

**Yealink (USA) Network Technology Co., LTD., and Yealink
Network Technology Co., LTD. v. Barco N.V.**

Case No. IPR2024-1436 (U.S. Patent No. 10,762,002)

Case No. IPR2024-1437 (U.S. Patent No. 11,403,237)

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

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

Patent Owner Demonstrative Slides

Wednesday, January 21, 2026

11:00 AM Eastern

- Demonstrative Only – Not Evidence

PO-1

Overview

[REDACTED] - Demonstrative Only – Not Evidence

PO-2



Challenged Patents

'002

United States Patent
10,762,002
Sep. 3, 2020

Patent No. US 10,762,002 B2
Date of Patent: Sep. 3, 2020

Reference to: US 10,762,002 B2
Date of Patent: Sep. 3, 2020

Abstract: A system and method for providing a user with a personalized experience based on user preferences and behavior. The system includes a user interface, a data storage, and a processing unit. The user interface is configured to receive user input and display content. The data storage is configured to store user preferences and behavior data. The processing unit is configured to process the user input and behavior data to generate a personalized experience for the user.

FIG. 1 is a block diagram of a system 100 for providing a personalized experience. The system 100 includes a user interface 110, a data storage 120, and a processing unit 130. The user interface 110 is configured to receive user input and display content. The data storage 120 is configured to store user preferences and behavior data. The processing unit 130 is configured to process the user input and behavior data to generate a personalized experience for the user.

US Patent No.
10,762,002

'676

United States Patent
11,258,676
Feb. 22, 2022

Patent No. US 11,258,676 B2
Date of Patent: Feb. 22, 2022

Reference to: US 11,258,676 B2
Date of Patent: Feb. 22, 2022

Abstract: A system and method for providing a user with a personalized experience based on user preferences and behavior. The system includes a user interface, a data storage, and a processing unit. The user interface is configured to receive user input and display content. The data storage is configured to store user preferences and behavior data. The processing unit is configured to process the user input and behavior data to generate a personalized experience for the user.

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US Patent No.
11,258,676

'237

United States Patent
11,403,237
Aug. 2, 2022

Patent No. US 11,403,237 B2
Date of Patent: Aug. 2, 2022

Reference to: US 11,403,237 B2
Date of Patent: Aug. 2, 2022

Abstract: A system and method for providing a user with a personalized experience based on user preferences and behavior. The system includes a user interface, a data storage, and a processing unit. The user interface is configured to receive user input and display content. The data storage is configured to store user preferences and behavior data. The processing unit is configured to process the user input and behavior data to generate a personalized experience for the user.

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US Patent No.
11,403,237

'951

United States Patent
11,422,951
Aug. 23, 2022

Patent No. US 11,422,951 B2
Date of Patent: Aug. 23, 2022

Reference to: US 11,422,951 B2
Date of Patent: Aug. 23, 2022

Abstract: A system and method for providing a user with a personalized experience based on user preferences and behavior. The system includes a user interface, a data storage, and a processing unit. The user interface is configured to receive user input and display content. The data storage is configured to store user preferences and behavior data. The processing unit is configured to process the user input and behavior data to generate a personalized experience for the user.

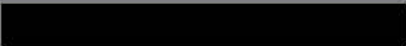
FIG. 1 is a block diagram of a system 100 for providing a personalized experience. The system 100 includes a user interface 110, a data storage 120, and a processing unit 130. The user interface 110 is configured to receive user input and display content. The data storage 120 is configured to store user preferences and behavior data. The processing unit 130 is configured to process the user input and behavior data to generate a personalized experience for the user.

