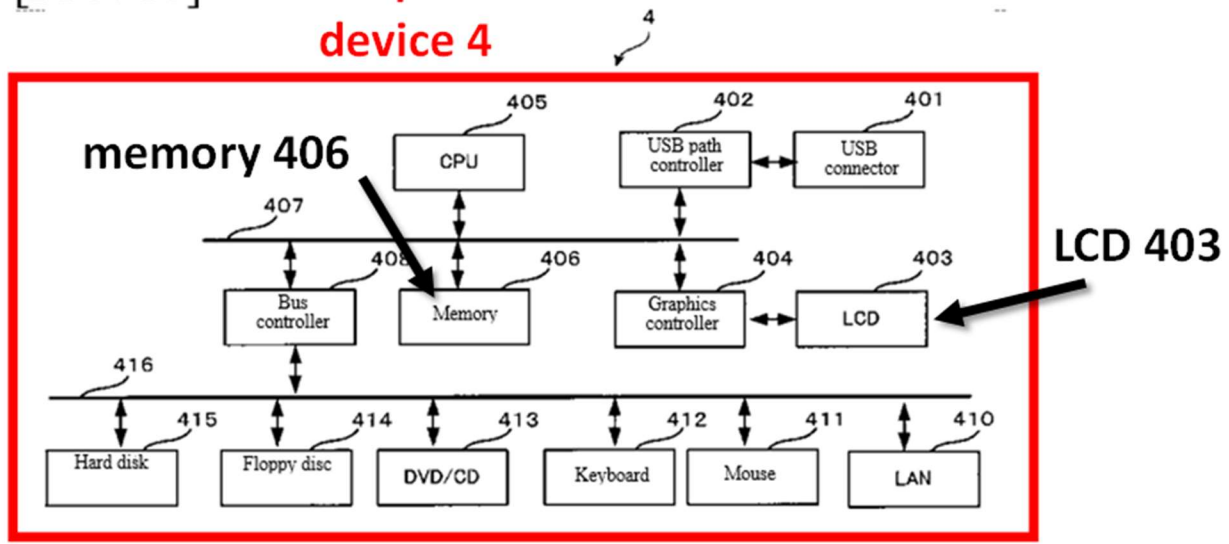
Uchida describes that *each processing device is a user device (e.g., PC)*. (EX-1009, ¶39, FIG. 1; EX-1002, ¶202). A POSITA would have readily understood that personal computers are capable of use by one participant in a meeting with a plurality of participants. (See EX-1009, ¶¶3, 12 (discussing “when an image projection device is shared among multiple groups”), 36-37, 58, 112, 186).

c. Limitation 1(c)

Uchida discloses that *the one or more processing device each having a memory (e.g., the PC containing RAM/ROM) second display (e.g., LCD (display) 403) and an operating system (OS)*. (EX-1009, ¶¶148-152 (“The memory 406 also stores an operating system (OS) program.”), FIG. 16).

[FIG. 16]

**Computer
device 4**



(EX-1009, FIG. 16)

A POSITA would have understood that the most common operating systems included standard drivers to communicate with various peripheral devices. (EX-1002, ¶¶203-205). While the particular drivers could vary depending on the operating system and change over time, 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. (See, e.g., 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.”); *see also* Section X.A.2 (Ground I, Claim 1)).

Thus, a POSITA 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.

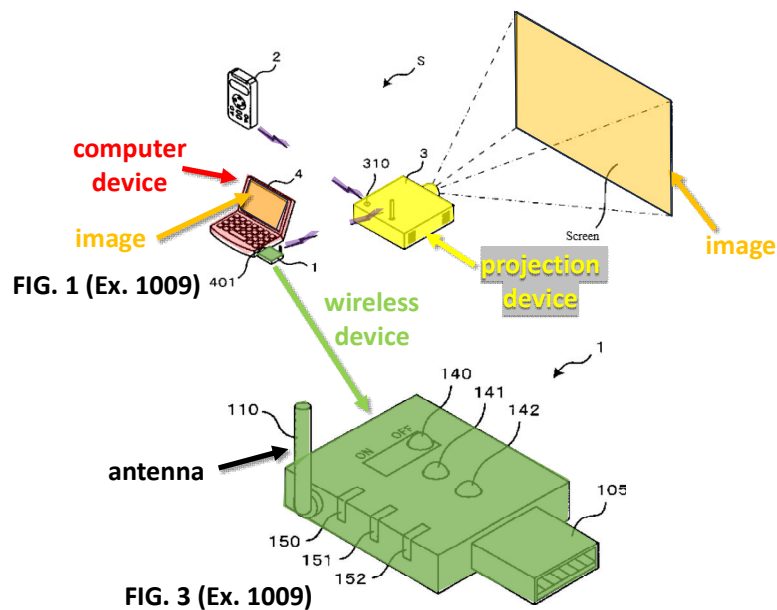
Deforche further recognizes that conventional operating systems included *at least one pre-installed generic driver providing a generic communications protocol for communication between the processing device and a class of peripheral devices*. (EX-1030, ¶30, it was known to use “USB class drivers ... without any extra installation in all OSes.”) 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.*, ¶9). According to Deforche, examples of such drivers include a “human interface driver (HID), which has predetermined software components configured for driving a human interface device such as a mouse, keyboard or other” and “a mass storage device (MSD) driver, which has predetermined software components configured for driving mass storage devices such as USB memory sticks, external hard drives, or

more generally readable and writeable computer peripheral memory devices.” (EX-1030, ¶10). 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. (EX-1030, ¶11). For 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. (EX-1030, ¶34; *see also id.*, ¶¶40-41). Thus, when Uchida describes the operating system recognizes the wireless device as a CD-ROM, a POSITA would have understood that the operating system of computer device 4 is setting up communication with the wireless device using a mass storage driver.

