

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

BARCO N.V.  
Patent Owner

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U.S. Patent No. 11,422,951  
IPR2024-1439

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**PETITION FOR *INTER PARTES* REVIEW OF  
U.S. PATENT NO. 11,422,951**

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## TABLE OF EXHIBITS

| EXHIBIT             | DESCRIPTION                                                                                      |
|---------------------|--------------------------------------------------------------------------------------------------|
| EX-1001             | U.S. Patent No. 11,422,951                                                                       |
| 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. 11,422,951                                                       |
| 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-<br>EX-1019 | <b>RESERVED</b>                                                                                  |
| 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”)                                |
| EX-1023             | U.S. Patent Application Publication No. 2009/0187687 (Hulbert”)                                  |
| EX-1024             | U.S. Patent Application Publication No. 2003/0112975 (“Taiwanese”)                               |
| EX-1025             | U.S. Patent Application Publication No. 2010/0017744 (Kikuchi”)                                  |

| <b>EXHIBIT</b>      | <b>DESCRIPTION</b>                                                                                   |
|---------------------|------------------------------------------------------------------------------------------------------|
| EX-1026             | U.S. Patent Application Publication No. 2009/0172219 (“Mardiks”)                                     |
| EX-1027             | U.S. Patent Application Publication No. 2010/0295994 (“Kaplan”)                                      |
| EX-1028             | U.S. Patent Application Publication No. 2003/0098819 (“Sukthankar”)                                  |
| EX-1029             | U.S. Patent Application Publication No. 2002/0159419 (“Morris”)                                      |
| EX-1030             | EP Patent Application Publication No. 2107463 (“Deforche”)                                           |
| EX-1031             | English Translation of Japanese Patent Application Publication No. 2007-208606 (“Maeda”)             |
| EX-1032             | <b>RESERVED</b>                                                                                      |
| EX-1033             | U.S. Patent Application Publication No. 2002/0196378 (“Slobodin”)                                    |
| EX-1034             | U.S. Patent Application Publication No. 2002/0174254 (“Kita”)                                        |
| EX-1035-<br>EX-1049 | <b>RESERVED</b>                                                                                      |
| 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-<br>EX-1065 | <b>RESERVED</b>                                                                                      |
| EX-1066             | Excerpt from File History of Ex Parte Reexamination 90/014,087                                       |

## **I. INTRODUCTION**

Yealink (USA) Network Technology Co., Ltd. and Yealink Network Technology Co., Ltd. (collectively, “Petitioners” or “Yealink”) requests *inter partes* review of claims 1-11 and 13-21 of U.S. Patent No. 11,422,951 (“the ’951 patent”) (EX-1001) assigned to Barco N.V. (“Patent Owner” or “PO” 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 ’951 patent is at issue in *Barco, Inc. et al v. Yealink (USA) Network Technology Co., Ltd.*, 2:2023-cv-521 (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 during this proceeding to Deposit Account No. 30827.

### **IV. GROUNDS FOR STANDING**

Yealink certifies the '951 patent is available for IPR and Yealink is not barred or estopped from requesting IPR challenging the claims of the '951 patent. Yealink is not the owner of the '951 patent, has not filed civil action challenging the validity of any claim of the '951 patent, and this Petition is filed less than one year after Yealink was served with a complaint alleging infringement of the '951 patent.

### **V. PRECISE RELIEF REQUESTED**

Petitioners respectfully request cancellation of claims 1-11 and 13-21 of the '951 patent based on the following grounds:

**Ground 1:** Claims 1-4, 6-11 and 13-21 are unpatentable under pre-AIA 35 U.S.C. § 103(a) as being obvious over U.S. Application Publication No. (“Ono”) and U.S. Application Publication No. 2006/0069840 (“Corbett”).

**Ground 2:** Claims 1-10 and 14-21 are unpatentable under pre-AIA 35 U.S.C. § 103(a) as being obvious over Japanese Patent Application Publication No. 2008-165007 (“Uchida”) and U.S. Application Publication No. 2011/0096138 (“Grimshaw”).

**Ground 3:** Claims 1, 2, 6-10, 13, 15-17, and 19-21 are unpatentable under pre-AIA 35 U.S.C. § 103(a) as being obvious over U.S. Application Publication No. 2008/0074560 (“Ichieda”).

The '951 patent claims benefit of priority to a provisional application filed on September 14, 2011. (EX-1001, 1:6-13). 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              |
| Ichieda (EX-1006)   | 102(b)          | March 27, 2008                  |
| Corbett (EX-1007)   | 102(b)          | March 30, 2006                  |
| Grimshaw (EX-1008)  | 102(a)/102(e)   | April 28, 2011/October 27, 2010 |

|                  |        |                            |
|------------------|--------|----------------------------|
| Uchida (EX-1009) | 102(b) | July 17, 2008 <sup>1</sup> |
|------------------|--------|----------------------------|

As evident from the table, Grimshaw qualifies as prior art under §102(a) based on its 2011 publication date and under §102(e) based on its 2010 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. *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.

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

| <b>Claim 1 from as-filed Appl. No. 12/913,608</b>                                                                                                                               | <b>Exemplary Support in Appl. No. 61/255,326 (EX-1012)</b>                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| A communication system for integration with a piece of furniture, comprising:                                                                                                   | 1:47, 1:13-14, 2:2-5, Figures 1-3 (communication system 10 integrated with a piece of furniture 26), 15:3-9 |
| a plurality of user modules,                                                                                                                                                    | 2:2-5, Figures 1-3 (user modules 14, 16, 18, 20), 15:3-9                                                    |
| each of the user modules includes a button;                                                                                                                                     | 6:2-13, 7:26-29, Figure 3 (button 344, 354, 364, 374 on each user module), 15:3-9                           |
| a network connection; and                                                                                                                                                       | 2:29-30, Figure 3 (network connection 390), 15:3-9                                                          |
| a control module being electronically coupled to both the user module and the network connection                                                                                | 2:7-22; 4:22-27, Figure 3 (control module 12 coupled to user modules and network connection), 15:3-9        |
| 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, Ichieda, Corbett, and Grimshaw were not considered during prosecution of Application No. 16/990,215 (which led to the '951 patent). (*See generally* EX-1004). Although Uchida was cited during prosecution, this foreign language document was among more than 200 cited references and not otherwise mentioned. (*Id.*) Further, because Grimshaw was not considered by the Office, the combination of Grimshaw and Uchida has not been previously considered.

## VI. THE '951 PATENT

### A. Admissions of Prior Art Techniques

The '951 patent recognizes an “explosion of communication electronic communication tools” (EX-1001, 1:27-38) and the desirability for tools allowing greater participation in meetings (*id.*, 2:27-45). One example of a prior art system referenced by the '951 patent is illustrated below. Linkable response units (in the form of USB dongles) are coupled to individual laptop computers to turn each computer into an audience-participation device. (EX-1020, abstract, ¶¶18, 30). The dongles wirelessly transfer information via a wireless transceiver to a base station, which in turn may be displayed on a screen. (*Id.*, ¶¶13, 20). The dongles include keypad/buttons to trigger this transmission. (*Id.*, ¶33).

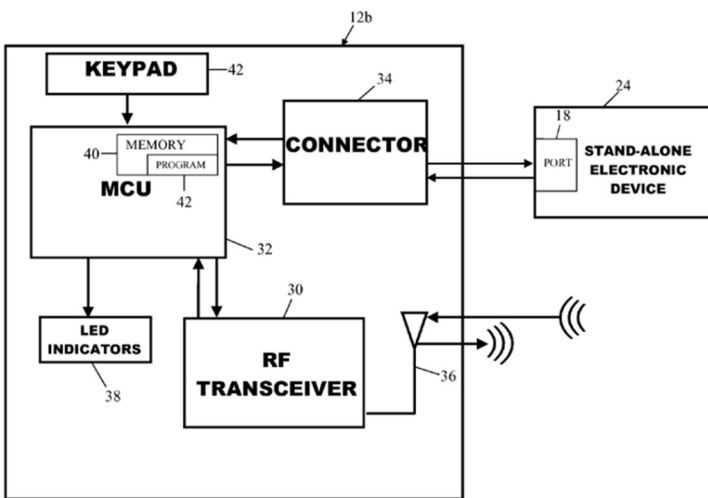


FIG. 2

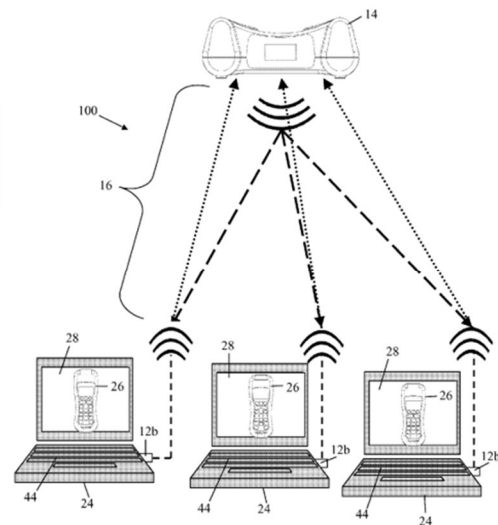
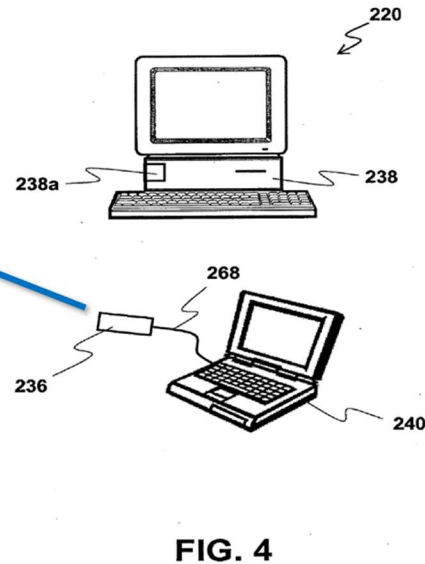
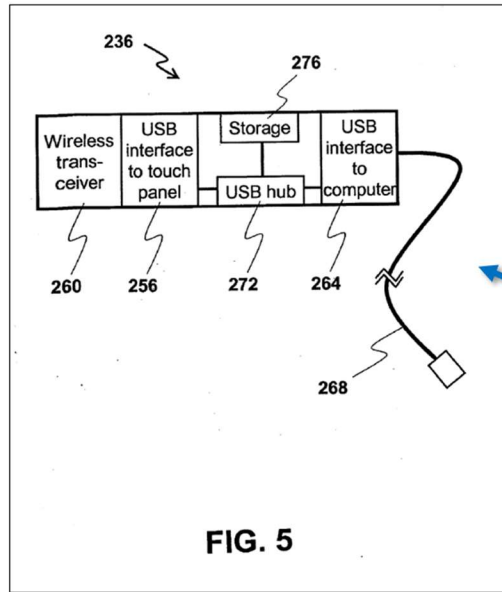


FIG. 3

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

The '951 patent also recognizes common techniques for transferring content of a computer to a projector for display. (EX-1001, 3:13-25). According to the '951 patent, “[t]he 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.*, 3:13-19). Another technique 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.*, 3:22-25).

Regarding “method 3,” the '951 patent identifies US 2009/0198839 (EX-1021 (“Banerjee”)) and US 2011/0115689 (EX-1022 (“Sugiyama”)). (*Id.*, 4:8-15). The '951 patent concedes these use a “well-known USB interface of the computer for extracting the display content of the computer” and transmitting to a projector. (*Id.*). Indeed, 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).<sup>2</sup>

## B. The Purported Invention

Although the '951 patent purports to improve problems with previous meeting technologies (EX-1001, 4:44-56), the '951 patent's claims are directed to systems and methods described in the prior art. (*See id.*, 4:8-19, 27:42-30:46; EX-1002, ¶¶58-61; §X). For example, claim 9 recites:

An electronic meeting tool for communicating user selected arbitrary media content from users at a meeting comprising:

a base node, the base node being coupled to a first display, the base node being adapted to receive user selected arbitrary media content from at least one peripheral device via a wireless communications network, and to control

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<sup>2</sup> All color elements are added annotations throughout unless otherwise noted.

display of the user selected arbitrary media content on the first display; and

the at least one peripheral device being adapted to communicate the user selected arbitrary media content to the wireless communications network;

wherein the at least one peripheral device is a connection unit comprising:

(a) a connector adapted to couple to a port of a user processing device, the user processing device having a second display and a memory, and

(b) a transmitter for transferring said user selected arbitrary media content to the wireless communications network; and

an input device configured to allow the user to carry out a user action on the input device that triggers transfer of said user selected arbitrary media content from the transmitter to the wireless communications network and via the wireless communications network to the base node for display on the first display.

Prior art, such as Banerjee and others, describe systems with vast majority of these features. (EX-1002, ¶¶38-57).

The examiner did not provide any reasons for allowance nor reject the ultimately allowed claims based on prior art. (EX-1004, 53, 398-403, 416-422). For patents in the same family as the '951 patent, Patent Owner argued that placing an input device "on the peripheral device" to trigger transmission of content distinguished the prior art. (*See* EX-1066, 1-12 (notice of intent to issue reexamination certificate and response to final office action)). However, as discussed

below, claim 9 does not recite that feature and, regardless, the evidence here shows that such a feature was well known to be included in electronic meeting tools.

### **C. Summary of the Prosecution History**

The file history has minimal substantive prosecution. The examiner initially rejected the claims for including terms that lacked proper antecedent basis and for obvious-type double patenting. (EX-1004, 416-423). Claim 61 was also rejected as anticipated by US 2010/0066806. (*Id.*). After amendment to address informalities, filing of a terminal disclaimer, and cancellation of claim 61, the examiner allowed remaining claims. (EX-1004, 398-403). The examiner did not address how the allowed claims purportedly distinguished over the prior art. (*Id.*)

## **VII. LEVEL OF ORDINARY SKILL IN THE ART**

In the corresponding litigation between the same parties, 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 Master’s Degree in Electrical Engineering with at least five years of work experience in computer science and embedded systems, or a Master’s Degree in Computer Science with at least five years of work experience in electrical and computer engineering and embedded systems. 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, ¶¶36-37).

## VIII. CLAIM CONSTRUCTION

Except where noted, Petitioner construes the claim terms according to their ordinary and customary meanings, as would have been understood by a POSITA. *See* 83 Fed. Reg. 51,340-59 (Oct. 11, 2018); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). Where the '951 patent defines a term, Petitioners have construed that term consistent with the definition provided.<sup>3</sup> (EX-1002, ¶¶62-69). No terms of the '951 patent have been construed in the corresponding litigation.

### A. “*arbitrary media content*” (claims 1, 9, 16, 21)

The '951 patent states this term “refers to the fact that a user may generate, create or select any media content that is appropriate to display.” (EX-1001, 11:43-50).

### B. “*coupled*” (claim 16)

The '951 patent states that this term “should not be interpreted as being restricted to direct connections only.” (EX-1001, 13:17-24).

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<sup>3</sup> Yealink does not waive the right to challenge the '951 patent claims as indefinite or to construe any term in alternate forums. Yealink's attempt to understand the claim terms and apply that to the prior art grounds here is not an admission that the challenged claims have definite scope.

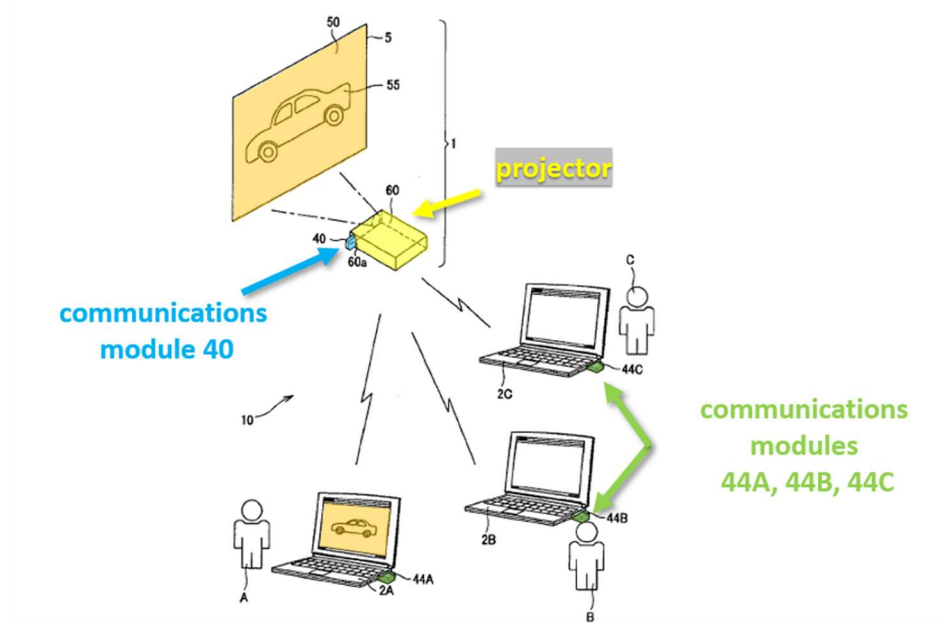
**C. “wireless communications network” (claim 16)**

The ’951 patent states that this refers to “any network that does not use cable links between nodes,” *e.g.*, a WLAN (Wireless Local Area Network) or any other. (EX-1001, 11:60-65).

**IX. OVERVIEW OF THE PRIOR ART**

**A. Ono (EX-1005)**

Like the ’951 patent, Ono describes an image display system including an image 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 and displays them. (EX-1005, ¶2; EX-1002, ¶¶70-72). Communications modules 44A, 44B, *etc.* couple to each PC wirelessly and wirelessly connect to a communications module 40, which is coupled to projector 60. (*Id.*, ¶36). A remote control can switch among PCs and display image information from the selected PC. (*Id.*, ¶¶7, 144).



(EX-1005, FIG. 1).

### B. Ichieda (EX-1006)

Ichieda describes an image display system 1 including a projector 50 which connects to information terminals 8080a-80d (*e.g.*, mobile phones) over a wireless LAN. (EX-1006, ¶43, FIG. 1; EX-1002, ¶¶73-76). To wirelessly connect, each phone captures an image of a barcode displayed by projector on a screen. (*Id.*, ¶75-91, FIG. 3-4). The barcode is then used to route image data (displayed on the phone) to particular area Aa-Ad on the screen where the barcode appeared. (*Id.*). Once connected, the phones 80a-80d transmit an image signal to the projector 50 via the wireless LAN. (*Id.*, ¶44, FIG. 1).

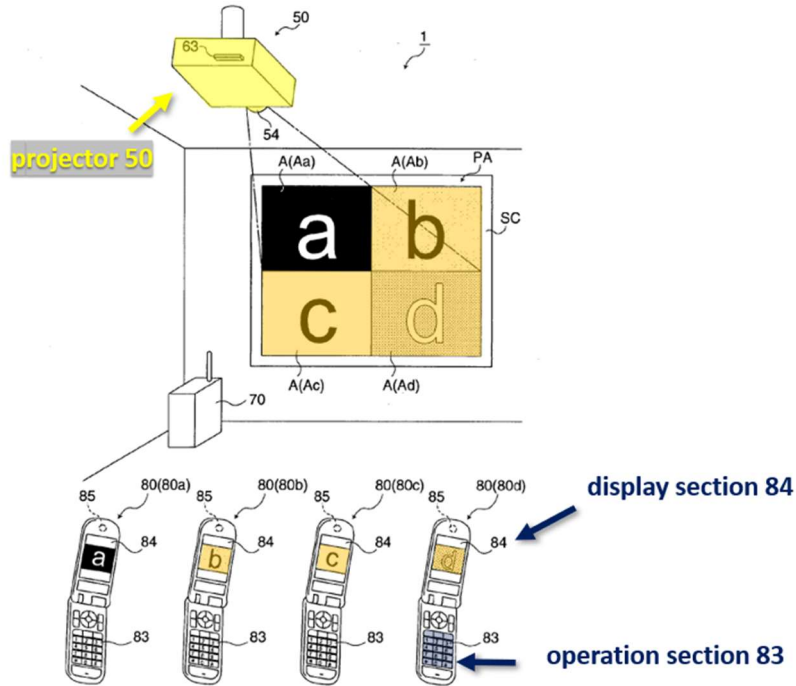
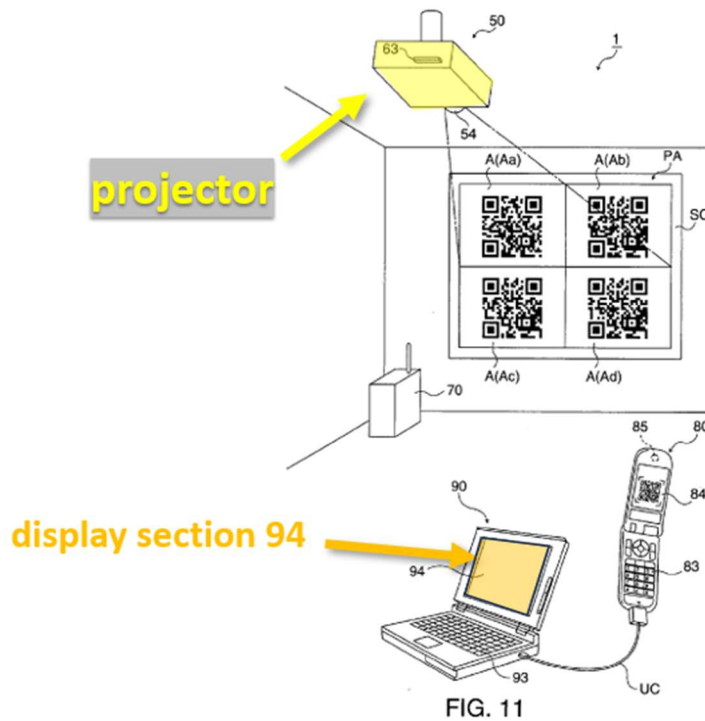


FIG. 1

(*Id.*, FIG. 1)

In another embodiment, the phone is connected to a laptop PC 90 and the images displayed on the laptop display section 94 are sent to the projector using a similar connection method. (*Id.*, ¶¶129-150. FIG. 11; EX-1002, ¶¶77-78).