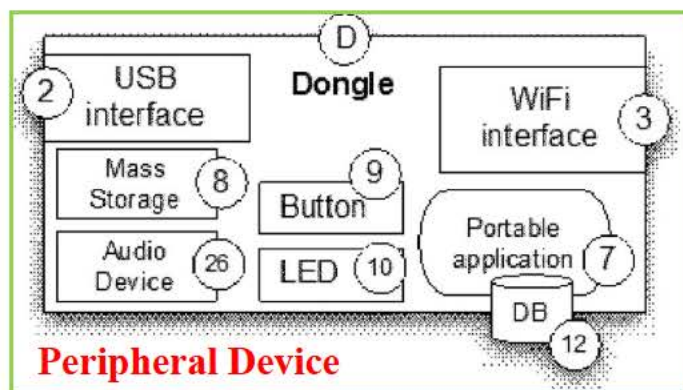
US Patent No.
11,422,951



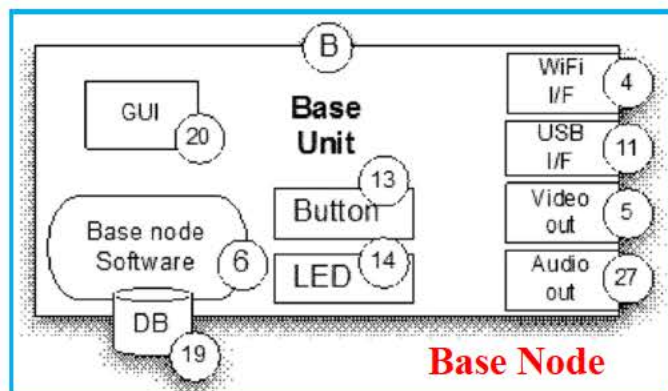
Summary of Challenge

Proceeding	Grounds	Claims
IPR2024-1436 (U.S. Patent No. 10,762,002)	Ground 1: Kaplan (Ex. 1027), Ahmed (Ex. 1014), and Deforche (Ex. 1030)	1-3, 9-11, 19, 21-22
	Ground 2 Maeda, (Ex. 1031), Ahmed, and Deforche	1-3, 9-11, 19, 21-22
IPR2024-1437 (U.S. Patent No. 11,403,237)	Ground 1: Kaplan and Mardiks (Ex. 1026)	1, 3, 9, 18, 19
	Ground 2: Maeda and Deforche	1, 3, 9, 18, 19
IPR2024-1438 (U.S. Patent No. 11,258,676)	Ground 1: Ono (Ex. 1005) and Deforche	1, 5, 8, 18, 20
	Ground 2: Ono	14
	Ground 3: Ono, Deforche, and Grimshaw (Ex. 1008)	4, 16, 19
	Ground 4: Uchida (Ex. 1009), Deforche, and Grimshaw	1, 4-5, 8, 16, 18-20
IPR2024-1439 (U.S. Patent No. 11,422,951)	Ground 1: Ono and Corbett (Ex. 1007)	1-4, 6-11, 13-21
	Ground 2: Uchida and Grimshaw	1-10, 14-21
	Ground 3: Ichieda (Ex. 1006)	1, 2, 6-10, 13, 15-17, 19-21