Further, Deforche’s techniques could also set up communication with a wireless modem device, like Uchida’s wireless device 1. Deforche discloses “setting up, by means of a pre-installed generic driver of the operating system on the computer device, a modem/host communication interface (6) for communication between the wireless modem device and the computer device.” (EX-1030, Abstract, ¶¶9-11, 17-18, 31). A POSITA 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. A POSITA would have had a reasonable expectation of success in implementing such a solution.

d. Limitation 1(d)

Uchida discloses *coupling a peripheral device (e.g., wireless device 1) to the processing device (e.g., computer device 4)*. (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, 66, FIGs. 1-3; EX-1002, ¶206).



(EX-1009, FIGs. 1 and 3).

e. Limitation 1(e)

Uchida discloses *the peripheral device (e.g., wireless device 1) having a wireless transceiver (e.g., wireless communication unit 107)*. (EX-1009, ¶¶53, 62, 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. 3, 5; EX-1002, ¶207).

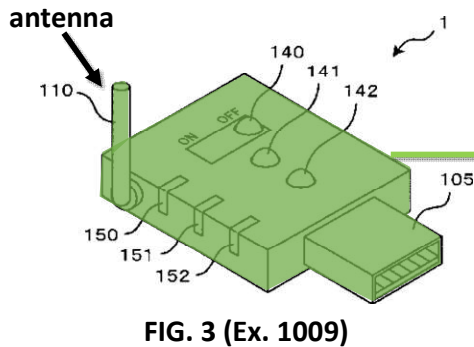


FIG. 3 (Ex. 1009)

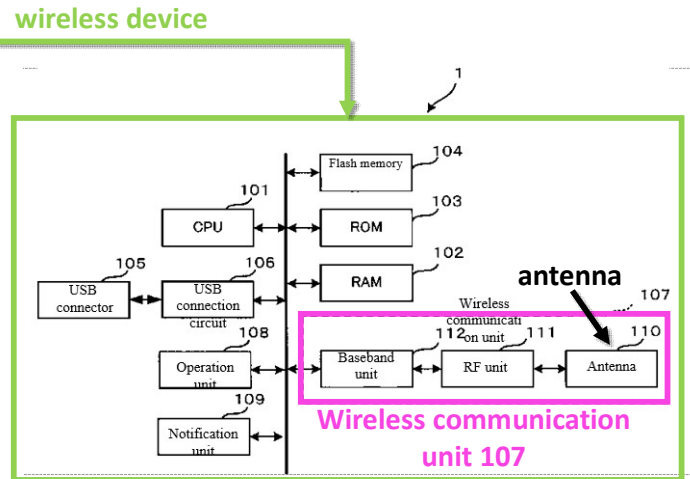


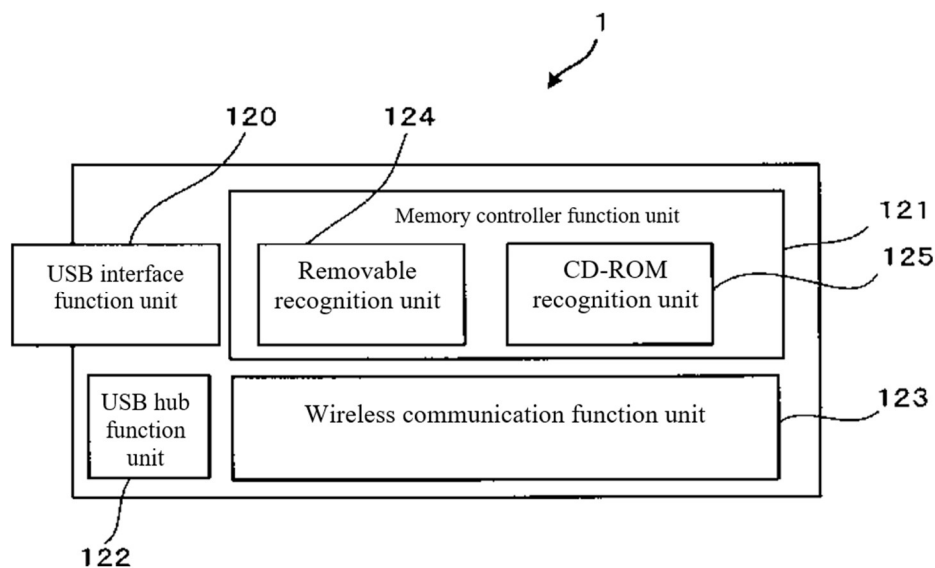
FIG. 5 (Ex. 1009)

(EX-1009, FIGs. 3 and 5).

f. Limitation 1(f)

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.* (EX-1030, ¶30; EX-1009, ¶66, FIGs. 5-7, 17-18). When 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. (EX-1009, ¶¶39, 48, 66, 76-79, 150, 163-165). “In this process, if it is determined that wireless device 1 has been inserted (step S300: YES), the CPU 405

starts the auto-run operation process (step S301),” which “corresponds to steps S320 to S327 in FIG. 18. (EX-1009, ¶155). “This auto-run operation works by having the CPU 405 recognize the wireless device 1 as a CD-ROM when the wireless device 1 is connected, using the function of the CD-ROM recognition unit 125 of the wireless device 1, and automatically reading the information of the wireless device 1.” (EX-1009, ¶163). Communication through USB interface function unit 120 (which corresponds to the USB connector 105 and the USB connection circuit 106 in FIG. 5) is “based on the USB standard.” (EX-1009, ¶77). A POSITA 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). (EX-1002, ¶¶208-210).



(EX-1009, FIG. 6).

Deforche recognizes that “[u]sually, a user needs to install proprietary drivers before he/she can use a USB network device.” (EX-1030, ¶30). Deforche, however, proposes using “USB class drivers supported without any extra installation in all OSes.” (*Id.*). 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.” (EX-1030, ¶9). According to Deforche, examples of such drivers include a “human interface driver (HID), which has predetermined software components configured for driving a human interface device such as a mouse, keyboard or other” and “a mass storage device (MSD) driver, which has predetermined software components configured for driving mass storage devices such as USB memory sticks, external hard drives, or more generally readable and writeable computer peripheral memory devices.” (EX-1030, ¶10). 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. (EX-1030, ¶11). For 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. (EX-1030, ¶34; *see also id.*, ¶¶40-41). Thus, when Uchida describes the operating system recognizes the wireless device as a CD-ROM, a POSITA would have understood that the operating

system of computer device 4 is setting up communication with the wireless device using a mass storage driver.