(EX-1006, FIG. 11).

### C. Corbett (EX-1007)

Corbett discloses a peripheral device, such as a USB flash drive 100, that connects to a host computing system 102 and includes a transmitter 122 for wireless transmission of data to an external device 150. (EX-1007, ¶17-20; EX-1002, ¶¶77-78). The user may initiate the transmission of the data to the external device 150 by activating a transmission initiation selector button 134. (*Id.*, ¶23).

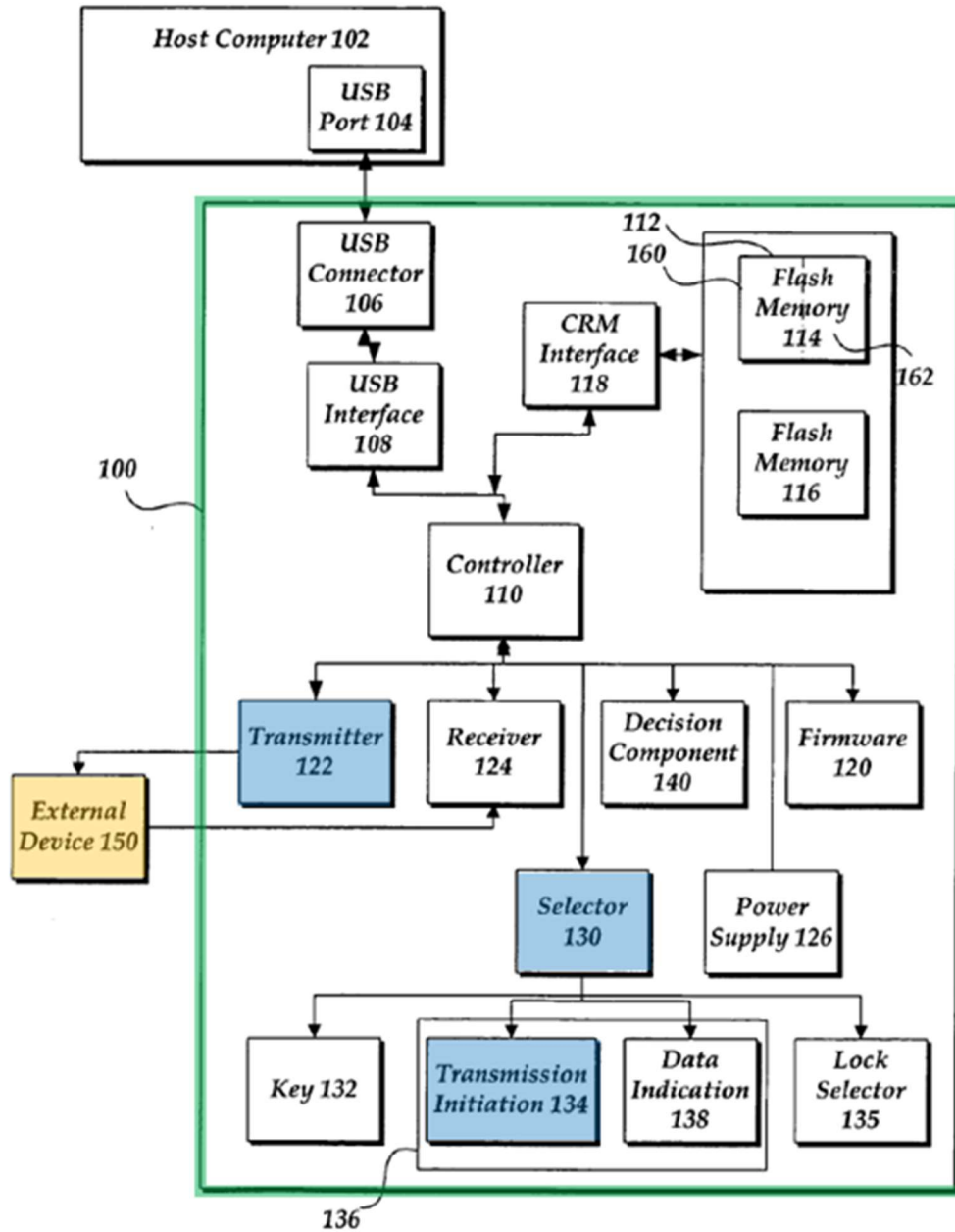


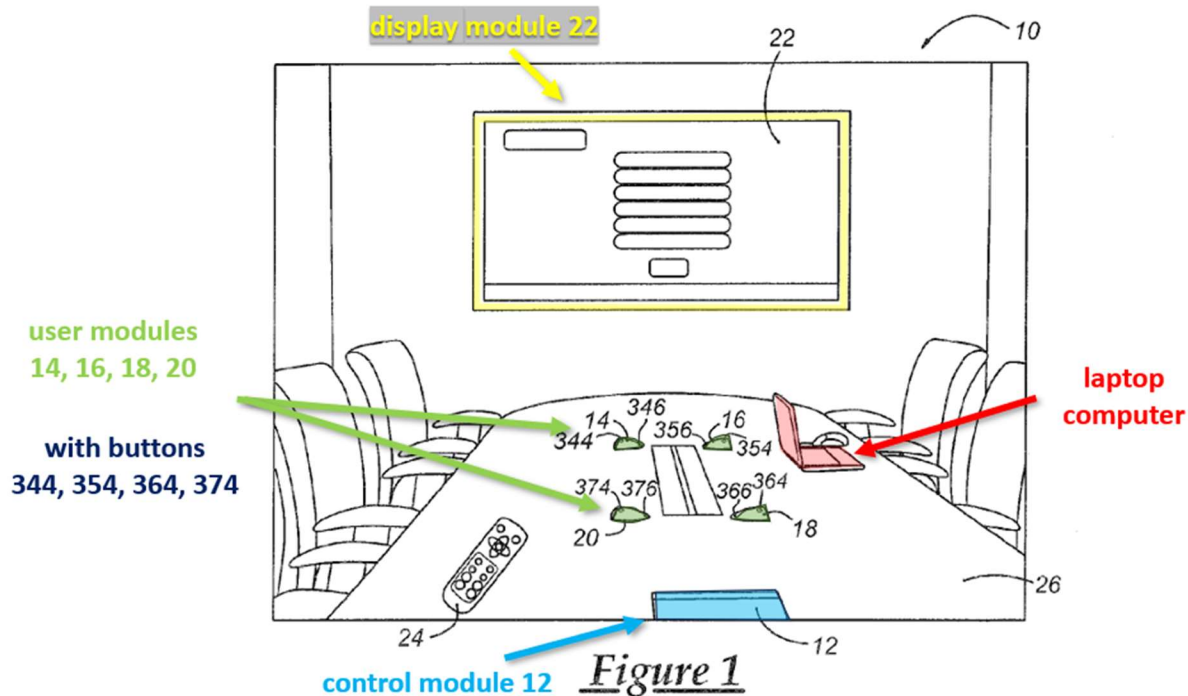
**Fig. 1**

(Ex-1007, FIG. 1).

**D. Grimshaw (EX-1008)**

Grimshaw discloses a communication system that provides presentation and conferencing functions. (EX-1008, ¶2; EX-1012, 1:4-7; EX-1002, ¶¶79-81). The

Grimshaw system includes individual user modules 14-20 that each connect to a laptop computer and allow them to send content to display module 22. (EX-1008, ¶12; EX-1012, 1:23-2:6). The user modules include a button which let a user take control over the content of display module 22 and switch the displayed content to the content on their respective laptop. (*Id.*, ¶19; EX-1012, 5:8-24).

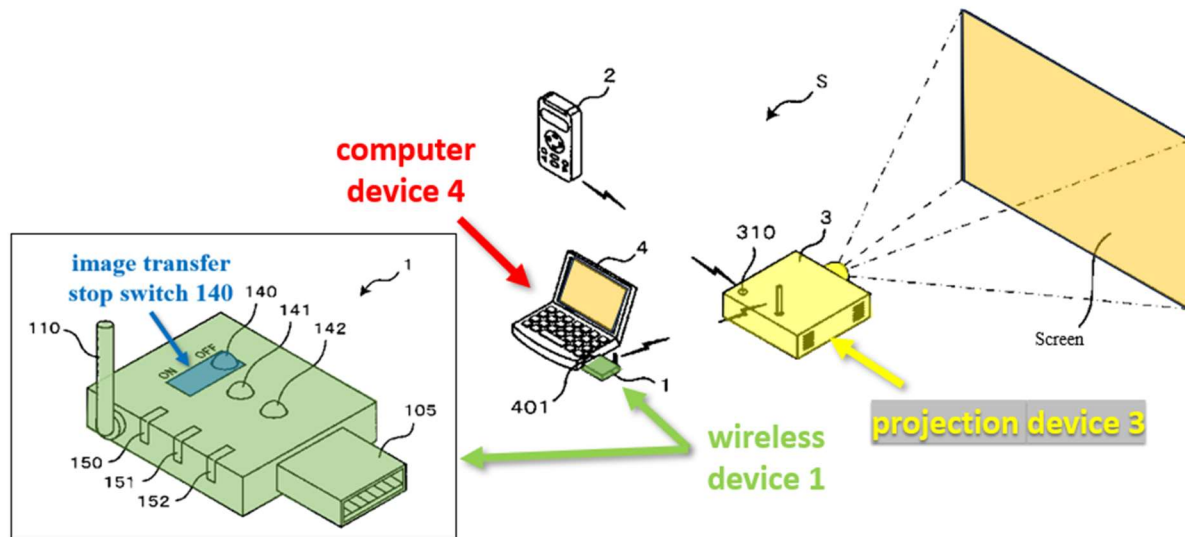


(EX-1008, FIG. 1; EX-1012, FIGS. 1-3).

#### E. Uchida (Ex-1009)

Uchida discloses a method for wireless connecting an image projection device to a computer device. (EX-1009, Abstract; EX-1002, ¶¶82-84). A wireless USB dongle (wireless device 1) couples to computer device 4 through a USB connector 105. (*Id.*, ¶¶4, 39). Wireless device 1 “transmit[s] image data [from the computer

device 4] to the image projection device 3” where, thereafter, the image projection device “projects an image corresponding to the image data on the screen.” (*Id.*). An image transfer stop switch 140 may halt or allow image transfer. (*Id.*, ¶¶70-72).



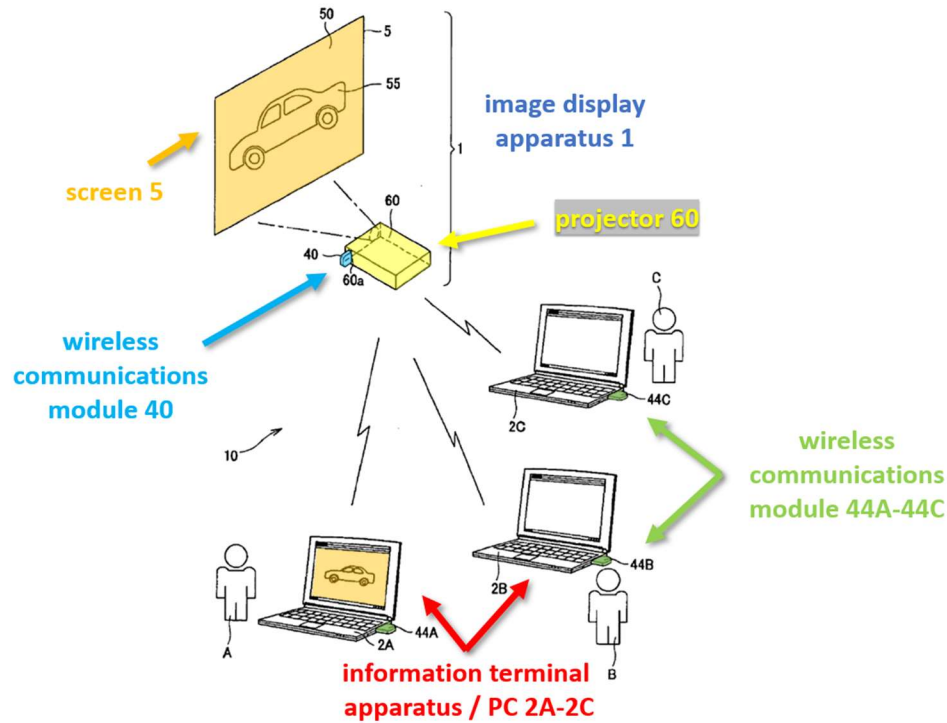
(EX-1009, FIG. 1).

## **X. DETAILED GROUNDS OF UNPATENTABILITY**

### **A. Ground I – Claims 1-4, 6-11 and 13-21 are Rendered Obvious by Ono and Corbett**

#### **1. Rationale to Modify Ono’s System**

Ono discloses an electronic meeting tool in the form of an image display system. (EX-1005, abstract, ¶2). A peripheral device (communications module 44) couples to a PC (information terminal apparatus 2) to wirelessly transfer image information to an image display apparatus 1. (*Id.*, ¶36).



(EX-1005, FIG. 1).

Ono also discloses that *an input device* (remote control 69) includes a physical actuator that can switch among PCs and display image information from the selected PC. (*Id.*, ¶¶7, 144). Although Ono does not disclose that the *peripheral device* (communication module 44) *comprises* an *input device* (as recited in claim 1), it would have been obvious to a POSITA to include input device/physical actuator (providing functionality like Ono's remote controller device) with a peripheral device (like communications module 44) for the following reasons (EX-1002, ¶¶85-100):

First, combining Ono's remote controller actuator with Ono's communications module "simply arranges old elements with each performing the

same function it had been known to perform” and yields predictable results. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). Physical actuators (like those of Ono’s remote controller) were ubiquitous and commonly incorporated into electronic devices. (EX-1002, ¶92). Combining Ono’s user input device (remote controller) with Ono’s peripheral device (wireless communications module) could have been accomplished according to known methods (*e.g.*, physically joining remote controller and communications module). (EX-1002, ¶¶86-91). In the proposed combination, each component would have performed the same function as it did separately—namely wireless transmission/reception by the communication module and PC selection by the remote controller. (*Id.*).

Moreover, independent of this and yet further supporting it, there was a known desirability to provide a user of an electronic meeting tool with a local input device that would allow control over sharing the content of the user’s computer screen to a shared display. (EX-1002, ¶¶87-91). Grimshaw and Uchida both illustrate this desirability in the art and thus provide a specific design incentive to make the proposed modification to Ono’s wireless communications module. (*Id.*). Specifically, each describe an input device located on a peripheral device, where the input device is a physical actuator that triggers transmission of the user’s computer screen content to a shared display, and thus provide a function like Ono’s remote controller. (EX-1002, ¶¶87-91). Thus, a POSITA would have found it obvious to

provide such an input device with the peripheral device in light of this known design incentive. *KSR*, 550 U.S. at 417 (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”).

Second, Corbett illustrates that the particular placement of the input device would have been an obvious matter of design choice within the skill of the art. (EX-1002, ¶¶92-100). For example, analogous art such as Corbett illustrates similar functionality of a user input device to trigger transmission on a similar wireless peripheral device. (EX-1007, ¶¶22-23; EX-1002, ¶93). Specifically, Corbett discloses a wireless USB flash drive 100 with a transmitter 122 a transmission initiation button 134 to trigger transfer of information to an external device 150. (*See, e.g.*, EX-1007, ¶¶6, 18, 20, 22-23, 26, 28, 46, FIG. 1; EX-1002, ¶¶96). Thus, Corbett describes one known design option in implementing a similar input device on a similar USB peripheral device. (EX-1002, ¶¶92-97).

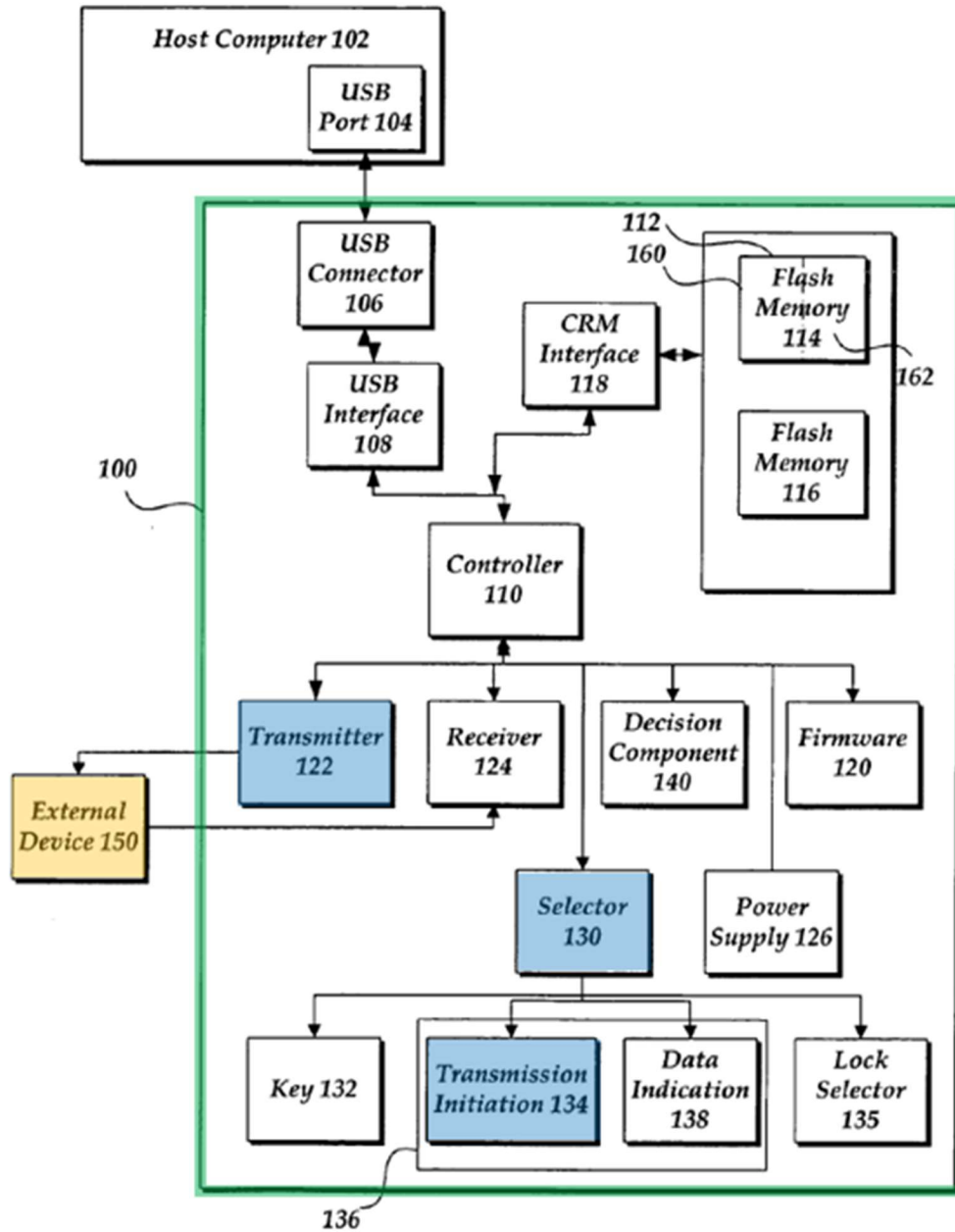


**Fig. 1**

(Ex-1007, FIG. 1).