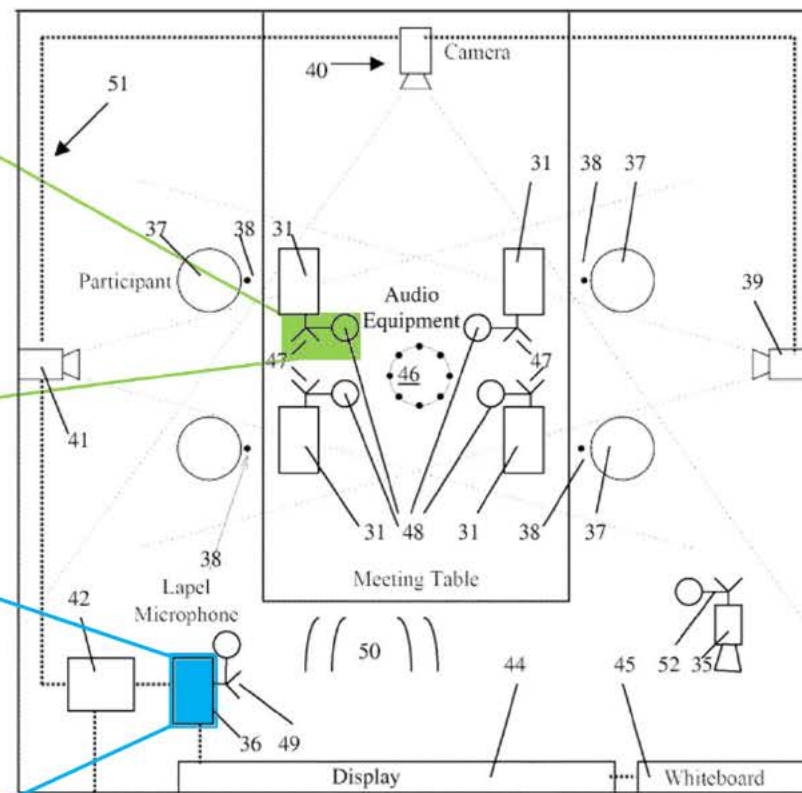




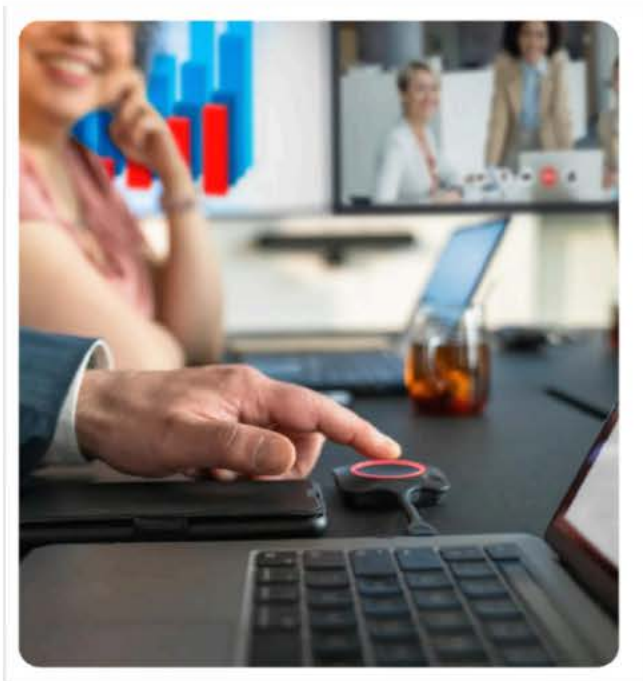
Ex. 1001, Fig. 4



Ex. 1001, Fig. 3



Ex. 1001, Fig. 1a



Ex. 2013

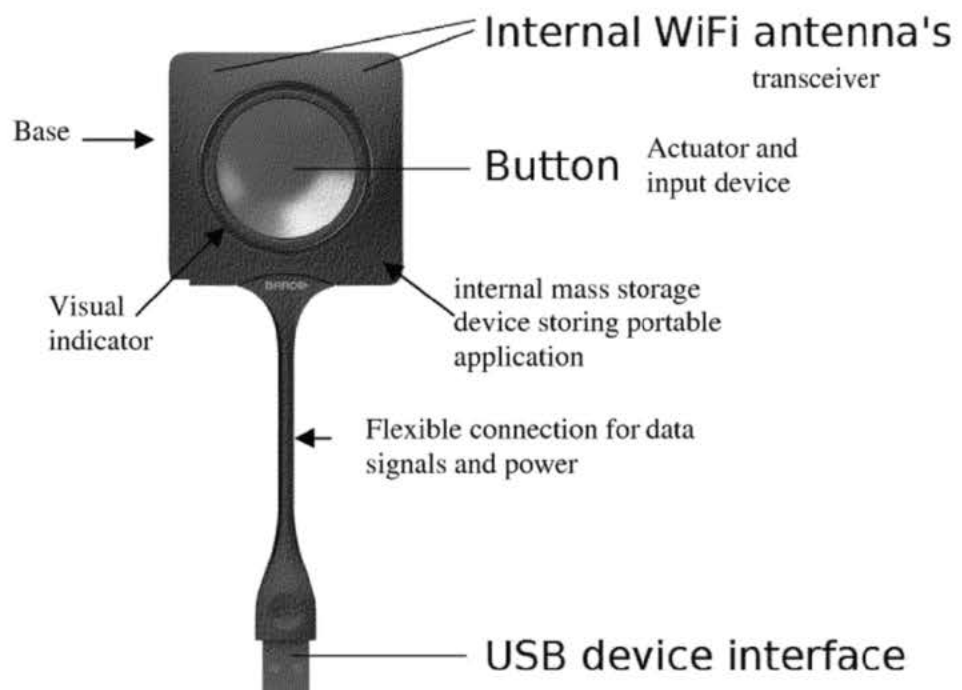


Fig. 10

Ex. 1001, Fig. 10

Objective Indicia of Non-Obviousness

[REDACTED] - Demonstrative Only – Not Evidence

PO-7

Acquiescence of Market Competitors

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Civil Action No. 4:19-cv-03250-JST

CONSENT JUDGMENT, PERMANENT INJUNCTION AND DISMISSAL WITH PREJUDICE

Judge: Honorable Jon S. Tigar

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Attorneys for Plaintiffs Barco NV and Barco, Inc.

UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

BARCO NV and BARCO, INC.

Plaintiffs,

v.

VIVITEK CORPORATION and DELTA
ELECTRONICS, INC.

Defendants

Civil Action No. 4:19-cv-03250-JST

CONSENT JUDGMENT, PERMANENT INJUNCTION AND DISMISSAL WITH PREJUDICE

Judge: Honorable Jon S. Tigar

- 1 -

1 The parties hereto having agreed to a settlement of the claims between them, and having
2 stipulated to the entry of this consent judgment, it is hereby ORDERED, ADJUDGED, AND

DECREED:

3
4 1. This Court has jurisdiction over Defendants Vivitek Corporation and Delta
5 Electronics, Inc. (collectively "Defendants") for the purpose of this Consent Judgment and over the
6 subject matter of the issues in this action and any action arising out of this Judgment. Defendants
7 consent to jurisdiction of this Court, and this Court retains jurisdiction for the purpose of executing
8 and enforcing this Consent Judgment and Permanent Injunction.

9 2. As used herein, the term "Barco" shall mean the Plaintiffs in this matter, Barco NV
10 and Barco, Inc.

11 3. As used herein, the term "Defendants' LauncherPlus Product" shall mean all versions
12 and variations of products that include the LauncherPlus, including the LauncherOne, LauncherPlus,
13 and LauncherPlus (USB-C) products, the products accused of infringement in Barco's Infringement
14 Contentions Served on November 7, 2019 and First Amended Infringement Contentions filed March
15 11, 2020.

16 4. As used herein, the term "Patents-in-Suit" shall mean U.S. Patent Nos. 8,756,348;
17 9,083,769; 10,585,814; and D699,241.

18 5. Defendants agree to the entry of Barco's proposed Amended Complaint filed as
19 Exhibit A to D.I. 46 on March 11, 2020, adding U.S. Patent No. 10,585,814 to this proceeding.

20 6. Defendants represent and warrant that as of the date of this Consent Judgment, they
21 have discontinued all sales of the Defendants' LauncherPlus Product in the United States.

22 7. Until the expiration of the last of the Patents-in-Suit, Defendants, including any of
23 their successors and assigns, are enjoined from making, having made, using, selling, offering to sell,
24 importing, and/or distributing any of the Defendants' LauncherPlus Product, and/or any merely
25 colorable variation of Defendants' LauncherPlus Product in the United States, unless and to the
26 extent otherwise explicitly authorized by Barco.
27
28

- 2 -

Ex. 2020; see IPR2024-01436 (Paper 21) 64-66; IPR2024-01437 (Paper 15) 54-56; IPR2024-01438 (Paper 15) 68-70; IPR2024-01439 (Paper 20) 71-74



Acquiescence of Market Competitors

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May 26, 2020



Barco successfully enforces ClickShare IP against competitors in the U.S.