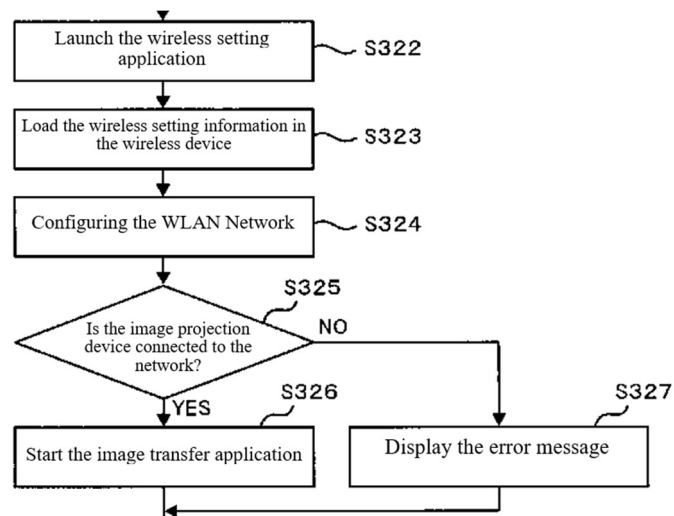
Further, Deforche's techniques could also set up communication with a wireless modem device, like Uchida's wireless device 1. Deforche discloses "setting up, by means of a pre-installed generic driver of the operating system on the computer device, a modem/host communication interface (6) for communication between the wireless modem device and the computer device." (EX-1030, Abstract, ¶¶9-11, 17-18, 31). A POSITA 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.)A POSITA would have had a reasonable expectation of success in implementing such a solution. (EX-1002, ¶¶208-210). Therefore, the combination of Uchida and Deforche discloses the *means for communication*, which is hardware or software, such as a pre-installed driver, for communicating data to the communications network.

g. Limitation 1(g)

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)*. (EX-1009, ¶¶40-41, 65, 68, 90, 165-167, FIGs. 8, 17-18).

Uchida discloses that "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).” (EX-1009, ¶165). “The CPU 405 then configures the WLAN (Wireless LAN) network by executing the wireless configuration application (step S324).” (*Id.*, ¶165). “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.” (*Id.*, ¶166). “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.” (*Id.*, ¶167). In this way, computer device 4 couples to the wireless LAN via wireless device 1. (EX-1002, ¶¶211-12).



(EX-1009, FIG. 18 (excerpted)).

h. Limitation 1(h)

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). (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).

The image data corresponds to “the screen displayed on the LCD 403, which is the display unit of the computer device 4.” (EX-1009, ¶¶158; *see also*, ¶3). A POSITA would have recognized that the content of the transmitted image data is “screen scraped data.” Indeed, the ’676 patent acknowledges that screen scraping was known in the art (EX-1001, 13:59-62) and could have been predictably implemented in an image display system like that of Uchida using known techniques, as described in Slobodin, which is directed to wireless transmission of screen scraped data to a projector (*see, e.g.*, EX-1033, ¶¶11-12; EX-1002, ¶¶213-16).

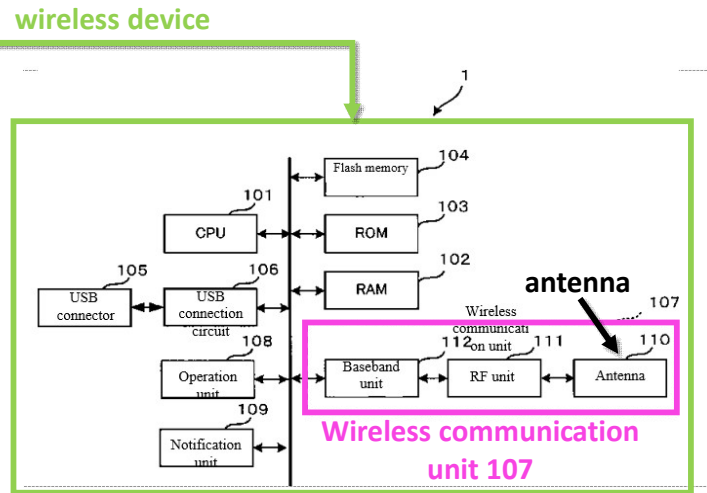
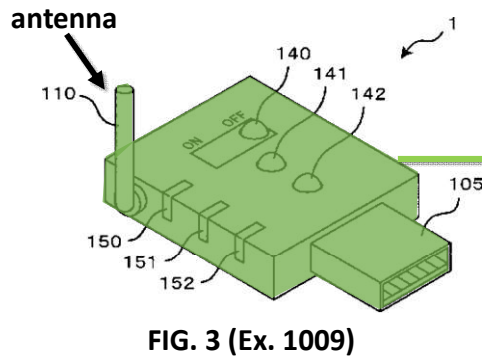
Further, Deforche describes running an application as a portable application from a peripheral device that does not require installation. (EX-1030, ¶¶14-16, 28-30). Deforche explains that this has the advantage ease of use and “Zero Footprint,” *i.e.*, avoiding modification to settings in the kernel protocol stack or in the operating system and in general any traces on the computer device so that if the wireless device

is disconnected leaving the computer as if the wireless device had never been used on the computer. (*Id.*).

A POSITA would have found it obvious to implement a technique like Deforche to run a client application stored on a peripheral device (like the wireless device of Uchida) to obtain screen scraped data for advantages described by Deforche. A POSITA would have had a reasonable expectation of success in implementing such a solution given the guidance of Deforche and the general ubiquity and predictability of the technology. (EX-1002, ¶¶213-16).

i. Limitation 1(i)

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)*. (EX-1009, ¶¶158; EX-1002, ¶17). The image data corresponds to “the screen displayed on the LCD 403, which is the display unit of the computer device 4.” (EX-1009, ¶¶158). “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.” (*Id.*). “When 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.” (*Id.*).