Although other suitable locations for such an input device, these were finite in number. Corbett, for example, recognizes that a user input device could be displayed on a host computer or on the peripheral device itself. (EX-1007, ¶¶22-23).

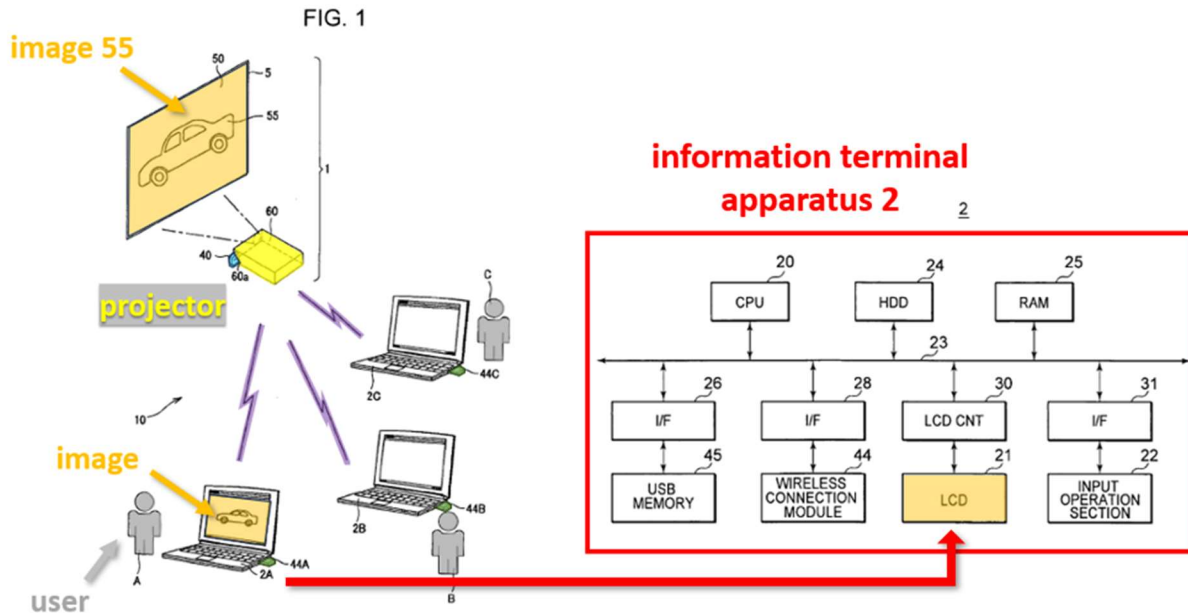
Thus, the prior art describes three potential locations for a user input device for triggering transmission from a peripheral device: the host computer, the peripheral device itself, and a remote controller. (EX-1002, ¶¶98-100; EX-1005, ¶66, EX-1007, ¶¶22-23). Because the art identifies a limited number of known locations for such a user input device, it would have been obvious to combine an input device and peripheral device, as claimed. *See Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1340 (Fed. Cir. 2020); *KSR*, 550 U.S. at 421. It would have been a “predictable variation” of Ono’s system, using a technique that was known to a POSITA, particularly since the location of the input device solves no stated problem in the art. *KSR*, 550 U.S. at 417; *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238 (Fed. Cir. 2010) (finding obviousness when “it is simply a matter of common sense” to combine known elements of the prior art to solve a known problem); *In re Kuhle*, 526 F.2d 553, 555 (C.C.P.A. 1975) (relocating electrical connection “solves no stated problem and would be an obvious matter of design choice”).

## 2. Claims 1 and 9

### a) Limitation 1(pre)/9(pre) - *An electronic meeting tool for communicating user selected arbitrary media content from users at a meeting*

To the extent limiting, Ono discloses *an electronic meeting tool* (image display system 10) *for communicating user selected arbitrary media content* (image information) *from users* (A, B, C) *at a meeting*. (EX-1005, ¶¶35-39, 55, 61-62, 73-

74, 88-89, 144, FIG. 1, 7; EX-1002, ¶¶101-127). A POSITA would have understood user A, for example, may generate, create or select any media content for display on LCD 21 of information terminal apparatus 2A as *user selected arbitrary media content*. (EX-1005, ¶¶88-89, FIGS. 1, 7; EX-1001, 11:43-50).



(*Id.*, FIGS. 1 & 7).

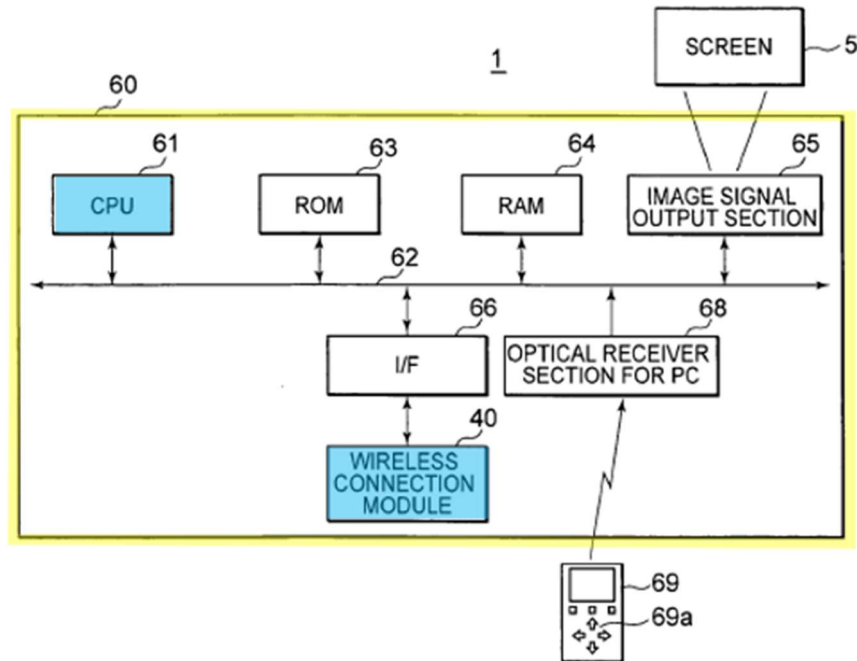
Ono further discloses a user may select their image information for display by the image display apparatus “and therefore, presentations can be conducted speedily.” (EX-1005, ¶144; *see also id.*, ¶¶38-41, 73, 88-89). Thus, a POSITA would have understood Ono to disclose an electronic meeting tool for communicating user selected arbitrary media content from users at a meeting, as claimed. (EX-1002, ¶¶103-108).

**b) Limitation 1(a)/9(a) - *a base node, the base node being coupled to a first display, the base node being adapted to receive user selected arbitrary media content from at least one peripheral device via a wireless communications network, and to control display of the user selected arbitrary media content on the first display***

Ono discloses *a base node (e.g., wireless communications module 40 and control section (CPU) 61, integrated in image display apparatus 1), the base node being coupled to a first display (e.g., an image display apparatus 1 including, e.g., projector 60 and display screen 50), the base node being adapted to receive user selected arbitrary media content (image information) from at least one peripheral device (wireless communications module 44A, 44B, 44C) via a wireless communications network, and to control display of the user selected arbitrary media content on the first display (via control section 61).*<sup>4</sup> (EX-1005, ¶¶42-44, 65, 89, FIGS. 1-3, 6-7, 9; EX-1002, ¶¶109-112). A POSITA would have understood the wireless communications module 40 and control section 61 constitute “a base node” at least because the ’951 patent provides an example with similar structure (*i.e.*, a processing device and connection unit). (EX-1002, ¶¶110).

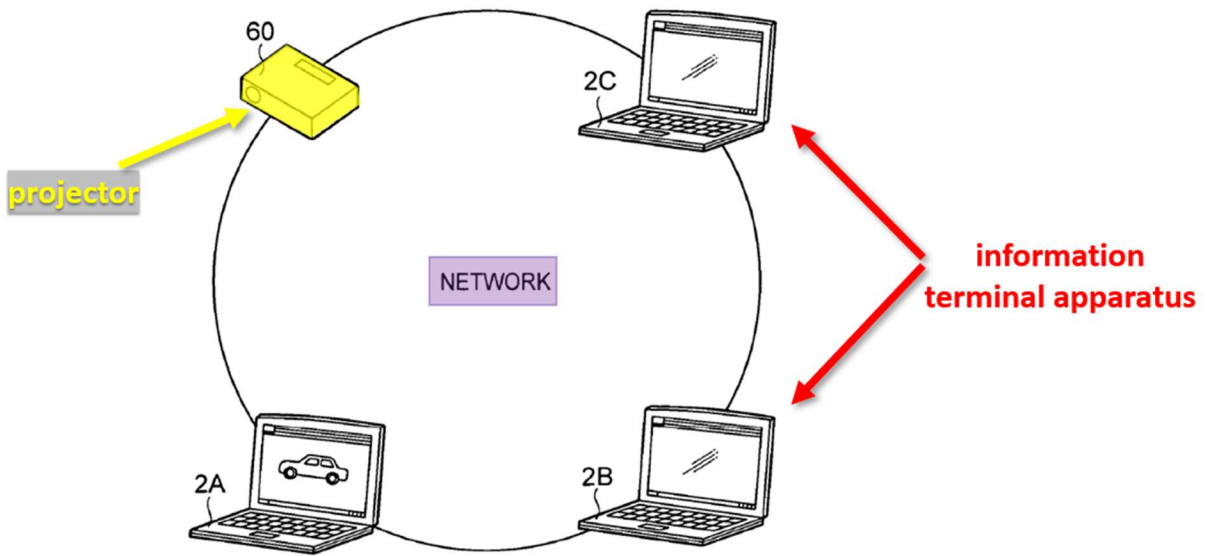
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<sup>4</sup> The identification of structure corresponding to the claim elements is exemplary only. For example, projector 50 constitutes a “base node” coupled to screen 5 (“first display”). Ono also teaches alternatives to a screen as a display. (See EX-1005, ¶162; EX-1002, ¶109.)



(*Id.*, FIG. 6).

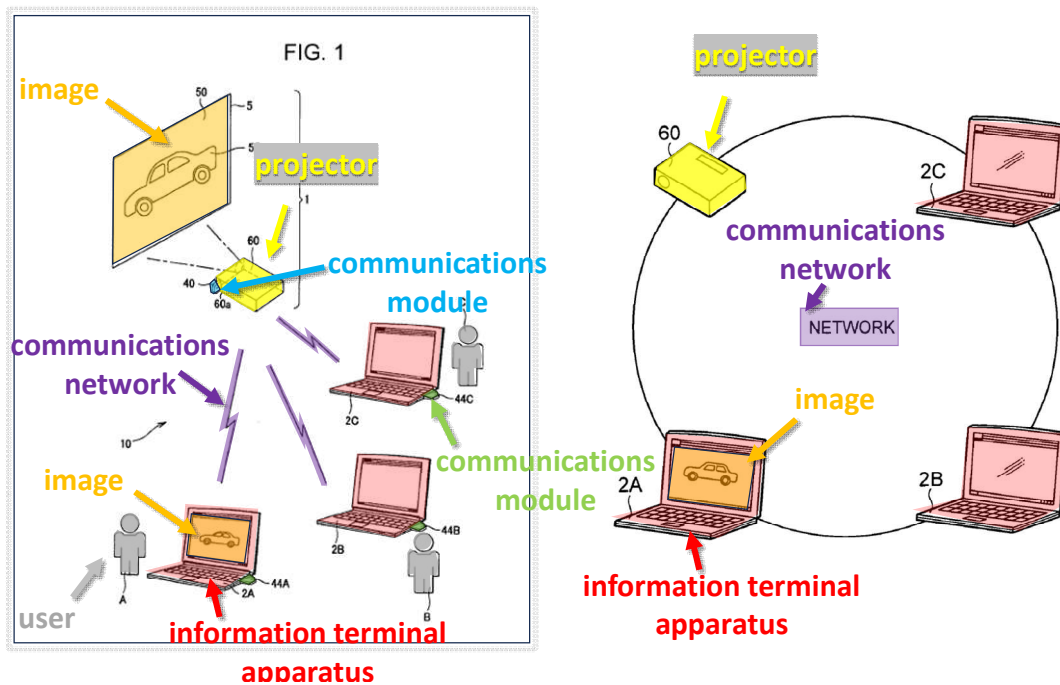
Ono discloses wireless communications module 40 receives image information from communication module 44A via a wireless communications network. (EX-1005, ¶¶11 (“[A]n image display apparatus [] receives a transfer of image information via the network”), 37-38, 41-42, 52, FIGS. 1-3, 6-7, 9; EX-1002, ¶¶111; *see also* §VIII.A.1(b)(discussing arbitrary media content)). Ono also discloses that control section 61 controls display of the image information on screen 5. (EX-1005, ¶¶89-90, 65-70). Ono illustrates the wireless communications network in Figure 2 (below). (EX-1005, ¶19).



(*Id.*, FIG. 2).

**c) Limitation 1(b)/9(b) - *the at least one peripheral device being adapted to communicate the user selected arbitrary media content to the wireless communications network***

Ono discloses *at least one peripheral device* (wireless connection module 44A, 44B, 44C) *being adapted to communicate the user selected arbitrary media content* (image information) *to the wireless communications network*. (EX-1005, ¶¶35, 38-42, 50, 55, 62, 88, 144, FIGS. 1-2; EX-1002, ¶¶113-114). For example, wireless connection module 44A transmits image information from information terminal apparatus 2A to communications module 40 via a wireless network. (*Id.*).



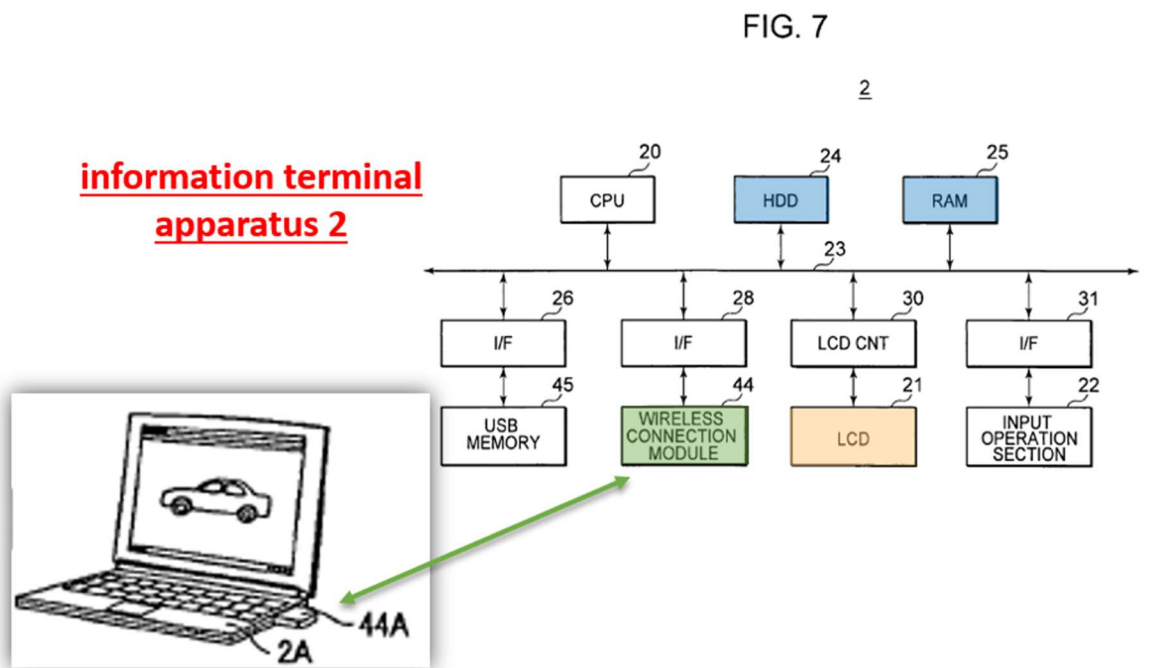
(*Id.*, FIGS. 1-2).

**d) Limitation 1(c)/9(c) - *the at least one peripheral device is a connection unit***

Ono discloses that *the at least one peripheral device* (wireless communication module 44A, 44B, 44C) *is a connection unit* (wireless connection module). (EX-1005, ¶¶39, 54-55; EX-1002, ¶114). For example, Ono states that communications modules 44A, 44B and 44C may be “wireless connection modules.” (EX-1005, ¶¶39). Further, Ono discloses that communications modules 44A, 44B and 44C are used “for the connection and disconnection of communications with the communications module 40 of the projector 60” and thus a POSITA would have understood each wireless communication module 44 is also a connection unit. (EX-1005, ¶¶39-42, 54; EX-1002, ¶114).

**e) Limitation 1(d)/9(d) - a connector adapted to couple to a port of a user processing device, the user processing device having a second display and a memory**

Ono discloses a connector (USB connector) adapted to couple to a port (USB slot) of a user processing device (information terminal apparatus 2A, 2B, 2C), the user processing device having a second display (LCD 21) and a memory (e.g., HDD 24 or RAM 25). (EX-1005, ¶¶39, 54-55, 62, FIGS. 1, 7; EX-1002, ¶¶115-117). Specifically, Ono discloses that wireless communication module 44 is a USB-type peripheral device that is inserted into the USB jack (slot) on the information terminal apparatus 2. (*Id.*) A POSITA would have understood that communication module 44 includes a USB-type connector have designed to fit within a USB jack. (EX-1002, ¶116).



(EX-1005, FIGS. 1 (excerpted), 7).

Ono further discloses each information terminal apparatus 2 has a liquid crystal display 21 and include hard disk drive (HDD) 24 and random-access memory (RAM) 25. (EX-1005, ¶73, FIGS. 1, 7; EX-1002, ¶117).

**f) Limitation 1(e)/9(e) - *a transmitter for transferring user selected arbitrary media content to the wireless communications network***

Ono and Corbett disclose and/or suggests *a transmitter* (a part of the wireless communications module enabling wireless transmission) *for transferring user selected arbitrary media content* (image information) *to the wireless communications network*. (EX-1002, ¶¶118-120). For example, Ono discloses that “image information sent from one or more information terminal apparatuses via a network.” (EX-1005, ¶9; *see also id.*, ¶¶11, 35-42, 50-56, 62, 68-69, 76, 88-89, 144).

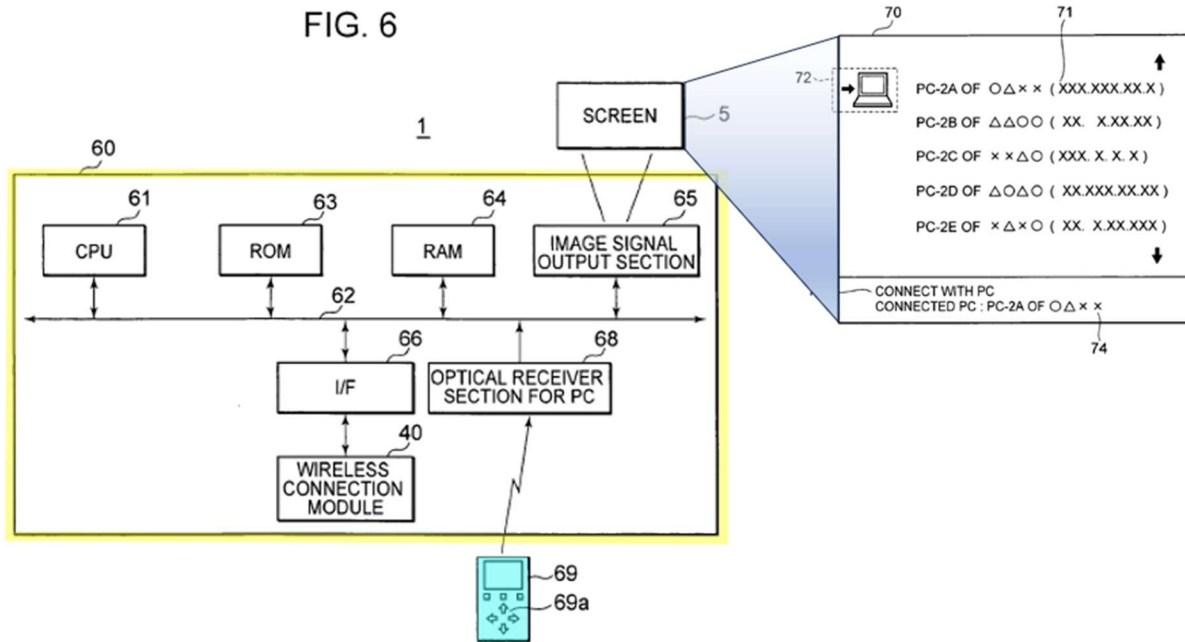
A POSITA would have understood that Ono’s communication modules 44 to include a transmitter chip as necessary means for wireless transmission, like Ono’s communications module 40 and in accordance with well-known wireless transmission protocols. (EX-1005, ¶¶37, 52, 54; Ex. 1007, ¶¶18-21; EX-1002, ¶¶119-120).