Kortrijk, Belgium, 26 May 2020 - In June 2019, Barco filed suit in the United States against Delta Electronics, Inc. and its subsidiary Vivitek Corporation for infringement of its ClickShare patents. Now, less than a year after the case began, Delta and Vivitek have agreed to withdraw their LauncherPlus products from the U.S. market.

Successful enforcement of Barco's patent rights

Barco's U.S. lawsuit against Delta and Vivitek is part of a coordinated worldwide effort to enforce its patents against those who commercialize wireless presentation systems copying ClickShare's original features. As a direct result of Barco's enforcement action, Delta and Vivitek have agreed to withdraw their LauncherPlus wireless presentation product in the United States.

This achievement follows the successful completion of another U.S. infringement case in February 2020. Barco ended its case against Sahara Presentation Systems after obtaining that its Clevershare products were materially redesigned to avoid patent infringement. As a result, the Clevershare product lacks some of the unique technical capabilities (like the built-in WIFI-chip) that make ClickShare a simple, user-friendly and secure presentation system.

Page 1 of 5

BARCO EXHIBIT 2021
Yealink v. Barco
IPR2024-01436

Ex. 2021; see IPR2024-01436 (Paper 21) 64-66; IPR2024-01437 (Paper 15) 54-56; IPR2024-01438 (Paper 15) 68-70; IPR2024-01439 (Paper 20) 71-74

SEAL HEARING

[REDACTED] - Demonstrative Only – Not Evidence

PO-10















UNSEAL

[REDACTED] - Demonstrative Only – Not Evidence

PO-18



The Crestron License

SCHEDULE I	
LICENSED PATENTS	
Patent / App/ No.	Title
US 10,684,972 B2 US Pat. Appl.: 16/771,068 US Pat. Appl.: 17/664,147 US Pat. Appl.: 17/742,166	Method and System for Making Functional Devices Available to Participants of Meetings
US 10,050,800 B2 US 10,762,002 B2 US 11,403,237 B2 US Pat. Appl.: 17/698,860	Electronic Tool and Methods with Audio for Meetings
US 8,756,348 B2 US 9,083,769 B2 US 9,722,986 B2 US 10,585,814 B2 US 10,795,832 B2 US 10,904,103 B2 US 10,965,480 B2 US 11,151,060 B2 US 11,216,392 B2 US 11,258,676 B2 US 11,422,951 US Pat. Appl. 17/675,641	Electronic Tool and Methods for Meetings

Ex. 2011, 64-66; *see* IPR2024-01436 (Paper 21) 64-66; IPR2024-01437 (Paper 15) 54-56; IPR2024-01438 (paper 15) 68-70; IPR2024-01439 (Paper 20) 71-74.



Acquiescence of Market Competitors – Crestron's Patent Marking

Patents (current products)

Crestron has been a leading innovator in commercial and residential control and automation solutions for more than 40 years. Crestron employs over 450 engineers in its 150,000 square foot state-of-the-art research & development facility in Rockleigh, New Jersey. This commitment to innovation is evident in Crestron's large and growing patent portfolio.

In accordance with Section 287(a) of Title 35 of the United States Code, the reader is hereby placed on notice of Crestron Electronics' rights in the United States Patents listed on this site and associated with the following products.

The patents and patent applications referred to below as "Barco ClickShare Patents" include US 8756348, US 9083769, US 9722986, US 10050800, US 10585814, US 10684972, US 10762002, US 10795832, US 10904103, US 10965480, US 11151060, US 11216392, US 11258676, US 11403237, US 11422951, US 20210191893, US 20220173981, US 20220206963, US 20220269634, US 20220276974.

Ex. 2018; *see* IPR2024-01436 (Paper 21) 64-66; IPR2024-01437 (Paper 15) 54-56; IPR2024-01438 (Paper 15) 68-70; IPR2024-01439 (Paper 20) 71-74

The '002 Patent

[REDACTED] - Demonstrative Only – Not Evidence

PO-21



The '002 Patent Claims

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

- a) coupling an external peripheral device physically to a port of the processing device, wherein the peripheral device comprises a wireless transceiver and a connector, said connector configured to couple to the port of the processing device;
- b) setting up, by means of a first pre-installed generic audio driver of the operating system, a means for audio communication between the peripheral device and the processing device and by means of a second pre-installed generic driver of the operating system, a means for data communication between the peripheral device and the processing device;
- c) using the peripheral device to connect the processing device to a communications network via the wireless transceiver;
- d) routing audio data from the processing device to the wireless transceiver via the connector of the peripheral device and the means for audio communication and routing the audio data from the wireless transceiver of the peripheral device to a base node over the communications network, wherein the first pre-installed generic audio driver is used for transferring the audio data between the processing device and the peripheral device.

Ex. 1001 ('002 Patent), Cl. 1

The '002 Patent Claims

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

- a) means for coupling an external peripheral device physically to a port of the processing device, the peripheral device comprising a wireless transceiver and a connector, said connector configured to couple to the port of the processing device;
- b) means for setting up, by means of a first pre-installed generic audio driver of the operating system, a means for audio communication between the peripheral device and the processing device and by means of a second pre-installed generic driver of the operating system, a means for data communication between the peripheral device and the processing device;
- c) wherein the peripheral device is configured in a way to connect the processing device to a communications network via the transceiver;
- d) means for routing audio data from the processing device to the wireless transceiver via the connector of the peripheral device and the means for audio communication and means for routing the audio data from the wireless transceiver of the peripheral device to a base node over the communications network, wherein the first pre-installed generic audio driver is used for transferring the audio data between the processing device and the peripheral device.