(EX-1009, FIGs. 3, 5). *See also* limitation 1(f).

j. Limitation 1(j)

Uchida discloses *a generic communication protocol (e.g., USB standards) is used for transferring the screen scraped data for display between processing device and the peripheral device.* (EX-1009, ¶¶77, 163; EX-1030, ¶¶9, 11, Abstract). Communication through USB interface function unit 120 (which corresponds to the USB connector 105 and the USB connection circuit 106) is “based on the USB standard,” which a POSITA would have understood to include the use of standard communication protocol applicable to a class of devices, such as a CD-ROM (which is how the wireless device 1 presents itself to the computer device 4). (*Id.*).

Further, Deforche also suggests the use of a generic communications protocol in implementing Deforche's techniques. (EX-1002, ¶¶218-19). For example, Deforche discloses that "the wireless modem device can communicate with the computer device by using the generic communication protocol provided by the generic driver." (EX-1030, ¶11, *see also id.*, Abstract, ¶9). For the same reasons discussed regarding the Uchida-Deforche combination, a POSITA would have found it obvious to implement the use of a generic communication protocol as provided by a pre-installed generic driver.

k. Limitation 1(k)

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.* (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)

l. Limitation 1(l)

Uchida discloses *displaying the screen scraped data on the one or more first displays.* (EX-1009, ¶¶52 ("[A]s shown in FIG. 2(c), image data is 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.”), 176, FIG. 1, 17-18; EX-1002, ¶221). Uchida also explains that the displaying is *in accordance with a set of rules*, (e.g., the state of the transfer stop switch 140). EX-1009, ¶¶70-71, 136-146). Furthermore, the combination of Uchida and Grimshaw discloses a further set of rules, as explained for the following limitation 1(m).

m. Limitation 1(m)

Grimshaw is directed to a communication system that allows users in a meeting to share media content. (EX-1008, ¶2; EX-1012, 1:4-7; *see also* Section VI.E (Grimshaw Summary); EX-1002, ¶¶222-25). Grimshaw addresses the ability of the users of the system to control what is displayed on a shared display. (*See* EX-1008, ¶¶19-20; EX-1012, 5:8-6:17; EX-1001, 6:60-7:3). Thus, Grimshaw is from the

same field as the '676 patent and addresses a similar problem.

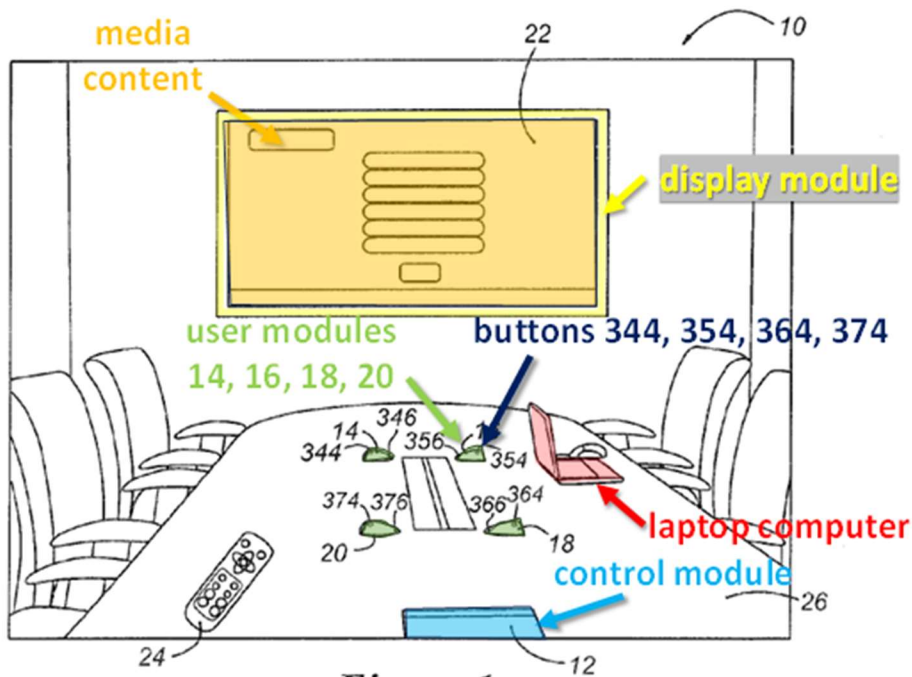


Figure 1

(EX-1008, FIG. 1).

A POSITA would have recognized problems associated with multiple users in a meeting vying for control and sought out known design options and solutions. (See, e.g., EX-1013, ¶¶2, 31, 48-49, FIG. 2; EX-1057, ¶¶36, 43-44; 51-57). Grimshaw describes a set of “user modules” that can be coupled to each user’s laptop computer, which connect the laptops to a shared display module. (EX-1008, ¶¶5-6, 12, 19-20, 23-24, 26-27). Each user module includes a button that allows the user to forcibly switch control over the display module. (EX-1008, ¶20). Grimshaw states that:

[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). (EX-1008, ¶20).

Grimshaw then explains possible ways to implement this functionality:

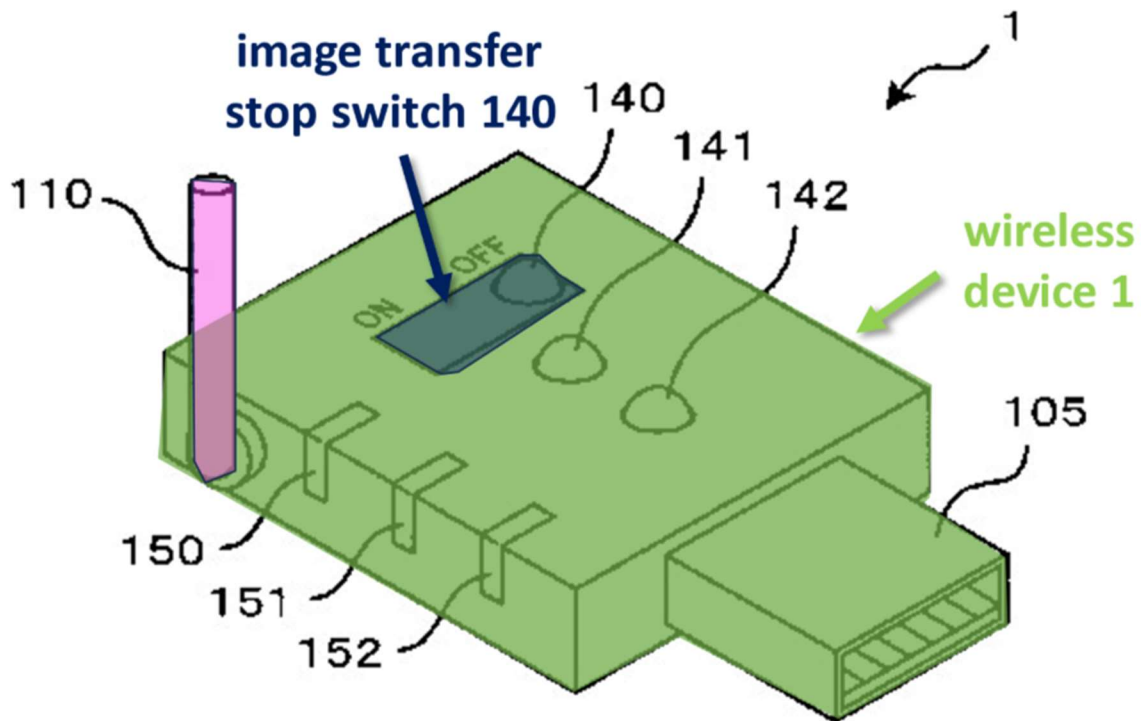
In the example above, controller 324 reviews the status of buttons 344, 354, 364, 374, determines that user module 14 has been selected, and sends command signals to switch controller 318, video processor 316 and/or converter 320 instructing them to pass the data signals from the selected user module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

Hence, Grimshaw describes *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.*

A POSITA 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. A POSITA 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. (EX-1002, ¶¶222-25).

3. Claim 4

Uchida discloses *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.* (EX-1009, ¶¶52-53, 65-72; see Section X.1.3 (Ground I, claim 4)). Uchida further discloses that image transfer stop switch 140 slides between ON and OFF position. When 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.*) A POSITA would have understood that reversing the slide switch back to OFF would resume (*i.e.*, trigger image transfer). (EX-1002, ¶¶226).



(EX-1009, FIG. 3)

A POSITA 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. Grimshaw is from the same field as the '676 patent and addresses a similar problem. (See Section X.A.2.m (Ground I, 1(m))).

In particular, Grimshaw discloses 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. (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-1012, 5:8-6:17, 8:29-9:20, FIGs. 1-4; *See* Limitation 1(m)). A POSITA would have understood that buttons 344, 354, 364, 374 constitute actuators coupled to the user modules 14, 16, 18, 20. (EX-1002, ¶226).

A POSITA 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. (EX-1008, ¶19).

4. Claim 5

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 POSITA would have understood that the pre-installed generic driver is a mass storage device driver as discussed above in view of Deforche. (*See* Section X.D.2.c, f (Claim 1(c), 1(f)); EX-1002, ¶227).

5. Claim 8

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*. (*See, e.g.*, EX-1009, ¶¶42, 166; EX-1002, ¶228).

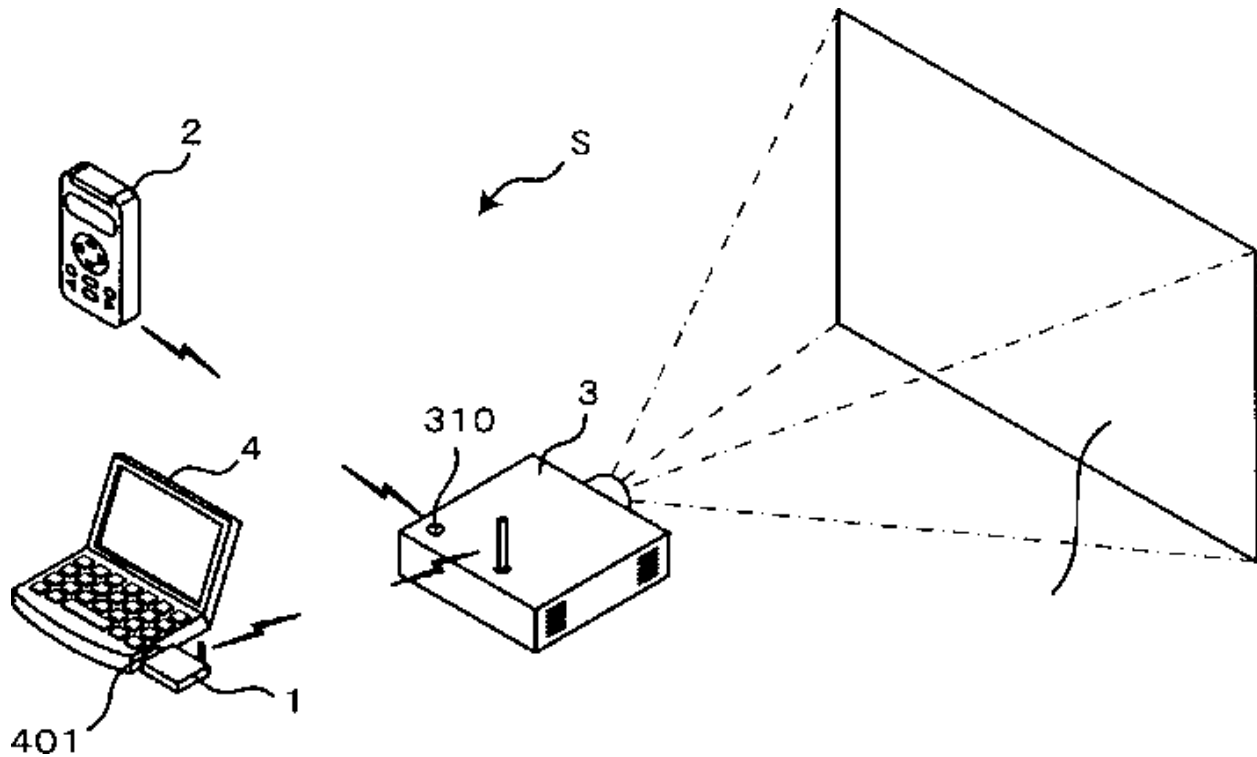
6. Claim 16

a. Limitation 16(pre)