**g) Limitation 1(f) - *an input device configured to allow the user to carry out a user action on the input device that triggers transfer of said user selected arbitrary media content from the transmitter to the wireless communications network and to the base node through the wireless communications network for display on the first display, the input device being a physical actuator coupled to the at least one peripheral device***

**Limitation 9(f) - *an input device configured to allow the user to carry out a user action on the input device that triggers transfer of said user selected arbitrary media content from the transmitter to the wireless communications network and via the wireless communication network to the base node for display on the first display***

Ono in view of Corbett discloses *an input device* (remote controller 69) *configured to allow the user to carry out a user action* (e.g., pressing up or down selection key on the operation section of the remote controller 69 and pressing the confirm (enter) key) *on the input device that triggers transfer of said user selected arbitrary media content* (image information) *from the transmitter to the wireless communications network and to the base node* (e.g., wireless communications module 40 and control section 61) *through the wireless communications network for display on the first display* (e.g., an image display apparatus 1 including, e.g., an image signal output section 65 and screen 5). (EX-1005, ¶¶44-48, 66-71, 77-78, 80-89, Figs. 3, 6, 8, 9; EX-1002, ¶¶121-127).

FIG. 8



(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; EX-1002, ¶¶122-126; *see also* §§VIII.A.1(a), VIII.A.1(b)).

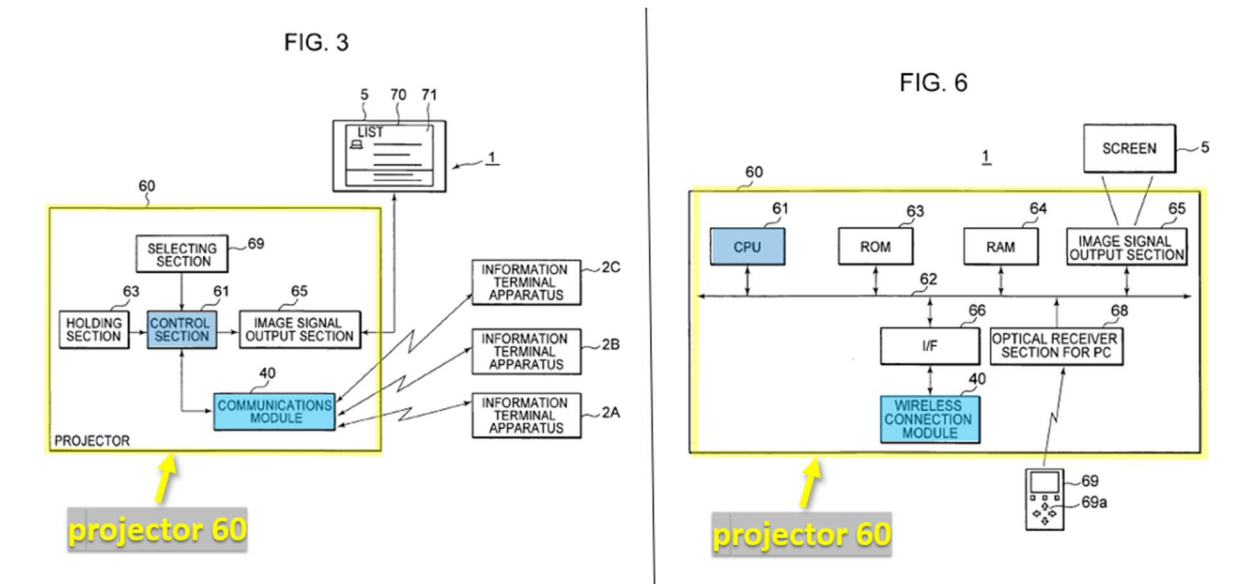
Additionally, Ono discloses that, once the desired PC is connected, remote controller 69 may fast-forward/rewind images on the PC screen and, in conjunction therewith, the images projected on screen 5. A POSITA would have understood this fast-forwarding/rewinding to trigger additional transmissions of image information. (EX-1005, ¶70; EX-1002, ¶127). Hence, Ono discloses the claimed *input device*.

Regarding the additional features of limitation 1(f) (*input device being a physical actuator coupled to the at least one peripheral device*), Ono discloses a *physical actuator* (e.g., keys of remote controller 69). (See §X.A.12(d) (limitation 16(c)). Ono places the actuator on remote controller 69, however, and not included in communications module 44. A POSITA would have found it obvious to incorporate an input device as claimed into Ono's communication module 44 as disclosed by Corbett and discussed in §X.A.1 (citing EX-1007, ¶¶22-23 (discussing a physical actuator on a peripheral device)).

**3. Claims 2, 10, and 17 - said base node is integrated in the first display**

Ono discloses *said base node* ("wireless communications module 40" and "control section 61") *is integrated in the first display* ("image display apparatus 1"). (EX-1005, ¶¶42-43, 50-52, 89, FIGS. 1-3, 6-7, 9; EX-1002, ¶¶128-130). A POSITA would have considered these elements to be "integrated" at least because the '951

patent describes a similar example base node-display arrangement as “integrated.”  
(EX-1002, ¶¶128-130).



(EX-1005, FIGS. 3, 6).

Additionally, a POSITA would have also known that integration of components was a common design choice that would have reduced complexity by eliminated the need for a separate wireless communications module and the need to couple it to the projector. (EX-1002, ¶¶128-130). a POSITA would have been motivated to integrate a base node (like Ono’s communications module 40 and control section 61) with a display (*e.g.*, Ono’s projector 60) to reduced complexity and eliminate the need for the wireless module as a separate device. (*Id.*). A POSITA would have had a reasonable expectation of success in achieving such integration as it would have involved the use of known components and known techniques that were within the conventional knowledge and abilities of a POSITA. (*Id.*).

4. **Claim 3 - a program adapted to be loaded onto the user processing device and to run on an operating system of the user processing device, said program being adapted to obtain said user selected arbitrary media content from the user processing device**
5. **Claim 18 - the step of loading a program onto the user processing device and running the program on the operating system of the user processing device to obtain user selected arbitrary media content**

Ono discloses *a program* (e.g., “connection application 46 and a driver 47”) *adapted to be loaded onto the user processing device* (e.g., “PC 2”) *and to run on an operating system the user processing device, said program being adapted to obtain said user selected arbitrary media content from the user processing device.* (EX-1005, ¶¶50-55; EX-1002, ¶131). A POSITA would have understood that PCs 2A-2C include operating systems, which are used to load and run (execute) connection application 46 to transfer images using the driver 47. (*Id.*).

6. **Claim 4 - the at least one peripheral device is a plug-and-play device**

Ono discloses that communications module 44 is a USB-type device that (EX-1005, ¶¶54, 73, 76, FIG. 7), which a POSITA would have considered a “plug-and-play” device according to the ’951 patent. (EX-1001, 9:46-59; EX-1002, ¶132).

**7. Claim 6 - at least one channel is formed between the transmitter of the at least one peripheral device over the wireless communications network to the base node that is independent from the networking capability of the user processing device**

Ono discloses that *at least one channel* (“wireless communications channel”) *is formed between the transmitter of the at least one peripheral device (e.g., “wireless communications module 44A”) over the wireless communications network to the base node (e.g., “wireless communications module 40” and CPU 61) that is independent from the networking capability of the user processing device (e.g., PC 2A).* (EX-1005, ¶¶36, 41; EX-1002, ¶¶133-135). A POSITA would have understood Ono to disclose wireless communications module 44A to include a transmitter as a necessary component of wireless transmission. (EX-1002, ¶¶134-135). Because this dedicated channel is formed through a peripheral device (*i.e.*, through communication module 44), a POSITA would have understood that it is independent from the networking capability of information terminal apparatus. (EX-1002, ¶135).

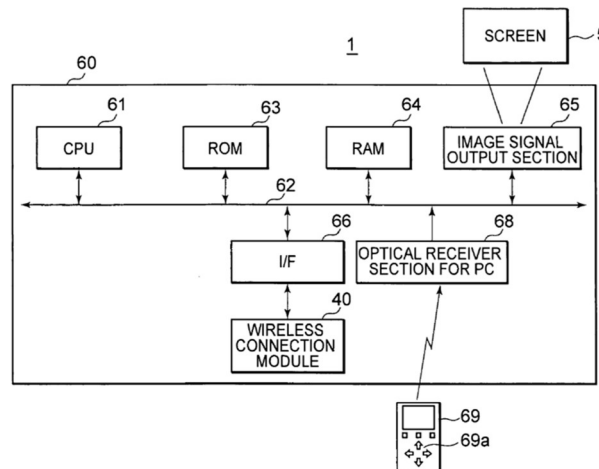
**8. Claim 7 - the at least one peripheral device is configured to encode, compress, and/or encrypt the user selected arbitrary media content when transmitting the user selected arbitrary media content from the transmitter to the base node of the wireless communications network**

For example, Ono discloses that *the at least one peripheral device* (communications module 44A) *is configured to encode, compress, and/or encrypt the user selected arbitrary media content* (image information) *when transmitting the*

*user selected arbitrary media content from the transmitter to the base node (e.g., wireless communications module 40 and control section 61) of the wireless communications network. (EX-1005, ¶¶41 (“[I]nformation terminal apparatus 2A, for example, encrypts image information ... through the communications module 44A.”), 56, 59, 63, 152-155, FIG. 18; see also EX-1007, ¶19, FIG. 2; EX-1002, ¶136).*

**9. Claims 8 and 15 - the first display has a processing unit and the base node is integrated into the processing unit**

Ono-Corbett discloses that *the first display* (image display apparatus 1) *has a processing unit (e.g., control section/CPU 61) and the base node is integrated into the processing unit* (see claim 2). (EX-1005, ¶¶43, 44-46, 50 (“[T]he image information apparatus 1... adopt[s] a hardware configuration that centers around a CPU”), 52, FIGS. 3, 6; EX-1002, ¶137; §X.A.3).



(EX-1005, FIG. 6).

**10. Claim 11 - the input device is displayed on the second display**

Ono-Corbett discloses and/or suggests this limitation for reasons like those explained for limitation 1(f). (EX-1002, ¶¶138-140; §X.A.1). Corbett suggests multiple possible design choices in implementing a user input device. (*Id.*) For example, Corbett discloses that “the user may provide a transmission initiation indication through the host computer system to initiate transmission of data to an external device.” (EX-1007, ¶22). In particular, a client driver of the host computer system 102 may provide “displayed button, or other appropriate user interface or selector which allows a user to initiate transfer of data.” (*Id.*) The host computer system may communicate the transmission initiation indication to the USB flash drive through the USB connection and, “[i]n response ... the transmitter may transmit data to the external device.” Thus, Corbett suggests an input device for triggering transmission of information may be displayed on a display of the host computer. (EX-1002, ¶¶138-140).

As discussed regarding limitation 1(f), a POSITA would have found it obvious to implement an image display system like that of Ono with display button for triggering transmission of image information from an information terminal apparatus to an image display apparatus. (*Id.*) In view of the teachings/suggestions of Corbett and knowledge of a POSITA, a POSITA would have found it obvious to modify an image display system like that of Ono to include input device on the

display of an information terminal apparatus to provide known user input functionalities. (*Id.*) A POSITA would have found it obvious to implement a user input on a display of the user's information terminal apparatus in the modified image display system would have allowed the system to benefit from known techniques. (*Id.*) When configuring and implementing Ono's modified image display system, a POSITA would have contemplated various ways to improve the design and facilitate such user input functionality, and such a skilled person would have recognized that a displayed button, for example, was one predictable way among known ways to allow user input. (*Id.*)

**11. Claim 13 - the input device is on a keyboard connected to the user processing device, is displayed on the second display and is able to be activated with a mouse pointer connected to the user processing device, or is displayed on the second display which is a touch screen and is able to be activated by the user action of touching the input device**

Ono-Corbett disclose and/or suggest at least the second option of claim 13 (*i.e., is displayed on the second display and is able to be activated with a mouse pointer connected to the user processing device*). (EX-1002, ¶¶141-142). As discussed regarding claim 12, Corbett suggests an implementation of the input device as a “displayed button, or other appropriate user interface or selector which allows a user to initiate transfer of data.” (EX-1007, ¶22). A POSITA would have understood from Corbett's reference that the display button refers to a virtual button on a display of the host computer screen (*e.g., a second display*). (EX-1002, ¶¶141-

142). Applying this teaching to an image display system like that of Ono, a POSITA would have immediately envisioned a button displayed on the display of an information terminal apparatus (a host computer) such as LCD screen 21 of Ono. (EX-1005, ¶73, FIGS. 1, 7; EX-1002, ¶¶141-142). A POSITA would have also understood that Ono's information terminal apparatus conventionally includes a mouse as an input operation section 22. (EX-1002, ¶¶141-142). A POSITA would have appreciated how a mouse conventionally controls a pointer on a display screen and enables a user to click on "buttons" displayed on the screen. (*Id.*). Thus, a POSITA would have immediately envisioned that Corbett's reference to a displayed button on a host computer additionally encompassed conventional ways to activate the displayed button, including by a mouse pointer connected to the host computer, as with Ono's mouse connected to the information terminal apparatus. (*Id.*).

For all the reasons discussed above, a POSITA would have found it obvious to implement an image display system like that of Ono with a display button displayed on an information terminal apparatus and able to be activated with a mouse pointer connected to the user information terminal apparatus. (*Id.*). When configuring and implementing Ono's modified image display system, a POSITA would have recognized that a displayed button and mouse pointer was one predictable way among known ways to allow user input. (*Id.*).

**12. Claim 14 - the at least one peripheral device further comprises an optical indicator for providing a visual indication of changes in state of the at least one peripheral device including when the user selected arbitrary media content is being transmitted by the at least one peripheral device**

Corbett discloses *an optical indicator* (a transmission direction selector) *for providing a visual indication of changes in state* (e.g., transmission or reception) *of the at least one peripheral device* (USB flash drive) *including when the user selected arbitrary media content* (data) *is being transmitted by the at least one peripheral device*. (EX-1007, ¶23 (“[T]he USB flash drive ... include[s] a transmission direction selector such as an arrow, selector, switch, and the like to indicate the data flow to be used if transmission is initiated.”); EX-1002, ¶143).

**13. Claim 16**

**a) Limitation 16(pre) - *A method for communicating arbitrary media content from users at a meeting***

Ono discloses this limitation for reasons like those explained above for limitation 1(pre). (EX-1002, ¶¶144-149; §§X.A.1, X.A.2).

**b) Limitation 16(a) - *operating a first display, wherein the first display is coupled to a base node, the base node being adapted to receive user selected arbitrary media content from a peripheral device via a wireless communications network and to control display of the user selected arbitrary media content on the first display***

Ono discloses *operating a first display* (image display apparatus 1), for example, by “project[ing] an image 55 onto a display screen 50 of the screen 5.”

(EX-1005, ¶38). As discussed regarding claims 1 and 9, Ono discloses *the first display is coupled to a base node (e.g., communications module 40 and control section 61), the base node being adapted to receive user selected arbitrary media content (image information) from a peripheral device (e.g., wireless communications module 44A) via a wireless communications network and to control display of the user selected arbitrary media content on the first display.* (EX-1002, ¶¶146; §X.A.2(b)).

**c) Limitation 16(b) - *connecting the peripheral device to a port of a user processing device and communicating the user selected arbitrary media content to the wireless communications network***

Ono discloses *connecting the peripheral device (e.g., wireless communications module 44A) to a port (USB jack) of a user processing device (e.g., wireless communications module 44A) and communicating the user selected arbitrary media content (image information) to the wireless communications network,* for reasons like those explained above for limitation 1(e) and 1(d). (EX-1002, ¶147; §X.A.2(e), (f)).

**d) Limitation 16(c) - *triggering transfer of said user selected arbitrary media content from said transmitter on the peripheral device to the wireless communications network and to the base node for displaying said user selected arbitrary media content on the first display, the input device being a physical actuator coupled to the peripheral device***

Ono discloses *triggering transfer* (by selecting/connecting a particular PC) of *said user selected arbitrary media content* (image information) *from said transmitter on the peripheral device* (e.g., wireless communications module 44A) *to the wireless communications network and to the base node* (e.g., communications module 40 and control section 61) for displaying said user selected arbitrary media content on the first display (image display apparatus 1), for reasons similar to those explained above for limitation 1(f). (EX-1002, ¶¶148-149; §X.A.1, X.A.2(g)). Ono alone or in combination with Corbett discloses and/or suggests *an input device* (e.g., Ono's remote controller 69 or Corbett's transmission initiation selector 134) *being a physical actuator* (e.g., button) *coupled to the peripheral device*, as discussed regarding limitation 1(f).

Regarding Ono, when remote controller 69 selects a particular PC 2A, a “connection request signal [is] generated by the CPU 61 of the projector 60 of the image display apparatus 1 with respect to [PC] 2A selected by the remote controller 69 [which] is transmitted from the wireless connection module 40 to the wireless connection module 44 of the appropriate information terminal apparatus 2A.” (Ex. 1005, ¶¶82-90, FIG. 9). In this way, the remote controller is indirectly “coupled to”

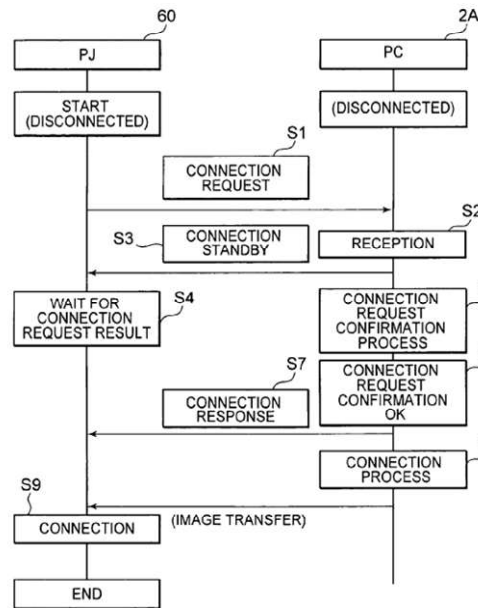
the communication/connection module 44. (EX-1002, ¶148; EX-1001, 13:17-24 (defining “coupled”)).

Regarding Corbett, transmission initiation selector 134 physically resides on the peripheral device (USB flash drive) and in that sense is coupled to the peripheral device. (EX-1007, ¶¶22-23, 28-29; EX-1002, ¶149). A POSITA would have been motivated to include a transmission initiation selector for the reasons discussed above regarding limitation 1(f).

**14. Claim 19 - configuring the peripheral device to connect to the wireless communications network by pairing the peripheral device with the base node**

Ono discloses *configuring the peripheral device (e.g., communications module 44) to connect to the wireless communications network by pairing the peripheral device with the base node (e.g., communications module 40 and control section 61)*. (EX-1005, ¶¶54-63, 76; EX-1002, ¶150). Ono illustrates connection (and pairing) between the information terminal apparatus and the image display apparatus via communication modules 40, 44 in Figure 9. (EX-1005, ¶¶83-90).

FIG. 9



(EX-1005, FIG. 9).

**15. Claim 20 - displaying user selected arbitrary media content on the first display in accordance with a set of rules**

Ono discloses *displaying user selected arbitrary media content* (image information) *on the first display* (image display apparatus 1) *in accordance with a set of rules*, including rules related to display control (switching PCs, fast forwarding/rewinding, blackout, *etc.*). (EX-1005, ¶¶68-72, 77-97, 111-126, FIGS. 9-10, 13; EX-1002, ¶151).