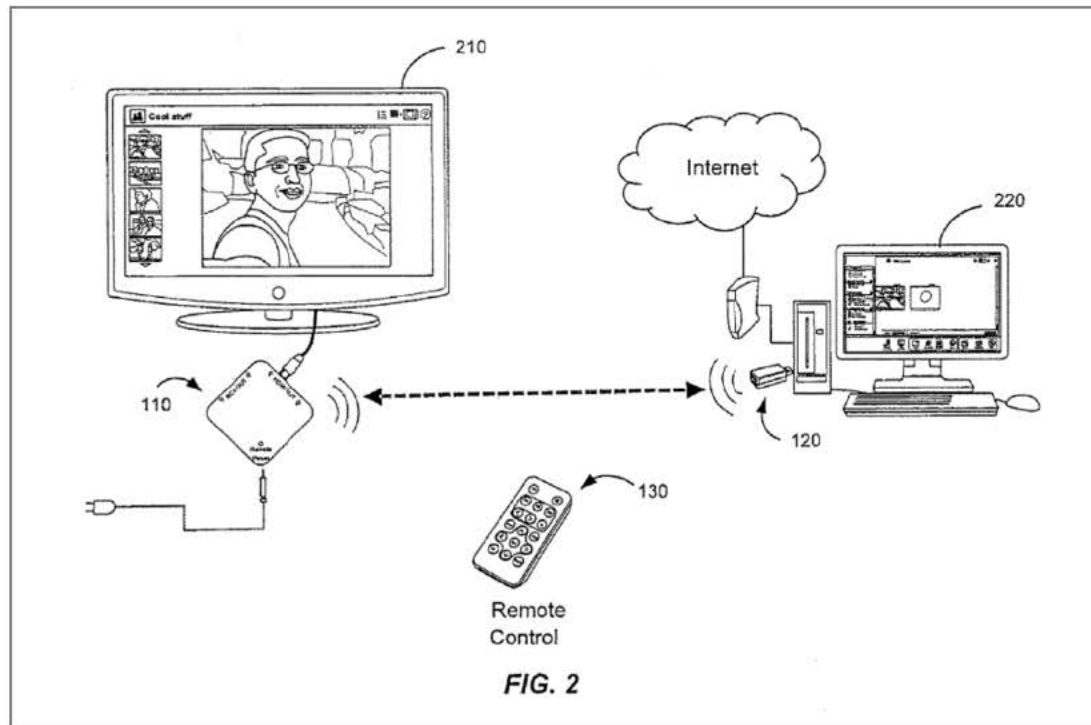
Ex. 1001 ('002 Patent), Cl. 11

21. A peripheral device for providing communication connectivity to a processing device which is provided with memory, a display and an operating system with at least one pre-installed generic driver providing a generic communication protocol for communication between the processing device and a class of peripheral devices, the peripheral device comprising a connection configured to be physically coupled to a port of the processing device and a memory in which executable software code is stored for execution on the processing device, said executable software code comprising:

- a first software code portion for setting up, by means of the pre-installed generic driver of the operating system, a means for audio communication between the peripheral device and the processing device;
- a second software code portion for connecting the processing device to a communications network via a transceiver of the peripheral device;
- a third software code portion for routing audio data from the processing device to the peripheral device via the connection and the means for audio communication and for routing the audio data from the peripheral device to the base node over the communications network, wherein the first pre-installed generic driver is used for transferring the audio data between the processing device and the peripheral device.

Ex. 1001 ('002 Patent), Cl. 21

Ground 1: Kaplan (Ex. 1027)