Uchida discloses *an electronic meeting tool (e.g., image display system S) for communicating arbitrary media content (e.g., display image data) being data for display, from users at a meeting.* (EX-1009, ¶¶12 (“when an image projection device is shared among multiple groups”), 36, 37, 58, 112, 158, 186). Uchida’s image projection system enables display of an image data based on the image data of LCD display 403 (*e.g.*, “data for display”) of computer device 4. Said differently, Uchida’s system enables a projector to display what is on a user’s computer screen and thus, image data is consistent with description of “user selected arbitrary media content” provided by the ’676 patent. (EX-1002, ¶¶229-232).

b. Limitation 16(a)

Uchida discloses *a base unit (e.g., image projection device 3) of a wireless communications network, and coupled to one or more first displays (e.g., screen).* (EX-1009, ¶¶124-134, 166-167, FIGs. 1, 8, 14, 18; EX-1002, ¶233).



(EX-1009, FIG. 1).

c. Limitation 16(b)

Uchida discloses *the base unit (e.g., image projection device 3) being adapted to receive user selected arbitrary media content (e.g., image data) from a processing device (e.g., computer device 4) via the wireless communications network, and to control display of the user selected arbitrary media content on the one or more first displays.* (EX-1009, ¶¶39, 124-129, 137-146, 158 (“When 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.”), 176, FIG. 15; *see also* Section X.E.3.b (limitation 16(a)); EX-1002, ¶234).

d. Limitation 16(c)

Uchida discloses *at least one peripheral device (e.g., wireless device 1) adapted to communicate the user selected arbitrary media content from the processing device (e.g., image data from computer device 4) to the base unit (e.g., image projection device 3) via the wireless communications network.* (EX-1009, ¶¶39-41 (“The computer device 4 connects the USB connector 105 (*see* FIG. 3) described below in the wireless device 1, 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.”), 65, 68, 90, 165-166, 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)”), FIGs. 8, 17-18; EX-1002, ¶235-36).

e. Limitation 16(d)

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.* (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

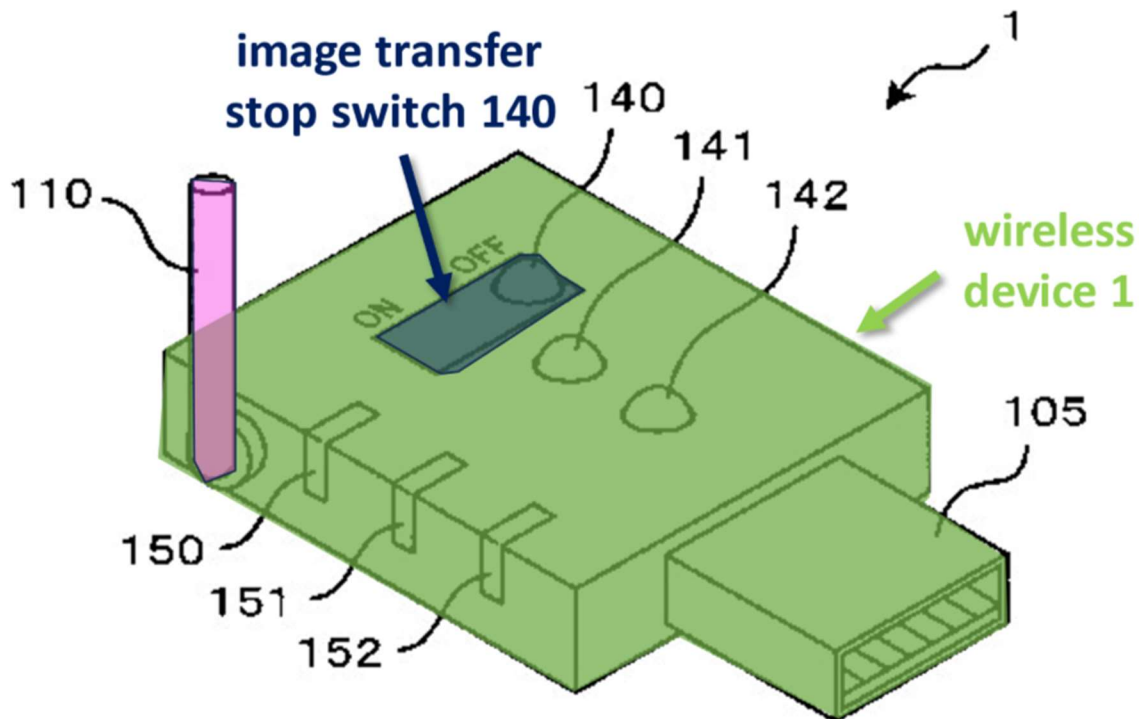
controls the wireless device 1 and transmits the image data from the computer device 4 to the image projection device 3”), 83, 152, 156, 167, 176; EX-1002, ¶¶237-38).

While Uchida’s image transfer application is loaded and installed onto computer device 4, a person of ordinary skill in the art would have understood that an alternative design choice would have been to simply load the application without requiring installation on the computer device. Deforche describes launching an application to setup wireless transfer of data as a portable application that does not require installation as discussed above. (*See* Section X.D.2.h (limitation 1(h)). A POSITA would have found it obvious to implement as least an image transfer application like that of Uchida as a portable application.

f. Limitation 16(e)

Uchida discloses *an input device (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 said user selected arbitrary media content from the processing device to a transmitter (e.g., wireless communication unit 107) and to the wireless communications network, the input device being an actuator coupled to the peripheral device (e.g., image transfer stop switch 140 coupled to wireless device)*. (EX-1009, ¶¶52-53, 65-72; *see* Section X.D.3 (claim 4); EX-1002, ¶¶239-42). Uchida further discloses that image transfer stop switch 140 slides between ON and OFF position. When 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.*) A POSITA would have understood that reversing the slide switch back to OFF would resume (*i.e.*, trigger image transfer).