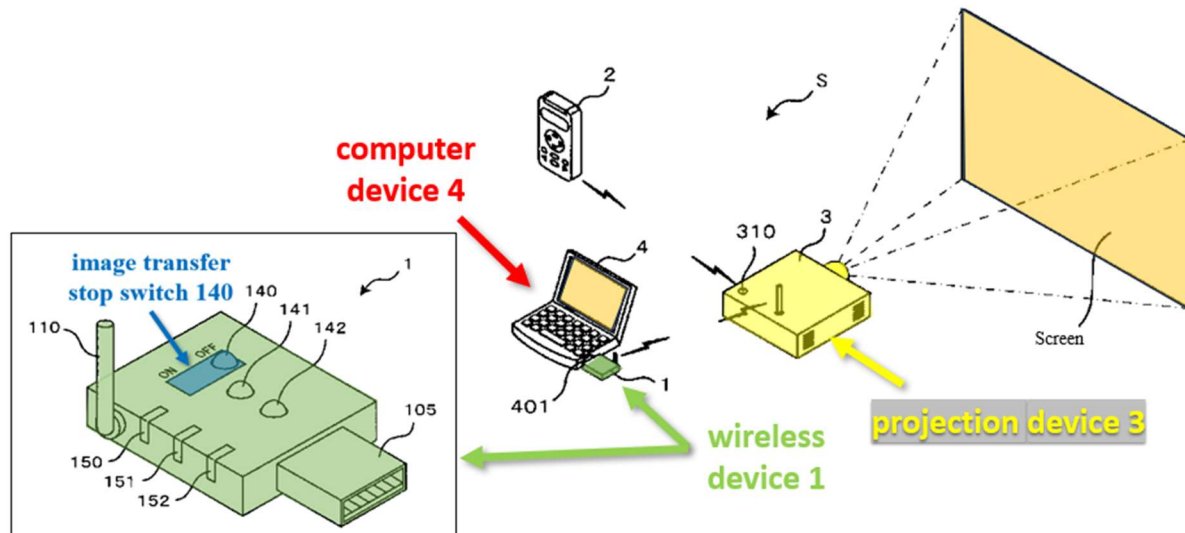
**16. Claim 21**

Ono and Corbett render obvious claim 21 for reasons like those explained above regarding claims 1 and 2. (EX-1002, ¶¶152-160; §§X.A.1-X.A.3).

**B. Ground II – Claims 1-10 and 14-21 are rendered obvious by Uchida and Grimshaw**

**1. Rationale to Modify Uchida's System**

Uchida discloses a method for wireless connecting an image projection device to a computer device. (EX-1009, Abstract; EX-1002, ¶¶161-168). Wireless device 1 transmits image data from the computer device 4 to the image projection device 3 for display of the image data on a screen. (*Id.*). An image transfer stop switch 140 may halt or allow image transfer. (EX-1009, ¶¶70-72).

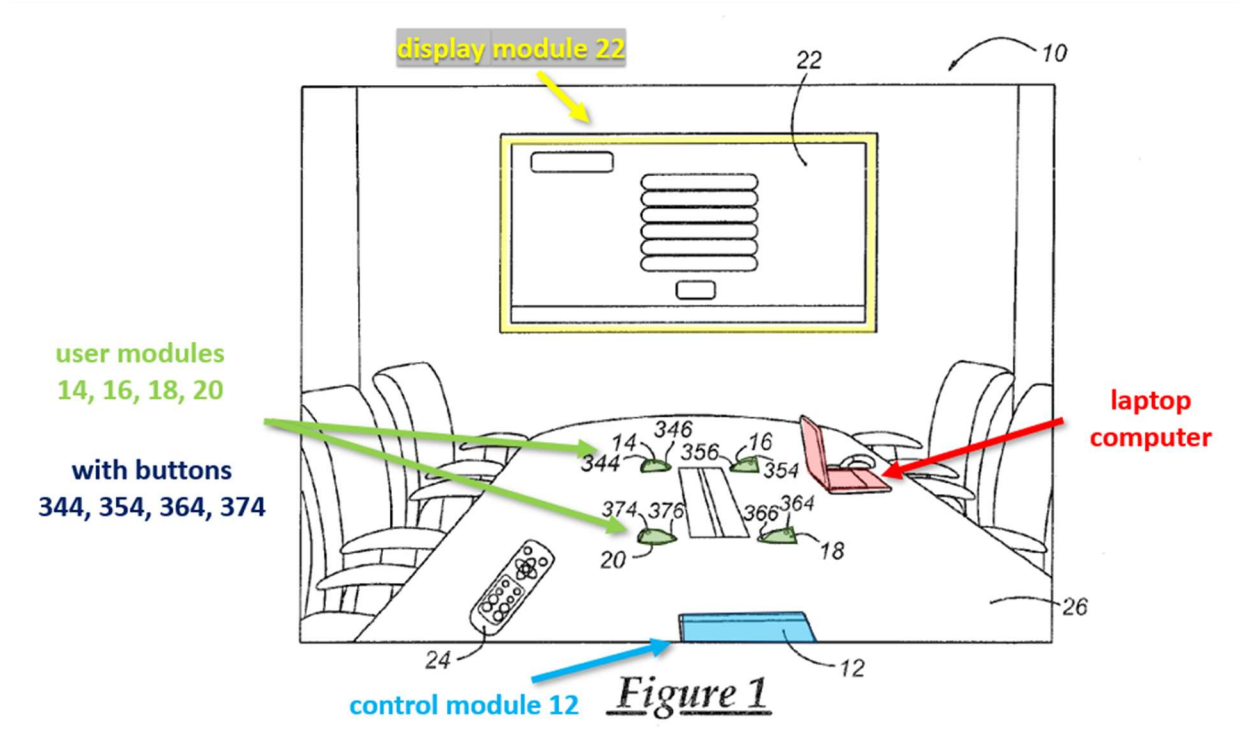


(EX-1009, FIG. 1).

And although Uchida contemplates multiple computers and wireless devices connected to the image projection device, for example in a conference setting, Uchida does not specifically address a scenario where multiple users are vying for control over the display to project images from their individual computers. (EX-1009, ¶¶36-37, 0058, 0112, 0122, 0186; *see also id.*, ¶¶3-12; EX-1002, ¶¶161-168.)

Grimshaw, however, specifically addresses such a scenario and provides suitable solutions. (EX-1002, ¶¶161-168).

Grimshaw discloses a communication system that provides presentation and conferencing functions. (EX-1008, ¶¶2-6, 12; EX-1012, 1:4-2:6). Grimshaw's system includes individual user modules 14, 16, 18, 20 that each couple to a laptop and allow the laptops to send content to display module 22. (EX-1008, ¶12; EX-1012, 1:23-2:6; EX-1002, ¶164).



(EX-1008, FIG. 1; EX-1012, FIGS. 1-3).

Grimshaw discloses user modules 14, 16, 18, 20 can connect to each user's laptop around the table, for example, and—with the push of a button—allow the user to take control of a common display module 22 and display the contents of the user's

laptop screen. (*See, e.g.*, EX-1008, ¶¶4, 0019 (EX-1012, 5:8-24), 0020 (EX-1012, 5:25-6:17).) For instance, Grimshaw explains the case where separate laptop computers are connected to user modules and are vying for control of the display module 22, stating:

a user may engage or push a button 344, 354, 364, 374 on their user module in order 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, ¶¶19-20 (EX-1012, 5:8-6:17).)

Thus, Grimshaw recognizes the desire for attendees at a meeting to have individual control over sharing the content from their laptop and to present it on the shared display, by pushing a button on their user module to trigger transmission of the image data from the laptop to the display. (EX-1008, ¶¶19-20; EX-1012, 5:8-6:17; *see also* EX-1008, ¶¶27-28, FIGS. 1-3; EX-1012, 8:29-9:20, FIGS. 1-3; EX-1002, ¶¶164-166).

Guided by these teachings of Grimshaw, a POSITA would have found it obvious to implement a wireless device (like that of Uchida) with a physical actuator (input device) that triggers transfer of media content from a wireless device to an image projection device through the wireless communications network, as recited in claims 1, 9, 16, and 21. (EX-1002, ¶¶164-168). Such a modification would have

been desirable to address the scenario where multiple users wish to take control of a shared display to present image data from their computer (*i.e.*, share their screen with the group). (*Id.*).

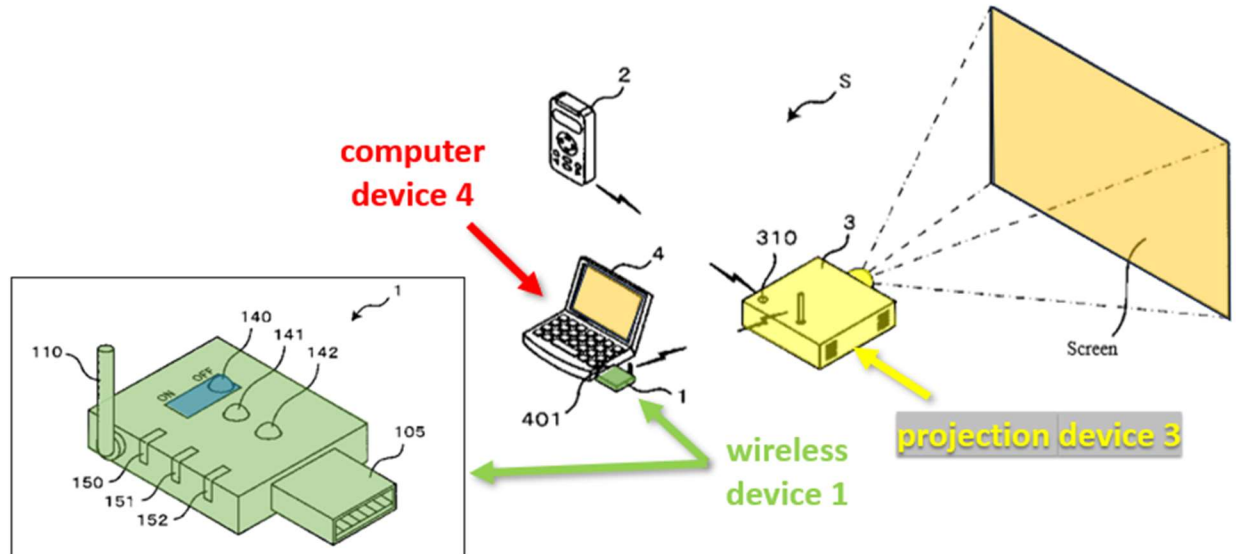
Uchida's wireless device 1 already provides much of this functionality. Thus, any modification to Uchida's wireless device would have been relatively minor and straightforward. (*Id.*) The takeover functionality described by Grimshaw could have been implemented according to known methods. (*Id.*) Therefore, a POSITA would have had a reasonable expectation of success in achieving the claimed combination given the relatively simple modification to a wireless device like that of Uchida. (*Id.*).

## **2. Claims 1 and 9**

### **a) Limitation 1(pre)/9(pre)**

To the extent limiting, Uchida discloses *an electronic meeting tool (image projection system S) for communicating user selected arbitrary media content (data signals) from users at a meeting.* (EX-1009, ¶¶13 (describing “an image projection system including an image projection device having a wireless unit that receives image data transmitted by wireless communication from an external computer device and projects an image corresponding to the image data.”), 0039-59, 0153-158, 0166, 0176, FIGS. 1-3, 14, 17, 18; EX-1002, ¶¶169-171). 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, ¶¶3-09, 0012

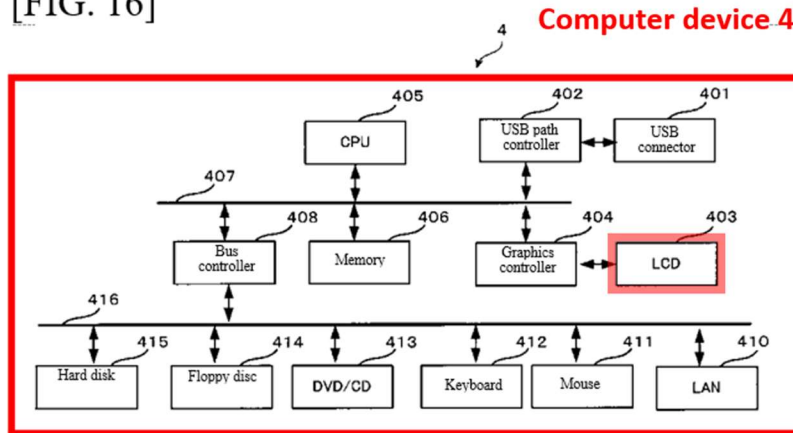
(discussing “when an image projection device is shared among multiple groups”),  
0036-37, 0058, 0112, 0186; EX-1002, ¶170).



(EX-1009, FIGS. 1, 3).

A POSITA would have also understood Uchida’s image data (*i.e.*, data corresponds to the image displayed on LCD 403 of computer device 4. (Ex. 1009, ¶¶39, 0185 (“CPU 405 starts transmitting the image data corresponding to the screen ... displayed on the LCD 403, which is the display unit of the computer device 4, to the image projection device 3.”). Thus, the user may generate, create or select any media content that is appropriate to display in accordance with the ’951 patent. (Ex. 1001, 11:43-50; EX-1002, ¶171).

[FIG. 16]

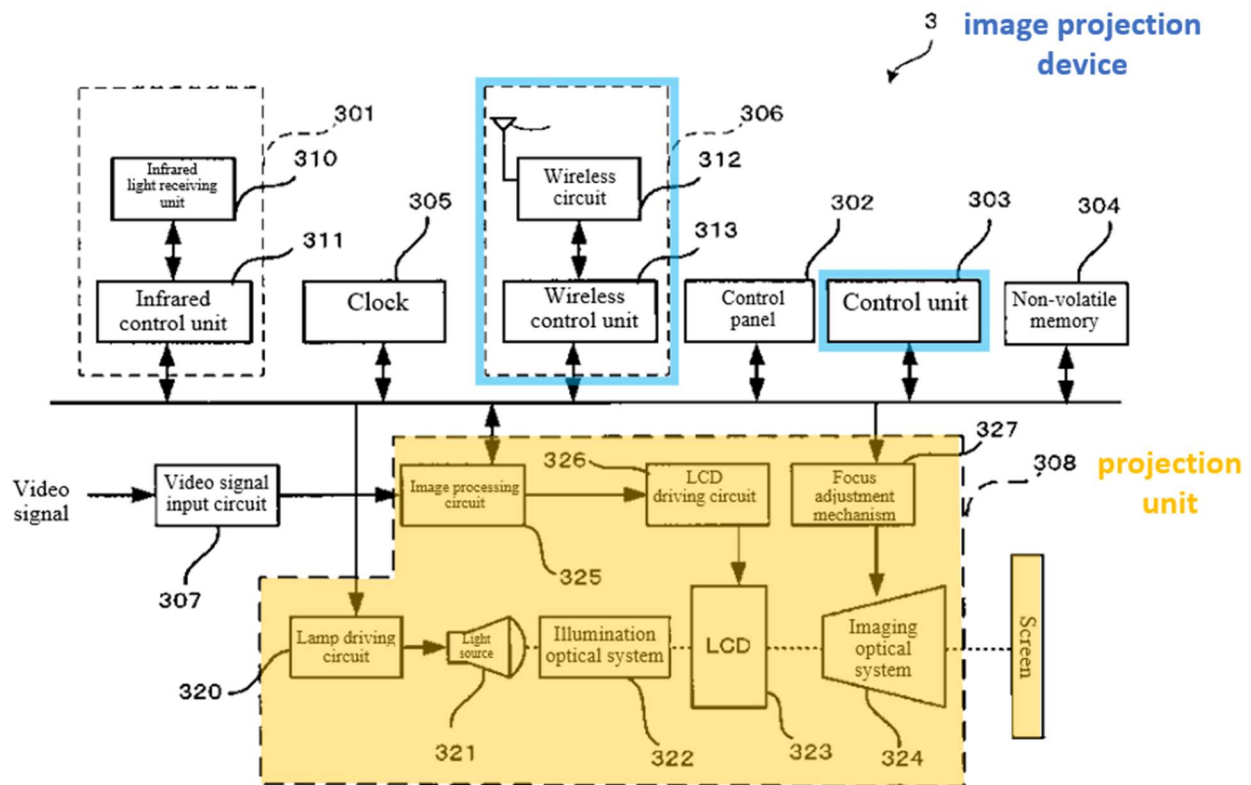


(EX-1009, FIG. 16).

**b) Limitation 1(a)/9(a)**

Uchida discloses *a base node (e.g., control unit 303 and wireless unit 306), the base node being coupled to a first display (e.g., image projector 3 including LCD 323, projection unit 308, and screen), the base node being adapted to receive user selected arbitrary media content (display image data) from at least one peripheral device (e.g., wireless device 1) via a wireless communications network (WLAN), and to control display of the user selected arbitrary media content on the first display.* (EX-1009, ¶¶39-52, 58, 127 (describing how “control unit 303 controls the wireless unit 306 to receive image data transmitted by wireless communication from the computer device 4, and projects an image corresponding to the received image data by the projection unit 308”), 153-158, 124-127 (“[C]ontrol unit 303 that controls the entire image projection device 3,” “wireless unit 306 [] performs wireless communication conforming to the wireless LAN standard,” and “projection

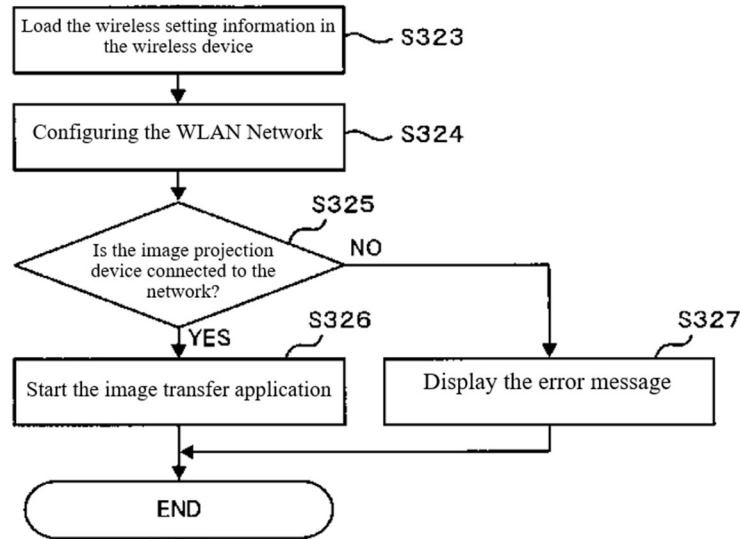
unit 308 [] projects an image based on ... image data received via the wireless unit 306, all of which are built into the housing.”), 166-167, 176 (describing how wireless device 1 “transmits image data via wireless communication to an image projection device 3 that projects an image according to the image data received by the wireless unit 306”), FIGS. 1-3, 14, 17, 18; EX-1002, ¶¶172-173).



(EX-1009, FIG. 14).

Uchida describes how wireless USB device 1 is first connected (*i.e.*, paired) to a remote control device 2 to receive wireless network settings matched to the image projection device 3 and thus establishes a wireless communication network

for sending image data. (EX-1009, ¶¶39-52, 65-69, FIGS. 2, 8, 18; 1002, ¶¶172-173).



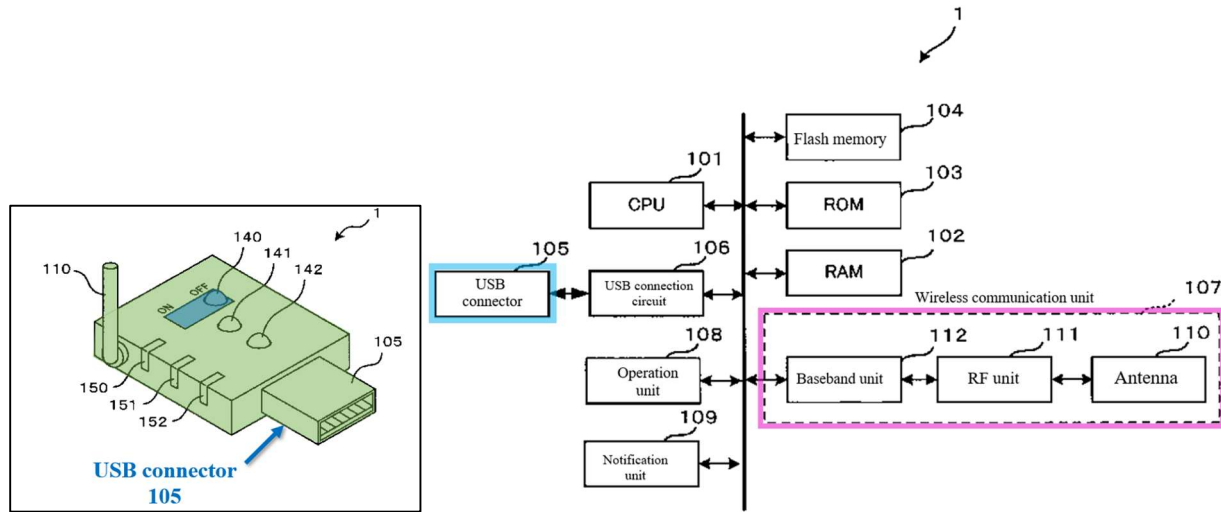
(EX-1009, FIG. 18 (excerpted)).