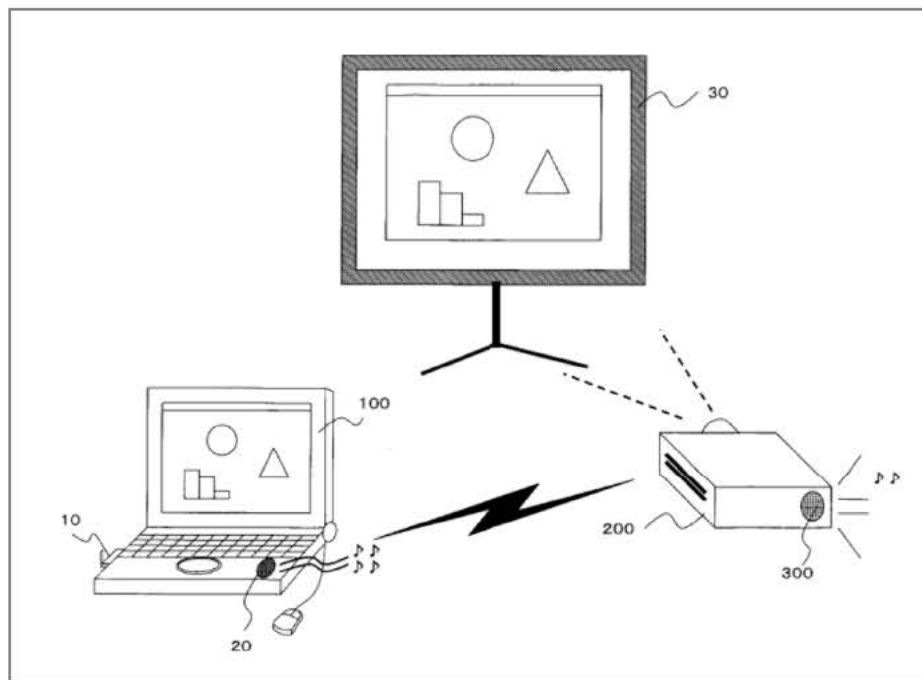


Ex. 1027, Figure 2; see IPR2024-01436 (Paper 21) 19-20

[0022] Target customers for the products described herein include owners of digital video cameras. Examples of digital video cameras include the Flip MinoHD™, Flip Mino™, Flip UltraHD™, and/or Flip Ultra™ digital video cameras provided by Pure Digital Technologies, Inc. Additionally, target customers may include owners of other digital video cameras. As described more fully in relation to FIG. 4, the transmitter 120 may includes software that is configured to access video footage stored on a computer or on a web server accessible through the internet. In some embodiments, when the transmitter 120 is plugged into the computer for the first time, the software may be uploaded to and installed to the computer (automatically in some embodiments). Using the installed software, the user is able to access video footage or other media stored on the computer, transmit the media to the receiver 110, and view and/or listen to the media on the display device 210. In other embodiments, a user is able to download the appropriate software from the internet.

Ex. 1027, ¶22; see IPR2024-01436 (Paper 21) 34

Ground 2: *Maeda* (Ex. 1031)



Ex. 1031, Figure 1; *see* IPR2024-01436 (Paper 21) 21-22

[0078]

The image and audio transmission system of the present invention can be applied to a system that transmits images and audio from an image generation device such as a PC to an image projection device such as a projector, and is particularly suitable for presentations using a wireless projector.

Ex. 1031, ¶78; *see* IPR2024-01436 (Paper 21) 34

Ground 1 and 2: Ahmed (Ex. 1014)

In one embodiment, the present invention provides a system
20 and method of automatically downloading, installing, and
updating the novel software of the present invention on the
computing device or remote monitor. No software CD is required
to install software programs on the remote monitor, the receiver
in the remote monitor, the computing device, or the transmitter
25 in the computing device. As an example, a personal computer
communicating to a wireless projector is provided, although the
description is generic and will apply to any combination of
computing device and remote monitor. It is assumed that both
the personal computer and wireless projector are in data
30 communication with a processing system on chip, as previously
described.

Ex. 1014, 29:20-22; *see* IPR2024-01436 (Paper 21) 28

Ground 1 and 2: *Ahmed* (Ex. 1014)

71. Drivers, which may include specific drivers and pre-installed generic drivers, provide a special function. For example, drivers control hardware that is connected to a computer; this allows the operating system and computer applications to interact with the hardware. Ex. 2022. Drivers are translators for the underlying hardware and the software layers of the operating system and applications themselves. This is beneficial because the operating system and applications do not need to know that they are accessing one type of device over another (e.g., a USB memory device rather than a memory disk). Ex. 2022. Instead, the driver is designed to translate commands to the specific device, and the operating system and application can be agnostic to the peripheral device it interacts with (e.g., a mouse, keyboard, USB memory) and instead treats them as a device in certain classes (e.g., human interface device or storage device).

Ex. 2004, ¶71; see IPR2024-01436 (Paper 21) 7

A mirror display driver for a virtual device mirrors the operation of a physical display device driver by mirroring the operations of the physical display device driver. In one embodiment, a mirror display driver is used for capturing the contents of a primary display associated with the computer while a virtual display driver is used to capture the contents of an "extended desktop" or a secondary display device associated with the computer.

Ex. 1014 9:24-31; see IPR2024-01436 (Paper 21) 35

In use, the operating system renders graphics and video content onto the video memory of a virtual display driver and a mirror display driver. Therefore, any media being played by the computer using, for example, a media player is also rendered on one of these drivers. An application component of the software of the present invention maps the video memory of virtual display driver and mirror display driver in the application space. In this manner, the application of the present inventions obtains a pointer to the video memory. The application of the present invention captures the real-time images projected on the display (and, therefore, the real-time graphics or video content that is being displayed) by copying the memory from the mapped video memory to locally allocated memory.

Ex. 1014; 10:1-13; see IPR2024-01436 (Paper 21) 35



Ground 1 and 2: *Ahmed* (Ex. 1014)

There is therefore still a need for methods, devices, and systems that enable individuals to use existing computing devices to receive, transmit, store, and playback media and to use existing televisions to experience the media. There is also a need for a simple, inexpensive way to wireless transmit media from a computing device to a television, thereby transforming the television in a remote monitor. It would also be preferred if numerous diverging standards applicable to text, graphics, video, audio transmission can be managed by a single, universal wireless media transmission system. Finally, there is a need for the convenient, automated configuration of wireless devices.

Ex. 1014, 3:3-13; *see* IPR2024-01436 (Paper 21) 23

Prior attempts at enabling the integration of computing devices with televisions have focused on a) transforming the television into a networked computing appliance that directly accesses the Internet to obtain media, b) creating a specialized hardware device that receives media from a computing device, stores it, and, through a wired connection, transfers it to the television, and/or c) integrating into the television a means to accept storage devices, such as memory sticks. However, these conventional approaches suffer from having to substantially modify existing equipment, i.e. replacing existing computing devices and/or televisions, or purchasing expensive new hardware. Additionally, both approaches have typically required

Ex. 1014; 2:13-24; *see* IPR2024-01436 (Paper 21) 23, 32.