(EX-1009, FIG. 3)

A POSITA 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. Grimshaw is from the same field as the '676 patent and addresses a similar problem. (*See* Section X.D.2.m (limitation 1(m))).

In particular, Grimshaw discloses 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. (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-1012, 5:8-6:17, 8:29-9:20, FIGs. 1-4; *See* Section X.D.2.m (Limitation 1(m))). A POSITA would have understood that buttons 344, 354, 364, 374 constitute actuators coupled to the user modules 14, 16, 18, 20. (EX-1002, ¶¶239-42).

A POSITA 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.

g. Limitation 16(f)

Uchida-Grimshaw discloses this limitation for the same reasons discussed in limitation 1(l) and 14(f). (*See, e.g.*, Sections X.D.2.1 and X.E.2.g (limitation 1(l); limitation 14(f); EX-1002, ¶¶243).

h. Limitation 16(g)

Uchida-Grimshaw discloses this limitation for the same reasons discussed in limitation 1(m) and 14(f). (*See, e.g.*, Sections X.D.2.m and X.E.2.g (limitation 1(m); limitation 14(f)); EX-1002, ¶¶244).

7. Claim 18

Deforche discloses *running said program does not require installation of the program or configuration of the processing device*. (*See, e.g.*, 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.”), *see also* 18, 26-27, 30-31, 47; EX-1002, ¶¶245).

8. Claim 19

Uchida-Grimshaw discloses this limitation for the same reasons discussed in Claim 16(d). (*See, e.g.*, Section X.E.3.e (limitation 16(d); EX-1002, ¶¶246).

9. Claim 20

See Sections X.D (Ground IV (limitation 1(h) and claim 18); EX-1002, ¶¶247).

E. Ground V – Claim 14 is rendered obvious by Uchida and Grimshaw

1. Rationale to combine

See Section X.D.1 for rationale to combine Uchida and Grimshaw. Claim 14 is similar to claim 1 but does not require Deforche’s pre-installed generic driver.

2. Claim 14

a. Limitation 14(pre)

See Section X.E.2.a (limitation 1(a)-(b)). This claim is very similar to claim 1 but does not include the pre-installed generic driver disclosed by Deforche.

b. Limitation 14(a)

Uchida discloses *setting up a communications network between a base node (e.g., “image projection device 3”) of the communications network and a peripheral device (e.g., wireless device 1) coupled to the processing device.* (EX-1009, ¶¶40-41, 61-69, 90, 165-167, 176, FIGs. 8, 17-18; EX-1002, ¶¶250-52). Uchida discloses “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.” (EX-1009, ¶166). “When the processing of step S324 is completed, CPU 405 determines whether wireless communication with the image projection device 3 is established via the wireless device 1, in other words, whether a network connection with the image projection

device 3 is established (step S325).” (EX-1009, ¶167). Thus, Uchida discloses that image projection device 3 couples to the wireless LAN via wireless device 1.

c. Limitation 14(b)

Uchida discloses *transferring media content (e.g., image data) between the processing device (e.g., computer device 4) and the peripheral device (e.g., wireless device 1)*. (EX-1009, ¶¶33, 39 (“The computer device 4 connects the USB connector 105 (*see* FIG. 3) described below in the wireless device 1, 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, 52, 81, 156, 167, 176; EX-1002, ¶253). *See also* Section X.D.2.c (limitation 1(c)).

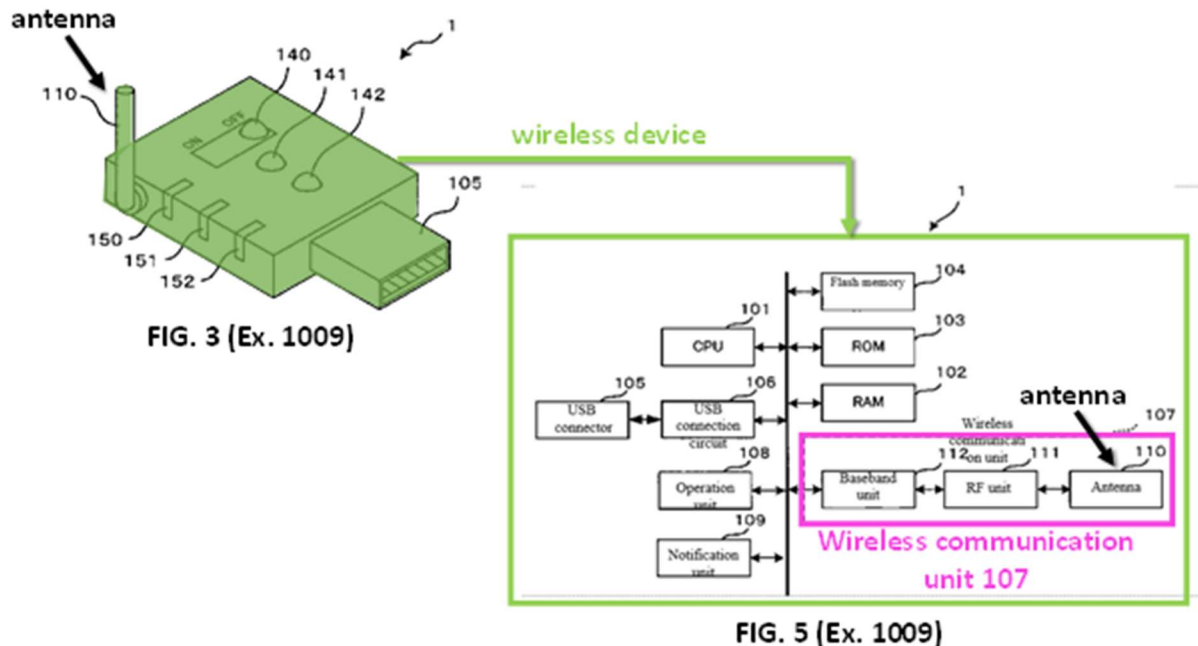
d. Limitation 14(c)