**c) Limitation 1(b)/9(b)**

Uchida discloses *at least one peripheral device* (wireless device 1) *being adapted to communicate the user selected arbitrary media content* (image data) *to the wireless communications network* (WLAN). (EX-1009, ¶¶39-52 (“[I]mage projection device 3 receives image data transmitted by wireless communication from the computer device 4 via the wireless device 1.... [W]ireless communication between the wireless device 1 and the image projection device 3 can meet the wireless LAN (Local Area Network) standard.”), 65-69 (“[W]ireless communication unit 107 communicates with the wireless unit of the image projection device 3 using settings based on the wireless setting information....”), 81, 154-168, 176, FIGS. 2,

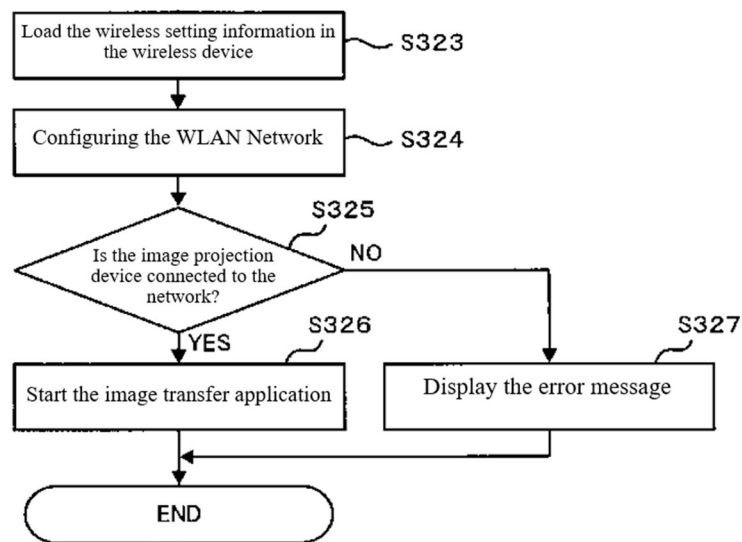
8 (detailing the wireless setting information for the LAN), 17-18; EX-1002, ¶¶174-175).

[FIG. 5]



(EX-1009, FIGS. 3, 5).

For example, as illustrated below, Uchida discloses that wireless device 1 “transmits the data from the wireless device 1 to the image projection device 3 via wireless communication (EX-1009, ¶158; 1002, ¶¶174-175).



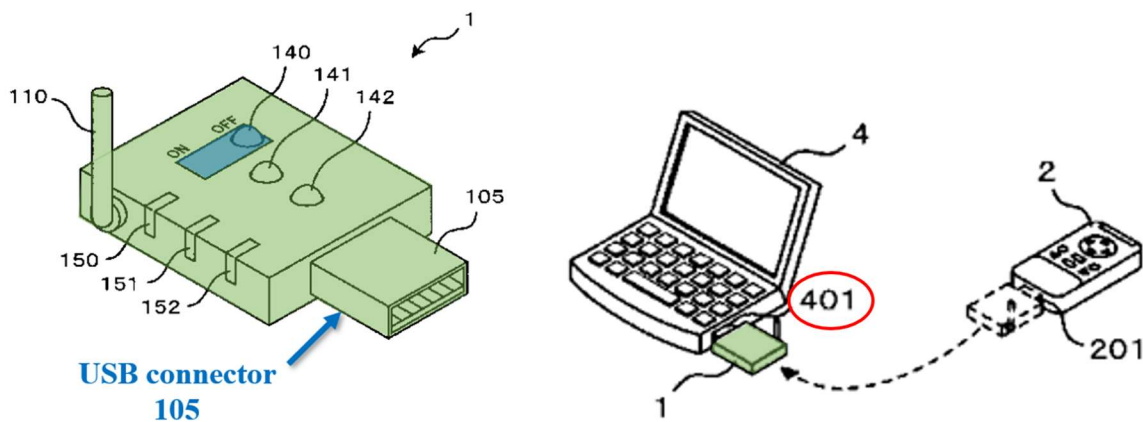
(EX-1009, FIG. 18 (excerpted)).

**d) Limitation 1(c)/9(c)**

Uchida discloses that *the at least one peripheral device* (wireless device 1) is *a connection unit*. (EX-1009, ¶¶39-52, 65-69, 166-167, 0176, FIG. 18; EX-1002, ¶176). Uchida discloses wireless device 1 “configures the WLAN network according to this wireless setting information” and is thus functions as “connection unit.” (EX-1009, ¶166).

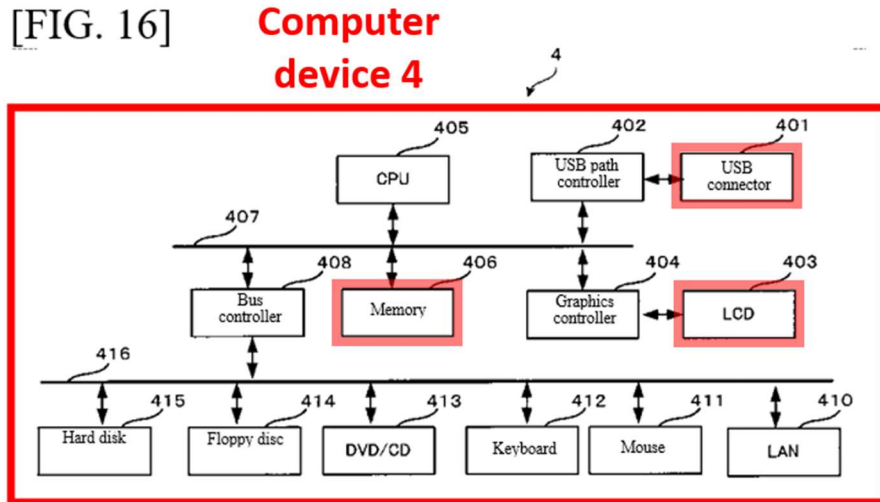
**e) Limitation 1(d)/9(d)**

Uchida discloses the wireless device 1 includes *a connector* (USB connector 105) *adapted to couple to a port* (USB connector 401) *of a user processing device* (computer device 4), *the user processing device having a second display* (LCD 403) *and a memory* (406). (EX-1009, ¶¶39, 47-48, 77, 148, 150, FIGS. 2, 3, 5, 16; 1002, ¶¶177-178). For example, Uchida states that “USB connector 105 of the wireless device 1 is connected to the USB connector 401.” (EX-1009, ¶48).



(EX-1009, FIGS. 2-3 (excerpted)).

Uchida also discloses that “computer device 4 includes ... an LCD 403 as a display unit [and] a memory 406 that stores the programs and various parameters.” (EX-1009, ¶148).



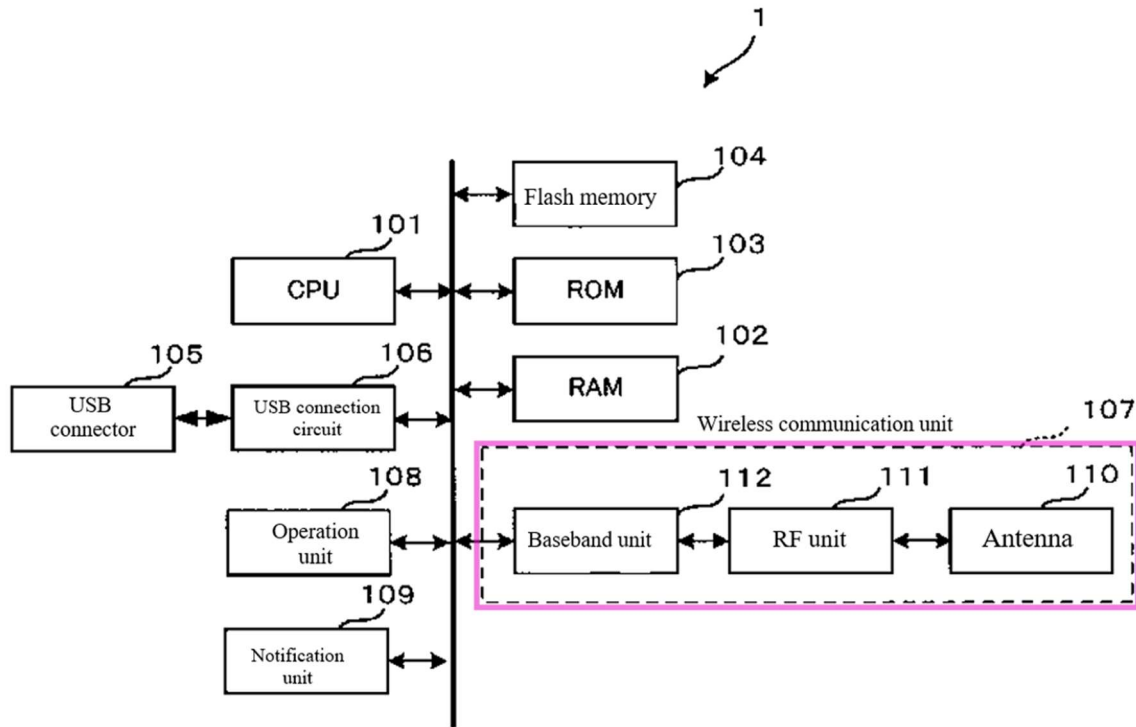
(EX-1009, FIG. 16).

**f) Limitation 1(e)/9(e)**

Uchida discloses the wireless device 1 includes *a transmitter* (wireless communication unit 107) *for transferring user selected arbitrary media content* (image data) *to the wireless communications network* (WLAN). (EX-1009, ¶¶61-69, 154-168, 176 (“[W]ireless device 1 has a wireless unit [107] and functions as a wireless unit of a computer device 4 that transmits image data via wireless communication....”), FIG. 5; EX-1002, ¶179). Uchida discloses that the wireless communication unit 107 includes antenna 110, radio frequency (RF) unit 111, and baseband unit 112, “and is capable of transmitting and receiving data based on the

wireless LAN standard” (EX-1009, ¶68), which a POSITA would have understood to be a transmitter. (EX-1002, ¶179).

[FIG. 5]

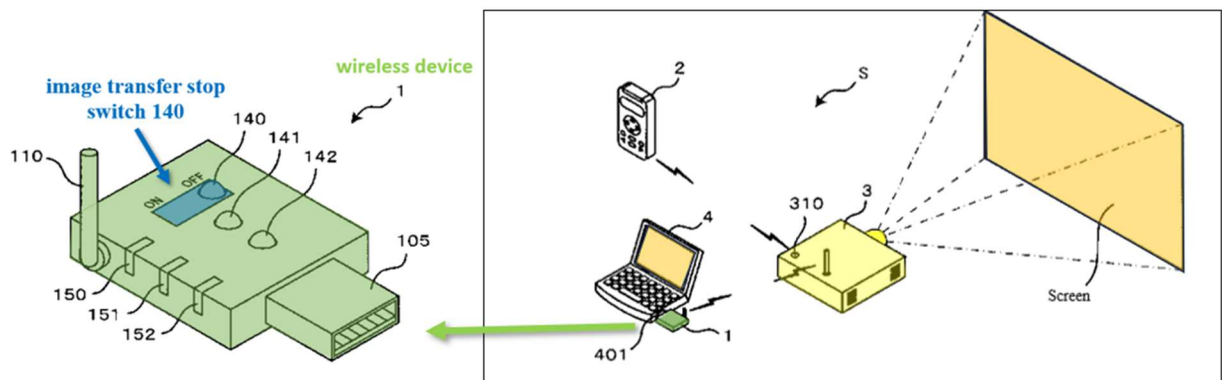


(EX-1009, FIG. 5).

**g) Limitation 1(f)/9(f)**

Uchida in view of Grimshaw discloses the wireless device 1 includes *an input device* (image transfer stop switch 140) *configured to allow the user to carry out a user action* (e.g., sliding switch 140) *on the input device that triggers transfer of said user selected arbitrary media content* (image data) *from the transmitter* (wireless communication unit 107) *to the wireless communications network (WLAN) and to the base node* (e.g., control unit 303 and wireless unit 306) *through the wireless*

*communications network for display on the first display (e.g., LCD 323 of the image projection unit), the input device being a physical actuator (slide switch) coupled to the at least one peripheral device (wireless device 1). (EX-1009, ¶¶10-13, 39-40, 70-72, 134, 139, 176, FIGS. 1-3; EX-1002, ¶¶161-168, 180-182). For example, Uchida discloses that “image transfer stop switch 140 is a slide switch that serves as an image transmission stop operation unit for instructing the image projection device 3 to stop transmitting the image data, and is a changeover switch that switches between an image stop ON mode and an image stop OFF mode.” (EX-1009, ¶71).*



(EX-1009, FIGS. 1, 3).

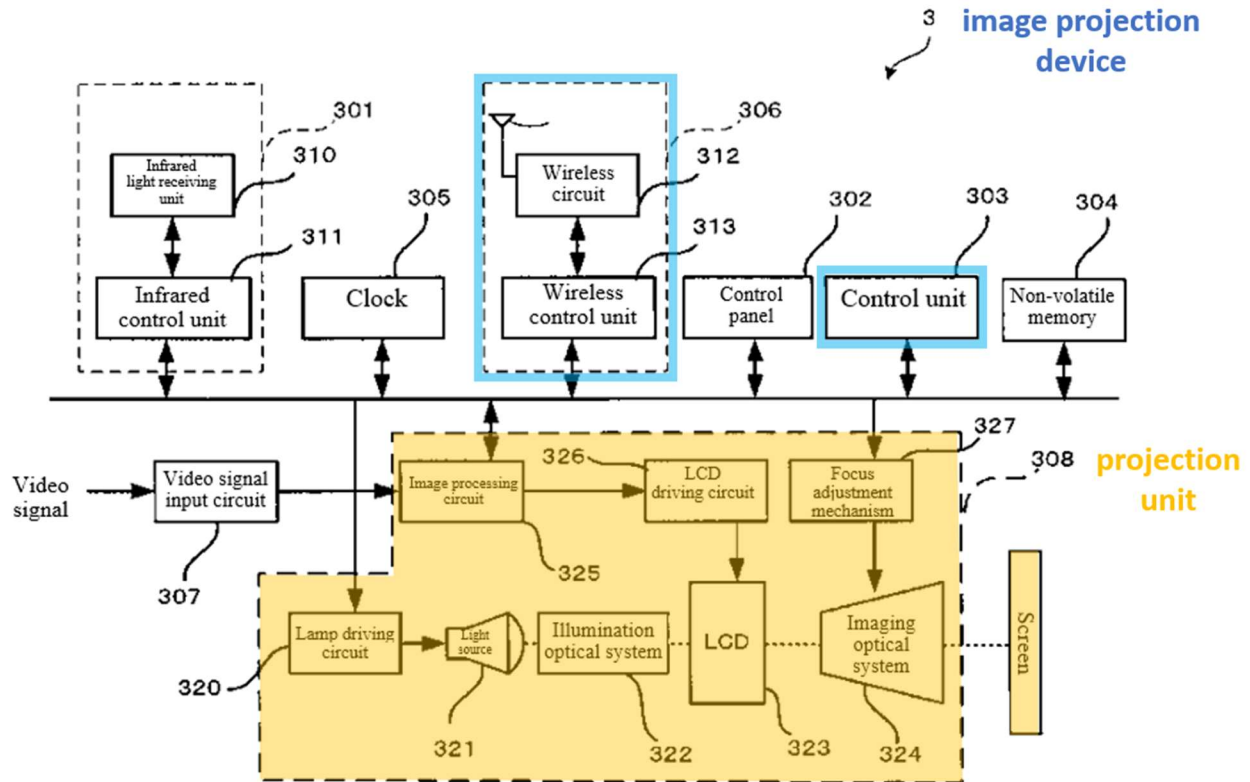
A POSITA would have understood that moving the switch to the “ON” position stops image transfer, while sliding it back to the “OFF” position resumes (and thus triggers) image data transmission. (EX-1009, ¶¶70-72; EX-1002, ¶¶162, 180-182).

Moreover, the input device of limitation 1(f) is also taught by Grimshaw and it would have been obvious to include with Uchida’s wireless device for the reasons

discussed regarding Grimshaw's disclosure where each button *triggers transfer of said user selected arbitrary media content*. (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). (See §X.B.1).

### **3. Claims 2, 10, and 17**

Uchida discloses that *said base node* (e.g., control unit 303 and wireless unit 306) *is integrated in the first display* (e.g., image projection device 3, including LCD 323, projection unit 308). (EX-1009, ¶124; EX-1002, ¶183). For example, as shown in FIG. 14, the image projection device 3 connects a control unit 303, a wireless unit 306, and a projection unit 308, “all of which are built into the housing.” Thus, a POSITA would have understood to disclose a control unit/wireless unit and integrated display. (EX-1009, ¶¶124-134, FIG. 14; EX-1002, ¶183).



(EX-1009, FIG. 14).

#### 4. Claims 3 and 18

Uchida describes *loading a program* (image transfer application) *onto the user processing device* (computer device 4) *and running on an operating system of the user processing device to obtain said user selected arbitrary media content* (image data) *from the user processing device*. (EX-1009, ¶¶48, 52, 80-81, 151-152, 167, 169; EX-1002, ¶184). For example, “[w]hen 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 (hereinafter abbreviated as ‘image transfer application’) stored in the program storage unit of the

wireless device 1.” (EX-1009, ¶48). When an application program for image transfer is installed, it also executed by the CPU 405. (EX-1009, ¶152). “[I]mage 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.” (EX-1009, ¶52).

#### 5. Claim 4

A POSITA would have appreciated that Uchida’s wireless device 1 is advantageously a plug-and-play USB device. (EX-1009, ¶¶150-168, FIGS. 17 & 18; EX-1002, ¶185). For example, Uchida discloses when the wireless device 1 is plugged into computer 4, “the CPU 405 of the computer device 4 determines whether or not the wireless device 1 is connected ... and when a USB device is connected, it is further determined whether this USB device has specific identification information.” (EX-1009, 154; *see also id.*, ¶¶150-168, FIGS. 17 & 18.) Uchida further discloses that if it is determined that wireless device 1 has been inserted, the CPU 405 will recognize the device as a CD-ROM (*i.e.*, a mass storage device) and “starts the auto-run operation process.” (*Id.*) A POSITA would have understood Uchida’s description of wireless device 1 to be consistent with the description of a play-and-play device in the ’951 patent. (EX-1002, ¶185).

**6. Claim 5**

Uchida discloses *the electronic meeting tool is configured to present the at least one peripheral device (wireless device 1) to the user processing device (computer device 4) as a mass storage device (CD-ROM) via a pre-installed generic driver which is a mass storage device driver.* (EX-1009, ¶¶78-83, 150-168, FIGS. 6-7, 17-18; EX-1002, ¶186). Uchida discloses the wireless device 1 will be recognized as a CD-ROM by the operating system when plugged into the computer 4. A POSITA would have understood this to be done via a “pre-installed generic driver,” such as a standard USB mass storage driver on a Windows operating system. (*Id.*).

**7. Claim 6**

Uchida discloses *at least one channel (wireless channel) is formed between the transmitter (wireless communication unit 107) of the at least one peripheral device (wireless device 1) over the wireless communications network (WLAN) to the base node (e.g., control unit 303 and wireless unit 306) that is independent from the networking capability of the user processing device.* (EX-1009, ¶¶41-42, 65, 68, 90, 106, 124, 149, 176, FIG. 8; EX-1002, ¶187; §X.A.2(f)).