Ground 1 and 2: *Deforche* (Ex. 1030)

[0004] It is an aim of the present invention to provide a wireless modem device and a method for operating same, with which the need for installation of an appropriate driver can be avoided.

Ex. 1030, ¶4; see IPR2024-01436 (Paper 21) 25

[0006] As used herein, with "wireless modem device" is intended to mean a computer peripheral device which has an electronic interface for connection to a complementary electronic interface of a computer device (host) and which comprises electronic components for establishing communication between said computer device to which it is connected and a remote device over a wireless communication network.

Ex. 1030, ¶6; see IPR2024-01436 (Paper 21) 25

[0034]

1. The user plugs the USB modem (below also referred to as "the modem device". At this point, the modem presents itself as a USB modem with VID/PID. Additionally, this solution builds on top of one of the default (non network) USB HID device class drivers available in the most common OS (Windows XP, Vista, Mac OSX and Linux). At this point, there are two alternatives on how the OS can react. If the USB modem drivers have not been installed, the OS recognizes the device as a MSD+HID generic device (the device is configured for presenting itself this way) and therefore loads those drivers. Alternatively, the USB modem drivers might have been installed, and then these drivers will handle the device. But let's concentrate on the 'nomadic' mode, in which OS generic drivers are used. At this point, the USB modem presents itself as a USB Mass Storage Device (10) presenting a CD Rom (exposing flash memory), a Generic Volume (exposing microSD) and a 3rd Generic Device to transport control and TCP/IP data between the host OS and the USB modem. Immediately after this configuration is shown in the OS, and now assuming a Windows OS, the CD Rom has an autorun that launches a launcher in which the user has the possibility to launch amongst other applications a web browser (e.g. Firefox) and a Connection Manager (CM). This launcher is based on

Ex. 1030, ¶¶34; see IPR2024-01436 (Paper 21) 38

Motivation to Combine: *Deforche* (Ex. 1030) – A Zero Footprint System

[0028] Problem Definition: to provide a way to achieve USB (or other interface) modem functionality in any computer (Operating system independent) without leaving a footprint (Zero-Footprint). This means that the need can be avoided to install drivers and/or applications on PC's to give USB modem connectivity. This also means that the need can be avoided for the end user to have administrator rights on the computer. An advantage is the ease of use of e.g. USB modem products which can even be allowed usage in restricted conditions. The invention can give the end user connectivity on any personal computer (PC) without interfering on the PC itself.

Ex. 1030, ¶128; see IPR2024-01436 (Paper 21) 29-31

[0009] In the connection method and the wireless modem device of the invention, a pre-installed generic driver of an operating system installed on the computer device is used for setting up a modem/host communication interface by means of which the wireless modem device and the computer device can communicate with each other. Data traffic from the computer device towards the wireless communication network and vice versa is routed over this modem/host communication interface and uses the generic communication protocol provided by the pre-installed generic driver. This has the advantage that the need for a specific driver for the communication between the wireless modem device and the computer device can be avoided. This has the advantage that a user can use the wireless modem device on a computer device on which he has no administrator rights, i.e. a computer device on which his user rights are restricted so that he cannot install a specific driver for the wireless modem device, for example a computer device in a hotel, on an airport and the like.

Ex. 1030, ¶19; see IPR2024-01436 (Paper 21) 29



Motivation to Combine: *Kaplan* (Ex. 1027) – Software Installation

[0022] Target customers for the products described herein include owners of digital video cameras. Examples of digital video cameras include the Flip MinoHD™, Flip Mino™, Flip UltraHD™, and/or Flip Ultra™ digital video cameras provided by Pure Digital Technologies, Inc. Additionally, target customers may include owners of other digital video cameras. As described more fully in relation to FIG. 4, the transmitter 120 may includes software that is configured to access video footage stored on a computer or on a web server accessible through the internet. In some embodiments, when the transmitter 120 is plugged into the computer for the first time, the software may be uploaded to and installed to the computer (automatically in some embodiments). Using the installed software, the user is able to access video footage or other media stored on the computer, transmit the media to the receiver 110, and view and/or listen to the media on the display device 210. In other embodiments, a user is able to download the appropriate software from the internet.

Ex. 1027, ¶122; IPR2024-01436 (Paper 21) 27-28

[0029] In various embodiments, metadata associated with the video content stored on the computer 220 or on the Internet is available to the system and can be used to sort, categorize, or otherwise manage the video content. As an example, if a particular video is marked as a favorite, given a name, placed in one or more particular folders, or the like, this information may be available to the user through the user interface displayed on the display device 210. The availability of this metadata contrasts with conventional media extenders in which only video content is available. Additionally, since embodiments of the present invention provide custom software solutions, the methods and systems described herein make available proprietary features such as user-defined channels that are not available using conventional techniques.

Ex. 1027, ¶129; IPR2024-01436 (Paper 21) 27



Motivation to Combine: *Maeda* (Ex. 1031) – Software Installation

[0022]

As shown in FIG. 3, the PC 100 includes a control unit 121, a screen generation unit 122, an image capture unit 123, an audio generation unit 124, an image output unit 125, an audio output unit 126, a PC communication unit 127, and an audio capture unit 128 as functional components.