Uchida discloses *the media content (e.g., image data) being screen scraped data from a screen of the processing device*. (EX-1009, ¶¶158, 176). The image data corresponds to “the screen displayed on the LCD 403, which is the display unit of the computer device 4.” (EX-1009, ¶¶158; *see also id.*, ¶3). A POSITA would have recognized that the content of the transmitted image data is “screen scraped data.” The ’676 patent acknowledges that screen scraping was known in the art (EX-1001, 13:59-62) and could have been predictably implemented in an image display system like that of Uchida using known techniques, as described in Slobodin, which is directed to wireless transmission of screen scraped data to a

projector. (See, e.g., EX-1033, ¶¶11-12; EX-1002, ¶254). See also Section X.D.2.d (limitation 1(d)).

e. Limitation 14(d)

Uchida discloses *transmitting the media content from the peripheral device to the communications network*. (EX-1009, ¶¶40-41, 65, 106, 166-167, 176 (“[W]ireless device 1 ... functions as a wireless unit of a computer device 4 that transmits image data via wireless communication to an image projection device 3”), FIG. 18; EX-1002, ¶255).



(EX-1009, FIGs. 3, 5). See also Section X.D.2.e (limitation 1(e)).

f. Limitation 14(e)

Uchida discloses *receiving media content from the communications network at the base node*. (EX-1009, ¶¶39, 70-71, 124-129, 139, 158 (“When 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.”), 176; EX-1002, ¶¶256-57). *See also* Section X.D.2.f (limitation 1(f)).

g. Limitation 14(f)

See Sections X.D.2.1-m (limitations 1(l)-(m)).

XI. SECONDARY CONSIDERATIONS

Patent Owner has not carried its burden of production in proffering any objective indicia of nonobviousness. To the extent Patent Owner offers any evidence, consideration should be delayed until Petitioners have had an opportunity to address it. Petitioner reviewed a declaration purportedly demonstrating nonobviousness submitted during reexamination (ctrl. no. 90/014,087) of a related patent, but the examiner found the declaration “insufficient.” (EX-1066, 3-4 and 12-17).

XII. THE BOARD SHOULD NOT EXERCISE ITS DISCRETION TO DENY INSTITUTION 35 U.S.C. § 314 (A)

Petitioners stipulate that they will not pursue in the parallel district court proceeding the same grounds as in the Petition or any grounds that could have reasonably been raised in the Petition. Accordingly, discretionary denial is inapplicable. Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation, at 7 (June 21, 2022) (“[T]he PTAB will not discretionarily deny institution of an IPR or PGR in view of

parallel district court litigation where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.”); *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-1019, Paper 12 (PTAB Dec. 1, 2020) (precedential as to § II.A).

XIII. THE PROPOSED GROUNDS ARE NOT SUBSTANTIALLY THE SAME AS PREVIOUSLY CONSIDERED ART OR ARGUMENTS

A. Factors (a), (b) and (d): “(a) the similarities and material differences between the Asserted Art and the prior art involved during examination; (b) the cumulative nature of the Asserted Art and the prior art evaluated during examination; (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art.”

The Asserted Art was not the basis of any rejection nor substantively evaluated. (*See generally* EX-1004). Indeed, the examiner evaluated no art and Patent owner made no arguments. (*Id.*) Patent Owner listed Uchida and Deforche on an IDS among hundreds of references and materials, but the examiner and the Patent Owner never mentioned them. Moreover, the examiner materially erred, as discussed below.

B. Factors (c), (e), and (f): “(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (e) whether petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; (f) the extent to which additional evidence and facts presented in this petition warrant reconsideration of the prior art or arguments.”

The examiner allowed the claims based on the “forcing rule.” (EX-1004, p.28). Yet as discussed, Ono and Grimshaw teach the claimed “forcing rule” and

were not considered by the Office. *See* §X.A.1.m; EX-1002, ¶¶53-69. Although Uchida and Deforche were cited, the record lacks any evidence that they were considered for the remaining claim limitations. *See* §§X.B, X.E. Therefore, the examiner materially erred in failing to address Uchida and Deforche’s teachings, particularly given the combination of teachings relied upon here. Accordingly, discretionary denial is not appropriate. *Keysight Technologies, Inc. v. Centripetal Networks, Inc.*, IPR2022-1421, Paper 14, 8 (PTAB Aug. 24, 2023) (reversing denial of institution when art cited in an IDS was not addressed); *see also Oticon Medical AB v. Cochlear Limited*, IPR2019-975, Paper 15, 19-20 (October 16, 2019) (most references were cited but not considered) (precedential); and *Parse Biosciences, Inc. v. 10x Genomics, Inc.*, IPR2023-876, Paper 7, 16 (PTAB Oct. 13, 2023) (instituting review when the examiner did not consider relevant teachings of cited art).

XIV. CONCLUSION

For the foregoing reasons, Petitioner respectfully requests review and cancellation of claims 1, 4-5, 8, 14, 16, and 18-20 of the ’676 patent.

Dated: September 13, 2024

Respectfully submitted,

By: /Stephen Yang/
Stephen Yang
Reg. No. 70,589
Dentons US LLP

Lead counsel for Petitioner

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter Partes* Review totals 13,991 as counted by Word Count feature of Microsoft Word, which is less than 14,000 allowed under 37 C.F.R. § 42.24(a)(1)(i), excluding the parts of the paper exempted by 37 C.F.R. §42.24(a).

Dated: September 13, 2024

By: /Stephen Yang/
Stephen Yang
Reg. No. 70,589

CERTIFICATE OF SERVICE

I hereby certify that on September 12, 2024, I caused a true and correct copy of the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 11,258,676 and supporting exhibits to be served via Federal Express mail on the Patent Owner at the following correspondence address of record as listed on PAIR:

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Dated: September 13, 2024

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