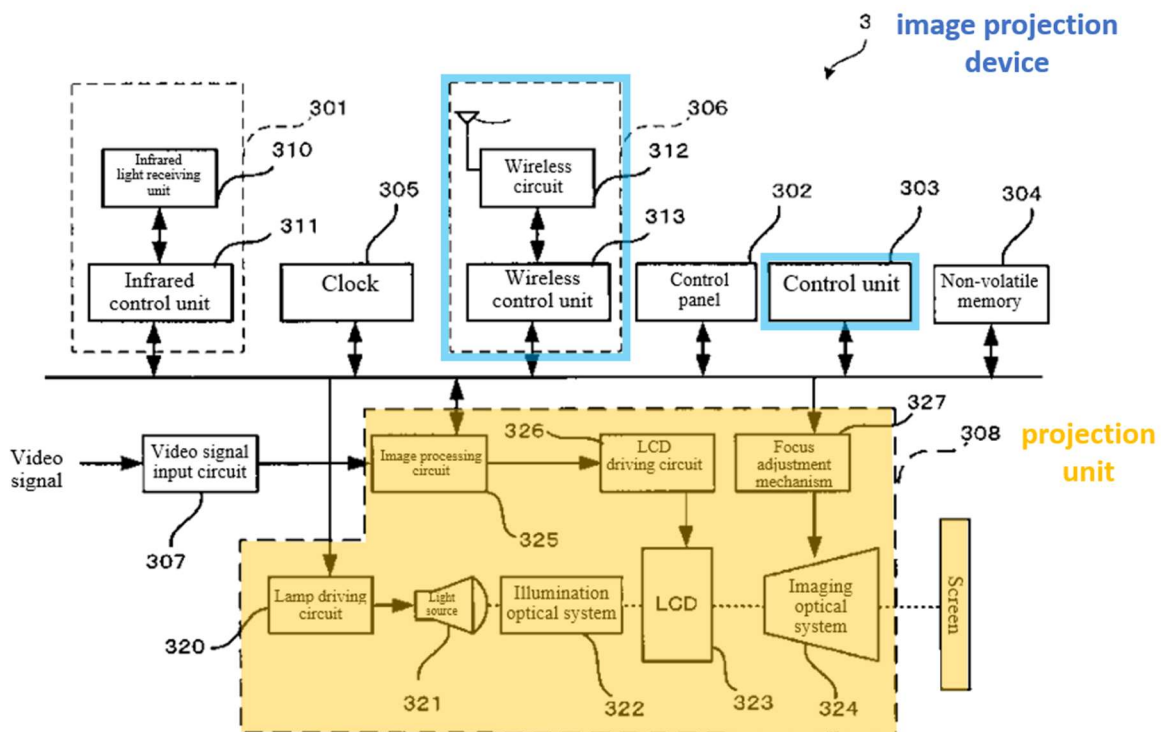
**8. Claim 7**

Uchida discloses *the peripheral device (wireless device 1) is configured to encrypt the user selected arbitrary media content (image data) when transmitting*

*the user selected arbitrary media content from the transmitter (wireless communication unit 107) to the base node (e.g., control unit 303 and wireless unit 306) of the wireless communications network (WLAN.) For example, Uchida's wireless communication technique encrypts data using a WEP (Wired Equipment Privacy) key. (EX-1009, ¶¶11, 41-42, 56-59, 65, 90, 111-112, FIGS. 2 & 8; EX-1002, ¶188).*

## 9. Claims 8 and 15

Uchida discloses the first display (e.g., image projector 3) *has a processing unit (e.g., CPU of control unit 303) and the base node (which may include control unit 303) is integrated into the processing unit.* (EX-1009, ¶¶124, 0127; EX-1002, ¶189).



(EX-1009, FIG. 14.)

**10. Claim 14**

190. Uchida discloses *the peripheral device* (wireless device 1) *further comprises an optical indicator* (image transfer lamp 151) *for providing a visual indication of changes in state of the at least one peripheral device including when the user selected arbitrary media content (image data) is being transmitted by the at least one peripheral device.* (EX-1009, ¶¶75 (“[W]hen image data is being sent from the computer device 4 to the image projection device 3, the image transfer lamp 151 flashes.”), 0155-158, FIGS. 3, 18; EX-1002, ¶190).

**11. Claim 16**

**h) Limitation 16(pre)**

Uchida discloses this limitation for reasons like those discussed above for limitation 1(pre). (EX-1002, ¶¶191-192; §X.B.2(a)).

**i) Limitation 16(a)**

Uchida discloses *operating a first display* (image projection device 3, including LCD 323), *wherein the first display is coupled to (and integrated with) a base node* (e.g., control unit 303 and wireless unit 306) for reasons like those discussed above for limitation 1(a). (EX-1009, ¶¶39-52, 134-139, 127, 153-158, 166, 176, FIGS. 1-3, 14, 17, 18; §X.B.2(b)).

**j) Limitation 16(b)**

Uchida discloses *the base node (e.g., control unit 303 and wireless unit 306) being adapted to receive user selected arbitrary media content (image data) from a peripheral device (wireless device 1) via a wireless communications network (WLAN) and to control display of the user selected arbitrary media content on the first display (image projection device 3).* (EX-1009, ¶¶39, 77, 124 (“The control unit 303 controls the wireless unit 306 to receive image data transmitted by wireless communication from the computer device 4.”), 166-167, 176, FIGS. 1-3, 8, 14, 17-18; EX-1002, ¶194; §§X.B.2(c), (e)).

**k) Limitation 16(c)**

Uchida discloses *connecting the peripheral device (wireless device 1) to a port (USB connector 401) of a user processing device (computer device 4) and communicating the user selected arbitrary media content (image data) to the wireless communications network (WLAN) for reasons like those discussed above for limitation 1(d).* (EX-1009, ¶¶39, 47-48 (“USB connector 105 of the wireless device 1 is connected to the USB connector 401 of the computer device 4.”), 68, 77, 124, 154, 158, 166-167 (“CPU 405 ... transmits the [image] data from the wireless device 1 to the image projection device 3 via wireless communication.”), 176, FIGS. 17-18; EX-1002, ¶195; §§X.B.2(c),(e)).

**I) Limitation 16(d)**

Uchida alone or in combination with Grimshaw discloses and/or suggests this limitation. For example, Uchida discloses *triggering transfer of said user selected arbitrary media content (image data) from said transmitter (communication unit 107) on the peripheral device (wireless device 1) to the wireless communications network (WLAN) and to the base node (control unit 303, wireless unit 306) for displaying said user selected arbitrary media content on the first display (e.g., LCD 323 and screen of image projection device 3), and an input device (image stop transfer switch 140) being a physical actuator (slide switch) coupled to the peripheral device* for reasons similar to those explained for limitation 1(f). (EX-1002, ¶¶196-197; §X.B.1, §X.B.2(g)).

Moreover, Grimshaw discloses pressing a button 344 on user module 14 to trigger transfer of data signals to a control module 12 for displaying content of laptop screen on a display 22. (EX-1008, ¶¶5, 19-20, 27-28; EX-1012, 5:8-6:17). For the same reasons discussed above regarding claim 1, a POSITA looking to implement Uchida's image projection system would have found it obvious to enhance Uchida's wireless module to include an input device as claimed as discussed above in Section X.B.1. (EX-1002, ¶¶196-197).

## **12. Claim 19**

Uchida discloses *configuring the peripheral device* (wireless device 1) *to connect to the wireless communications network* (WLAN) *by pairing the peripheral device with the base node* (e.g., control unit 303 and wireless unit 306) by configuring communication settings for both the wireless device and the image projection device 3. (EX-1009, ¶¶42-48, 0155, 0163-167, FIG. 18; EX-1002, ¶198).

## **13. Claim 20**

Uchida discloses *displaying user selected arbitrary media content* (image data) *on the first display* (e.g., LCD 323 of image projection device 3) *in accordance with a set of rules* (e.g., connection, auto-run operation, timeout processes). (EX-1009, ¶¶159-162, 170-175, FIGS. 17-19; EX-1002, ¶199).

## **14. Claim 21**

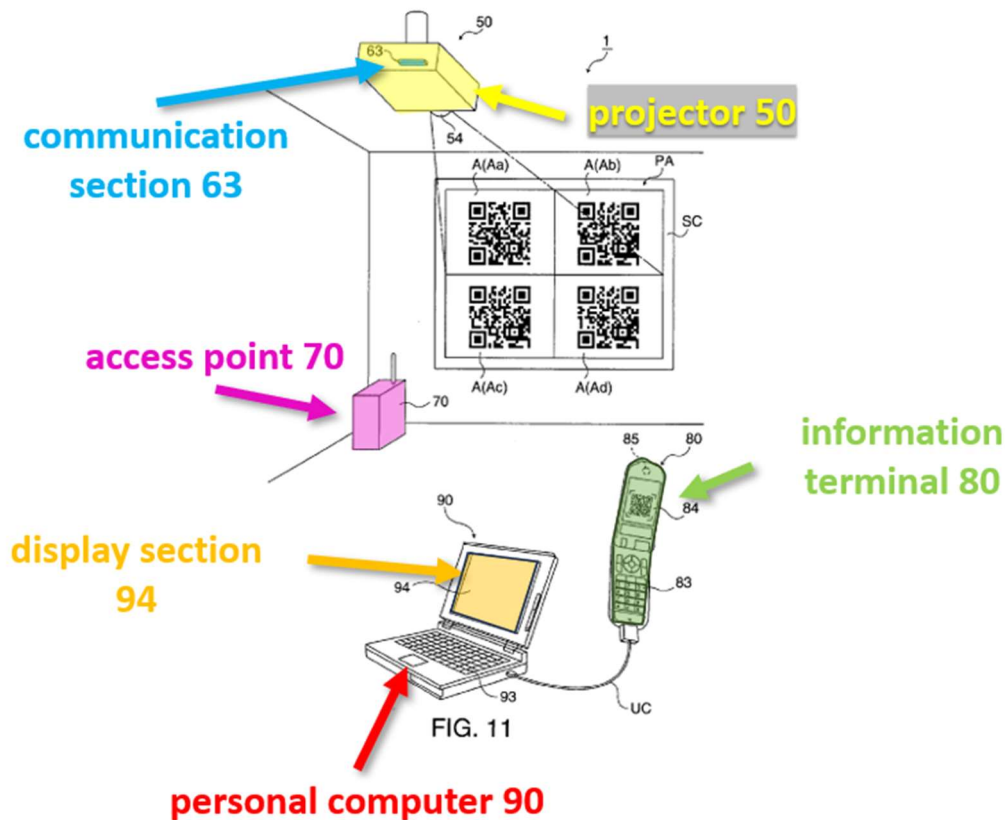
Uchida alone or the Grimshaw-Uchida combination discloses and/or suggests claim 21 for reasons like those explained above regarding claims 1 and 2. (EX-1002, ¶¶200-208; §§ IX.B.1-IX.B.3).

### **C. Ground III – Claims 1-2, 6-10, 13, 15-17, and 19-21 are rendered obvious by Ichieda**

#### **1. Rationale to Combine Embodiments of Ichieda**

Ichieda's third embodiment includes image display system 1 with projector 50, laptop personal computer (PC) 90 (*i.e.*, an image supply device), and information terminal 80 (*i.e.*, a cellphone). (EX-1006, ¶129, FIGS. 11-13; EX-1002, ¶209). After

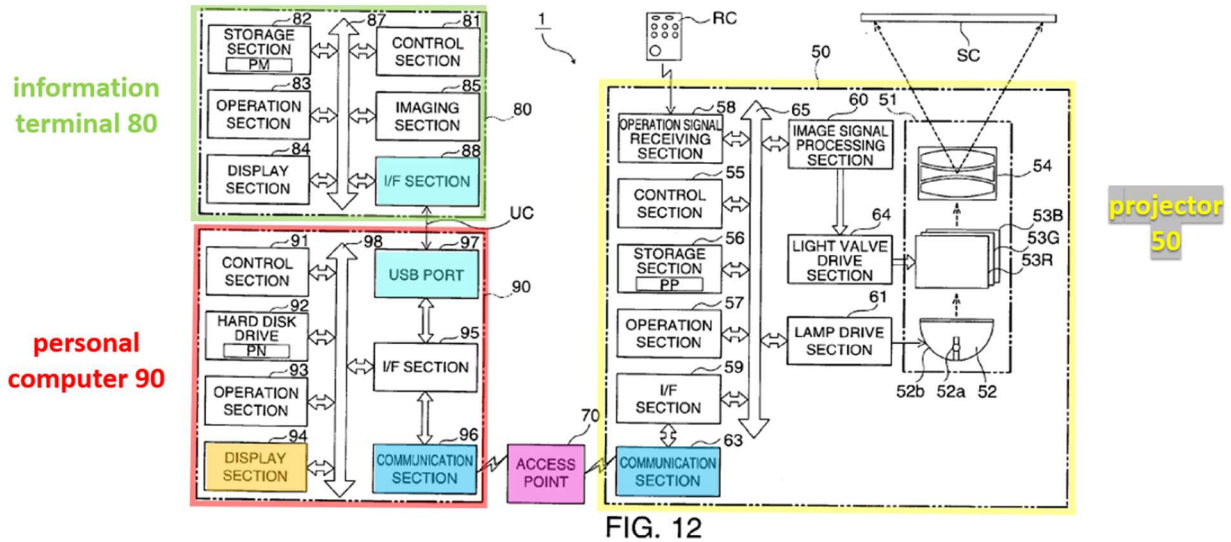
a pairing process between laptop PC 90 and projector 50 (which involves information terminal 80 capturing a barcode image displayed on screen SC), laptop PC 90 is connected via a network to projector 50, which displays an image based on the image signal input from laptop PC 90 in the area of a projection screen associated with the particular captured barcode. (EX-1006, ¶¶8-17, 135, 150, 163, FIGS. 11-13; EX-1002, ¶209).



(EX-1006, FIG. 11).

Ichieda explains that, according to one variation, PC 90 can transmit the image signal through USB port 97, which is connected to the phone (information terminal 80). (EX-1006, ¶136-137; EX-1002, ¶¶210-211). This transmission to the cellphone

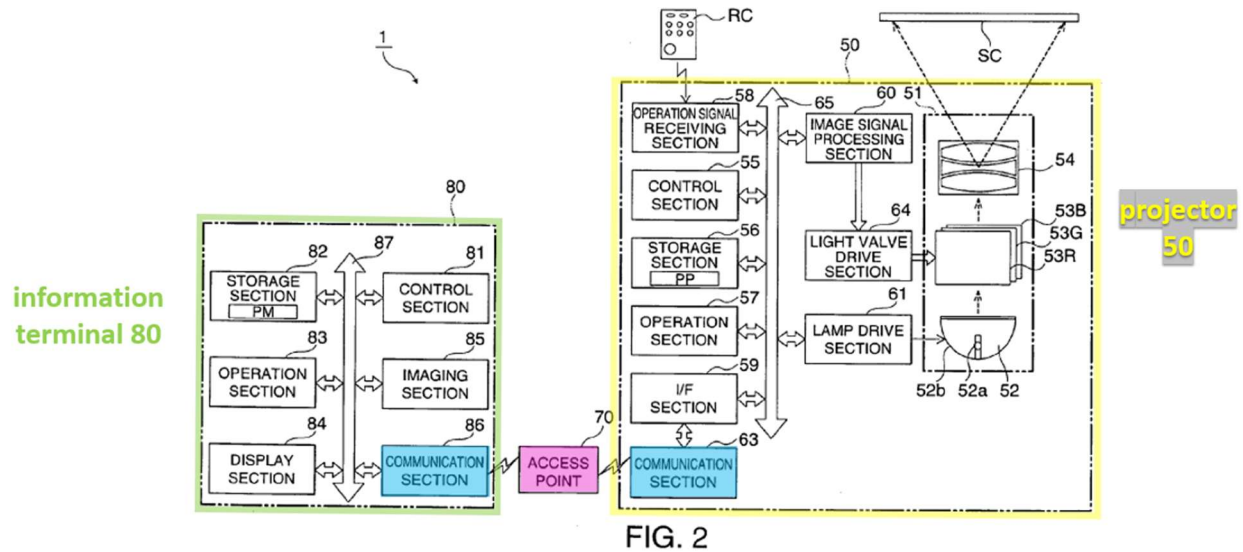
80 is an alternative to using PC 90's communication section 96 (which is illustrated below in Figure 12). (*Id.*)



(EX-1006, FIG. 12).

Although Ichieda does not explicitly describe transmitting the image signal to projector 50 in connection with the third embodiment, Ichieda does explain how to transmit an image signal from the information terminal apparatus 80 (cellphone) to the projector 50 in connection with Ichieda's first embodiment (*e.g.*, FIG. 1). (EX-1002, ¶212). For example, according to the first embodiment, Ichieda explains terminal 80 includes communication section 86, which is a wireless LAN module. (EX-1006, ¶72). Communication section 86 performs transmission of the image signal through a wireless LAN is established between the information terminal 80 and the projector 50. (EX-1006, ¶¶44, 72, 104, 136, FIG. 2; EX-1002, ¶213). Thus,

Ichieda's communication section 86 in cellphone 80 can also be used to transmit an image signal to projector 50. (*Id.*)



(EX-1006, FIG. 2).

Given Ichieda's disclosure of how cellphone 80 can transmit the image signal to projector 50, a POSITA would have understood it would also be used in the variation of the third embodiment, namely utilizing communication section 86 of an information terminal 80 to transmit the image signal (as described with respect to the first embodiment) obtained from USB port 97 of the laptop PC 90 (as described in the third embodiment). (EX-1002, ¶214). As described with respect to both the first and the third embodiment, communication section 63 of projector 50 could receive such an image signal via the wireless LAN. (*Id.*)

Beyond Ichieda's explicit disclosure, a POSITA would have recognized the option to use a communication section of an information terminal, like that described

in Ichieda's first embodiment, to transmit an image signal from a laptop PC to a projector in much the same way as described in the first embodiment (instead of directly from the laptop). (EX-1002, ¶215). In addition, a POSITA would have found it obvious to use such a transmission technique, for example, to free the laptop network card from use. (EX-1002, ¶215). A POSITA would have found such a combination of familiar elements straightforward and predictable at least because Ichieda describes the components (information terminal, communication section, USB port/interface, etc.) and explains how to arrange such transmission according to established methods (for example, wireless LAN standards and USB protocols, etc.). (EX-1002, ¶215). Given the guidance in Ichieda and the well-known components utilized, a POSITA would have had a reasonable expectation of success in achieving the claimed combination. (EX-1002, ¶215).

## **2. Claims 1 and 9**

### **a) Limitation 1(pre)/9(pre)**

Ichieda discloses *an electronic meeting tool for communicating user selected arbitrary media content (image signal) from users at a meeting*. (EX-1002, ¶¶216-220; EX-1006, abstract (“[a]n image display device for displaying an image based on an image signal input from a plurality of image supply devices via a network.”)). In Figure 1, the image displayed on display section 84 of information terminal 80a is displayed in an area Aa on a screen SC. (See EX-1006, ¶¶43, 45, 70, 81-83, FIGS.

1, 2, 6). Similarly, for the information terminal 80b, 80c, and 80d, the content of their respective display section is respectively displayed in area Ab, Ac, Ad on a screen SC. (*Id.*, ¶88).

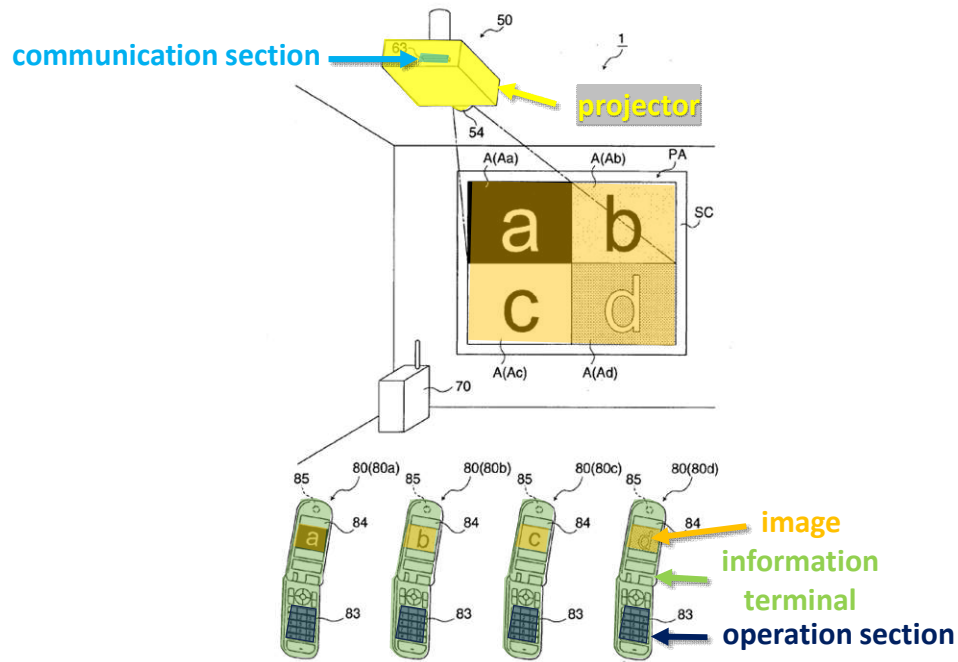
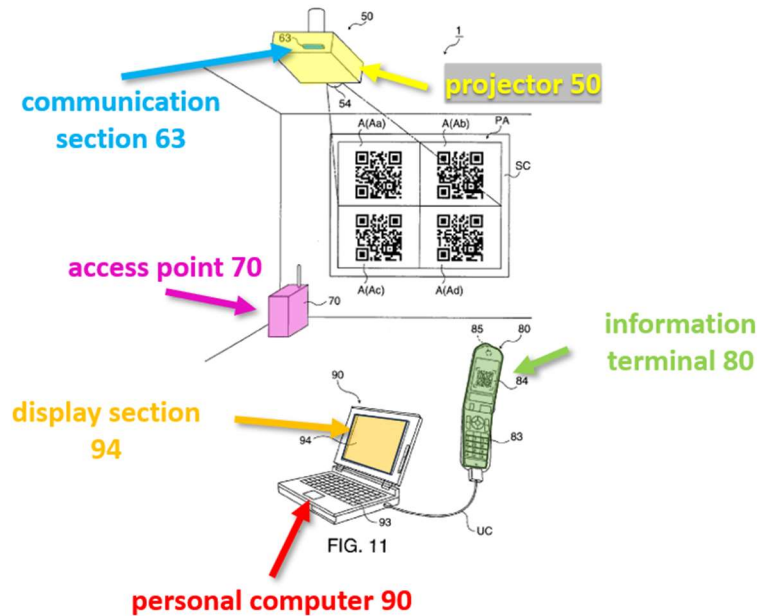


FIG. 1

(EX-1006, FIG. 1)

In Ichieda's third embodiment (FIGS. 11-13), content from display section 94 of PC is displayed, for example, in one quadrant of the screen using a method like Ichieda's first embodiment. (EX-1006, ¶¶115-117, 127-152, FIGS. 11-13; *see also id.*, ¶¶42-48, 58-62, 72-95, FIGS. 1-6; EX-1002, ¶¶219). A POSITA would have thus understood that Ichieda's image display device enables display based on an image signal input from a selected image source and hence the displayed content would have been understood to be "user selected arbitrary media content" as

claimed. (EX-1006, ¶¶81 (where the image source is information terminal 80), 129, 150 (where the image source is instead laptop 90 (third embodiment); EX-1002, ¶220).



(EX-1009, FIG. 11).

**b) Limitation 1(a)/9(a)**

Ichieda discloses *a base node (communication section 63 and control section 55), the base node being coupled to a first display (e.g., projector 50), the base node being adapted to receive user selected arbitrary media content (image signal) from at least one peripheral device (informational terminal 80) via a wireless communications network (wireless LAN), and to control display of the user selected arbitrary media content on the first display.* (EX-1006, ¶¶50, 54, 60, 127-137, FIGS. 11-13; EX-1002, ¶221). Regarding its third embodiment, Ichieda discloses that

communication section 63 and control section 55 are adapted to receive an image signal from PC 90 (*i.e.*, “image supply device”) via a wireless LAN and control display of the image signal on the screen SC. (*Id.*) Ichieda discloses a laptop type PC 90 may be provided with an information terminal 80 (*e.g.*, “at least one peripheral device”). (EX-1006, ¶¶129-137, FIGS. 11-12; EX-1002, ¶222).

**c) Limitation 1(b)/9(b)**

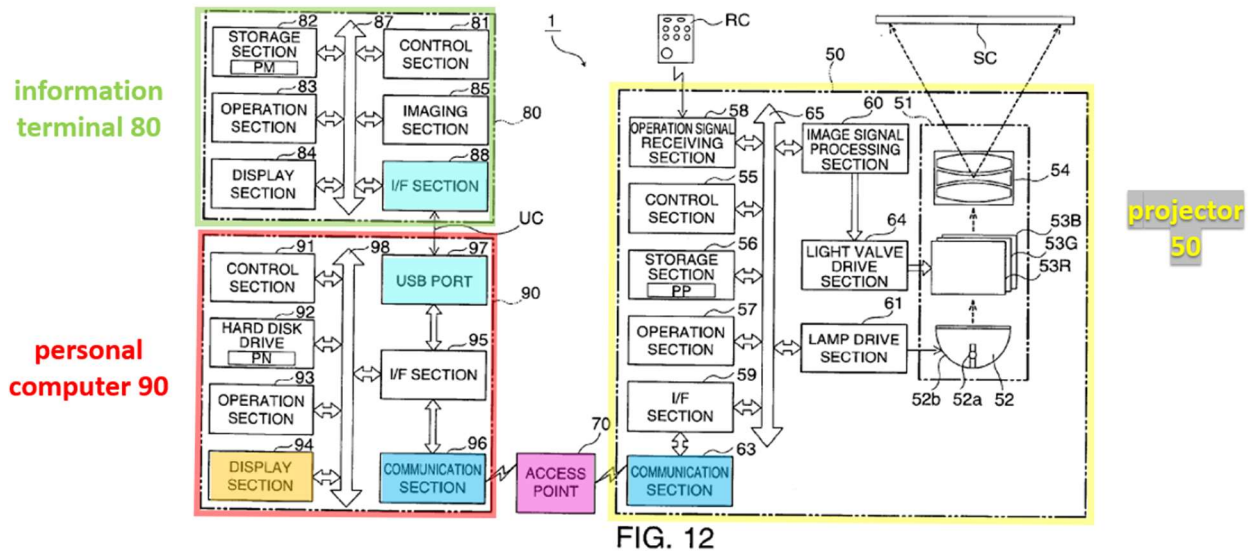
Ichieda discloses the *peripheral device* (information terminal 80) being *adapted to communicate the user selected arbitrary media content* (image signal) *to the wireless communications network* (LAN). With respect to the first embodiment, Ichieda teaches that “[t]he information terminal 80 is arranged to supply (transmit) an image signal to the projector 50 in a condition in which the network connection (wireless LAN connection) with the wireless LAN is established between the information terminal 80 and the projector 50....” (EX-1006, ¶44, 72; EX-1002, ¶223). For the reasons discussed, a POSITA would have combined the wireless transmission technique of Ichieda’s first embodiment with the variation described regarding Ichieda’s third embodiment such that information terminal apparatus 80 is adapted to communicate an image signal to the wireless LAN. (EX-1002, ¶223; EX-1006, ¶72; §X.C.1).

**d) Limitation 1(c)/9(c)**

As noted above, Ichieda discloses the *peripheral device* (information terminal 80) is a connection unit the interface section 88 of the is connected to the USB port 90 of laptop PC 90 via a cable UC in the present embodiment.” (EX-1006, ¶137, FIGS. 11-12; EX-1002, ¶224). Further, as discussed in §X.C.1, according to the proposed combination of Ichieda’s third and first embodiments, the information terminal apparatus would further connect to a LAN to transfer an image signal to the projector 50 via the LAN. (*Id.*)

**e) Limitation 1(d)/9(d)**

Ichieda discloses that the information terminal 80 includes *a connector* (cable UC) *adapted to couple to a port* (USB port 97) *of a user processing device* (PC 90), *the user processing device having a second display* (display section 94) *and a memory* (e.g., hard disk drive 92, ROM, RAM). (EX-1006, ¶¶132-137, FIGS. 11-12; EX-1002, ¶225).



(EX-1006, FIG. 12).

**f) Limitation 1(e)/9(e)**

Ichieda discloses information terminal 80 may include *a transmitter* (communication section 86) *for transferring user selected arbitrary media content* (image signal) *to the wireless communications network* (wireless LAN). (EX-1006, ¶¶72-81 (“Thus, the wireless [LAN] connection between the information terminal 80 and the projector 50 has established, and it becomes possible to transmit the image signal from the communication section 86 of the information terminal 80 to the communication section 63 of the projector 50.”), FIG. 3; EX-1002, ¶¶226-227). Ichieda suggests that such a wireless transmission technique could also be used in conjunction with the third embodiment (Figures 11-13). (EX-1002, ¶¶226-227; §X.C.1).

**g) Limitation 1(f)/9(f)**

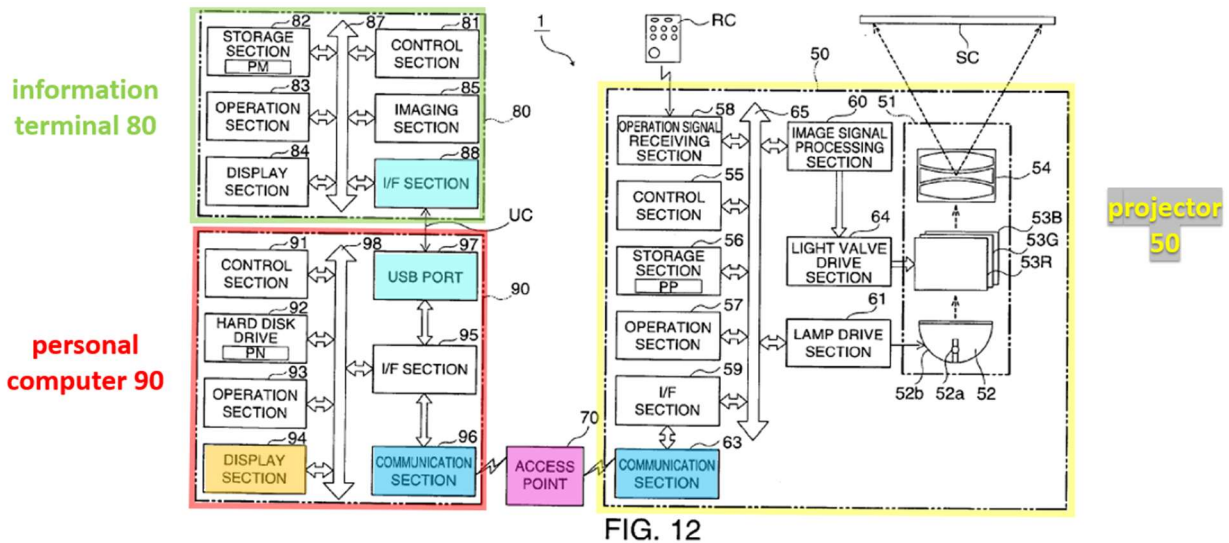
Ichieda discloses *an input device* (operation section 83) *configured to allow the user to carry out a user action* (e.g., pressing a button on operation section 83) *that triggers transfer of said user selected arbitrary media content* (image signal) *from the transmitter* (communication section 86) *to the wireless communications network* (LAN) *and to the base node* (e.g., communications section 63 and control section 55) through the wireless communications network for display on the first display (e.g., screen of projector 50), *the input device being a physical actuator* (connection button) *coupled to the at least one peripheral device*. (EX-1006, ¶¶44, 60, 69 (“The operation section 83 is equipped with a plurality of operation buttons for performing various instructions to the information terminal 80 [such as] ‘a connection button’ for instructing the wireless LAN connection...”), 81-83, 107, FIGS. 3, 7, 13; EX-1002, ¶¶228-229). As illustrated in processes shown in Figures 3, 7, and 13, once a connection is established, the image signal is sent. (*Id.*).

Ichieda suggests that input device used for transmission in the first embodiment could also be used in conjunction with the third embodiment. (EX-1002, ¶¶228-229; §X.C.1).

**3. Claims 2, 10, and 17**

Ichieda discloses *the base node* (communication section 63 and control section 55) *is integrated in the first display* (e.g., projector 50). (EX-1006, ¶¶50, 60

(“[T]he communication section 63 can be arranged to use ... a wireless [LAN] module previously built-in in the projector 50.”), 162, FIGS. 2, 12; EX-1002, ¶230).



(EX-1006, FIG. 12).

#### 4. Claim 6

Ichieda discloses *at least one channel (network connection) is formed between the transmitter (communication section 86) of the at least one peripheral device (information terminal 80) over the wireless communications network (wireless LAN) to the base node (communication section 63 and control section 55) that is independent from the networking capability of the user processing device (PC 90).* (EX-1006, ¶¶5-6 (“the portable information terminal is arranged to be able to establish the network connection with the projector”), 8, 44 (“The information terminal 80 is arranged to supply (transmit) an image signal to the projector 50 in a condition in which the network connection (wireless LAN connection) with the

wireless LAN is established between the information terminal 80 and the projector 50, and corresponds to the image supply device of the embodiment of the invention.”), 72, 81 (“Thus, the wireless [LAN] connection between the information terminal 80 and the projector 50 has established, and it becomes possible to transmit the image signal from the communication section 86 of the information terminal 80 to the communication section 63 of the projector 50.”), FIGS. 2, 11-12; EX-1002, ¶¶231-232).

As discussed, Ichieda discloses and suggests that communication section 86 could alternatively be used for transmission of the image signal in conjunction with the third embodiment. (EX-1002, ¶¶231-232; §X.C.1).

## **5. Claim 7**

Ichieda discloses *the peripheral device* (information terminal 80) *is configured to encode, compress, and/or encrypt the user selected arbitrary media content* (image signal) *when transmitting the user selected arbitrary media content from the transmitter* (communication section 86) to the base node (communications section 63 and control section 55) of the wireless communications network (wireless LAN). (EX-1006, ¶¶5, 56, 72 (describing compliance to the wireless LAN standard such as IEEE 802.11b, IEEE 802.11g, or IEEE 802.11a), FIGS. 2, 12). For example, a POSITA would have understood the wireless LAN standards used by the

communication section 86 include their own encoding schemes as part of the compliance with the standard. (EX-1002, ¶¶233-234).

As discussed, Ichieda discloses and suggests that communication section 86 could alternatively be used for transmission of the image signal in conjunction with the third embodiment. (*Id.*; §X.C.1).

## **6. Claims 8 and 15**

Ichieda discloses *the first display* (projector 50) *has a processing unit* (e.g., control section 55 or image signal processing section 60) *the base node is integrated into the processing unit* (EX-1002, ¶235; EX-1006, ¶50, 54 (control section 55 includes a processing unit), 61 (“The image signal processing section 60 is an image processor”), 162, FIGS. 2, 12).

## **7. Claim 13**

Ichieda discloses and/or suggests the limitation of claim 13. For example, Ichieda discloses *input device* (operation section 83) *is on a keyboard connected to the user processing device* (e.g., PC 90) (EX-1006, ¶¶65, 67, 69, 71, FIGS. 1, 11). Ichieda shows information terminal 80 may include a keyboard as the operation section 83 in Figures 1 and 11 as was known by a POSITA. (EX-1002, ¶236).

**8. Claim 16**

**h) Limitation 16(pre)**

Ichieda discloses and/or suggests this limitation for reasons like discussion for limitation 1(pre). (EX-1002, ¶¶237-238; §X.C.2(a)).

**i) Limitation 16(a)**

The combination of Ichieda's third embodiment as modified by Ichieda's first embodiment discloses *operating a first display (e.g., projector 50), wherein the first display is coupled to a base node (e.g., communication section 63 and control section 55), the base node being adapted to receive user selected arbitrary media content (image signal) from a peripheral device (information terminal 80) via a wireless communications network (wireless LAN) and to control display of the user selected arbitrary media content on the first display.* (EX-1006, ¶¶44-47, 50, 55, 67, 69, 71, 129, 162 (explaining that the projector may be other display types) FIGS. 1-3 and 11-13; EX-1002, ¶239.)

**j) Limitation 16(b)**

As discussed above, the proposed modification to Ichieda suggests *connecting the peripheral device (information terminal 80) to a port (USB port 97) of a user processing device (PC 90) and communicating the user selected arbitrary media content (image signal) to the wireless communications network (wireless LAN).* (EX-1002, ¶¶240; §§X.C.1(e), (f)).

**k) Limitation 16(c)**

As discussed, Ichieda discloses and/or suggests *triggering transfer of said user selected arbitrary media content* (image signal) *from said transmitter* (communication section 83) *on the peripheral device* (information terminal 80) *to the wireless communications network* (wireless LAN) *and to the base node* (communications section 63 and control section 55) *for displaying said user selected arbitrary media content on the first display, the input device being a physical actuator* (connection button) coupled to the peripheral device for reasons discussed regarding limitation 1(f). (EX-1006, ¶¶44, 47, 60, 69, 81-83, 107, FIGS. 3, 7, 13; EX-1002, ¶¶241; §§X.C.1, X.C.2(g)). For example, Ichieda discloses connecting the information terminal 80 to a USB port 97 of PC 90 and communicating the image signal to the wireless LAN. (*Id.*)

**9. Claim 19**

Ichieda discloses *configuring the peripheral device* (information terminal 80) *to connect to the wireless communications network* (wireless LAN) *by pairing the peripheral device with the base node* (e.g., projector 50) using a barcode displayed on a screen. (EX-1006, ¶¶75-83, 132-152, FIGS. 3, 13; EX-1002, ¶¶242).

**10. Claim 20**

Ichieda discloses *displaying user selected arbitrary media content* (image signal) on the first display (e.g., on screen SC of projector 50) in accordance with a

set of rules, such as which sub-area to display the image. (EX-1006, ¶¶58, 69, 73-91, 106-111, 119-123, 138-152, FIGS. 1, 3, 6, 9-11; EX-1002, ¶243).

### **11. Claim 21**

Ichieda discloses and/or suggests every limitation of claim 21 for reasons like those explained above regarding claims 1 and 2. (EX-1002, ¶¶244-252; §§X.C.1-X.C.3).

## **XI. SECONDARY CONSIDERATIONS**

Patent Owner bears the burden of proof in establishing objective indicia of nonobviousness but has not come forward with any such evidence. To the extent Patent Owner offers any purported evidence of nonobviousness, consideration should be delayed until Petitioners have had an opportunity to respond to it.

## **XII. THE BOARD SHOULD NOT EXERCISE ITS DISCRETION TO DENY**

### **INSTITUTION UNDER 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.”**

Patent Owner cited Uchida in an IDS, but the examiner and the Patent Owner never discussed Uchida on the record. (*See generally* Ex-1004). There is also no overlap between the art considered on the record and Uchida. To the extent that factor 1 is met, the examiner erred in a material manner by failing to reject the claims based on Uchida, as discussed further 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 did not give any specific reasons for allowance, noting only that the previous 35 U.S.C. § 102 rejection was “resolved through ... cancelling the relevant claims.” (Ex-1004, p.53).

Uchida, however, is undeniably relevant prior art that teaches numerous limitations. *See* §X.B. Further, Uchida teaches limitations that, in combination with Grimshaw, disclose each limitation of the challenged claims. *See* §X.B. Therefore, Uchida is different from the prior art the examiner discussed on the record and demonstrates that the examiner materially erred in failing to address Uchida's teachings of what was allegedly missing from the prior art discussed. Accordingly, Petitioner asks the Board to institute review because Section 325(d) does not apply given these facts. *Keysight Technologies, Inc. v. Centripetal Networks, Inc.*, IPR2022-1421, Paper 14, 8 (PTAB Aug. 24, 2023) (Director reversing denial of institution when examiner erred by not addressing art cited in an IDS); *see also Oticon Medical AB v. Cochlear Limited*, IPR2019-975, Paper 15, 19-20 (October 16, 2019) (most references were of record during prosecution but not considered) (precedential); and *Parse Biosciences, Inc. v. 10x Genomics, Inc.*, IPR2023-876, Paper 7, 16 (PTAB Oct. 13, 2023) (instituting review because the examiner did not consider the relevant teachings, despite prior art having been discussed on the record). Furthermore, neither the examiner nor Patent Owner addressed Uchida on the record. Therefore, the examiner made an error in failing to consider Uchida.

Finally, the examiner never expressly considered the references nor the grounds presented in this petition present. Therefore, Petitioner asks the Board to find that the Uchida-based grounds, as well as the other grounds herein, present a

reasonable likelihood of prevailing because they teach all the limitations of the challenged claims.

#### **XIV. CONCLUSION**

For the foregoing reasons, Petitioners respectfully request review and cancellation of claims 1-11 and 13-21 of the '951 patent.

Dated: September 13, 2024

Respectfully submitted,

By: /Stephen Yang/

Reg. No. 70,589

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**CERTIFICATE OF WORD COUNT**

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 13,479 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), and complies with typeface requirements of 37 C.F.R. §42.6(a)(ii) and the style requirements of 37 C.F.R. §§42.6(a)(iii) and (iv).

Dated: September 13, 2024

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

**CERTIFICATE OF SERVICE**

I hereby certify that on September 13, 2024, I caused a true and correct copy of the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 11,422,951 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

Respectfully submitted,

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