Ex. 1031, ¶22; see IPR2024-01436 (Paper 21) 43-44

[0078]

The image and audio transmission system of the present invention can be applied to a system that transmits images and audio from an image generation device such as a PC to an image projection device such as a projector, and is particularly suitable for presentations using a wireless projector.

Ex. 1031, ¶78; see IPR2024-01436 (Paper 21) 43-44



Motivation to Combine: *Ahmed* (Ex. 1014) – Software Installation

Referring to Figure 2, a computing device 200 of the present invention is depicted. Computing device 200 comprises an operating system 201 capable running the novel software systems of the present invention 202 and a transceiver 203.

Ex. 1014, 7:26-29; see IPR2024-01436 (Paper 21) 28

Referring to Figure 3, modules of the novel software system 300 of the present invention is depicted. The software 300 comprises a module for the real-time capture of media 301, a module for managing a buffer for storing the captured media 302, a codec 303 for compressing and decompressing the media, and a module for packaging the processed media for transmission 304.

Ex. 1014, 8:7-12; see IPR2024-01436 (Paper 21) 28

In one embodiment, the present invention provides a system and method of automatically downloading, installing, and updating the novel software of the present invention on the computing device or remote monitor.

Ex. 1014, 29:20-22; see IPR2024-01436 (Paper 21) 28



The '002 Patent Claims

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

Ex. 1001 ('002 Patent), Cl 2,

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

Ex. 1001 ('002 Patent), Cl 3

The '951 Patent

[REDACTED] - Demonstrative Only – Not Evidence

PO-35



The '951 Patent Claims

1. 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 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,
- (b) a transmitter for transferring user selected arbitrary media content to the wireless communications network, and
- (c) 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.

Ex. 1001 ('951 Patent), Cl. 1

The '951 Patent Claims

9. 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 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.

Ex. 1001 ('951 Patent), Cl. 9

16. A method for communicating arbitrary media content from users at a meeting comprising:

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;

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; and

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.

Ex. 1001 ('951 Patent), Cl. 16

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

a base node, the base node being integrated into a first display of a wireless communications network, the base node being adapted to receive user selected arbitrary media content from a user processing device via the wireless communications network, and to control display of the user selected arbitrary media content on the first display; and

at least one peripheral device adapted to communicate the user selected arbitrary media content from the user processing device 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 the user processing device, the user processing device having a second display and a memory,

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

(c) 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 of said user processing device to said transmitter on the at least one peripheral device through said port, and from the transmitter to the wireless communications network to the base node of 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.

Ex. 1001 ('951 Patent), Cl. 21



Ground 1: *Ono* (Ex. 1005) and *Corbett* (Ex. 1007)

At this stage of the proceeding, we find that Patent Owner's argument has merit. As Patent Owner notes, Ono describes remote controller 69 as capable of receiving user inputs that will cause a "connection request signal" to be transmitted. Ex. 1005 ¶ 45. Ono also makes clear, however, that the connection request signal does not necessarily result in the transfer of image information because that request may either be accepted or *denied*. *See id.* ¶¶ 82–97. As such in the proposed combination, if the connection request is accepted, then image information is communicated from the transmitter to the wireless communications network and to the base node for display (*id.* ¶¶ 87–88); conversely, if the connection request is not accepted, then image information is not communicated (*id.* at ¶¶ 65–96). Going forward, the parties should further address with more specificity why, or why not, Ono's description of a connection request signal is within the scope of the recited trigger for transferring user selected arbitrary media content from the transmitter to the wireless communications network and to the base node.

IPR2024-01439 (Paper 12) 20

[0045] The control section 61 generates a connection request signal with respect to the information terminal apparatus selected by the selecting section 69. The communications module 40 transmits the above-mentioned connection request signal from the control section 61 to the appropriate information terminal apparatus 2A, 2B or 2C.

Ex. 1005, ¶45; *see* IPR2024-01439 (Paper 20) 27

Ground 1: *Ono* (Ex. 1005) and *Corbett* (Ex. 1007)

[0045] The control section 61 generates a connection request signal with respect to the information terminal apparatus selected by the selecting section 69. The communications module 40 transmits the above-mentioned connection request signal from the control section 61 to the appropriate information terminal apparatus 2A, 2B or 2C.

Ex. 1005, ¶45; see IPR2024-01439 (Paper 20) 27

[0083] FIG. 9 is a sequence diagram of a case where the information terminal apparatus 2A accepts a connection request from the projector 60 of the image display apparatus 1. In the sequence diagram of FIG. 9, the connection request signal generated by the CPU 61 of the projector 60 of the image display apparatus 1 with respect to the information terminal apparatus 2A selected by the remote controller 69 is handed over to the wireless connection module 40 via the I/F 66, and is transmitted from the wireless connection module 40 to the wireless connection module 44 of the appropriate information terminal apparatus 2A in step S1.

Ex. 1005, ¶83; see IPR2024-01439 (Paper 20) 27

[0091] In addition, as shown in FIG. 10, the information terminal apparatus 2A is also capable of rejecting a connection request from the projector 60 of the image display apparatus 1. In the sequence diagram of FIG. 10, the connection request signal generated by the CPU 61 of the projector 60 with respect to the information terminal apparatus 2A selected by the remote controller 69 is handed over to the wireless connection module 40 via the I/F 66, and is transmitted from the wireless connection module 40 to the wireless connection module 44 of the appropriate information terminal apparatus 2A in step S1.

Ex. 1005, ¶91; see IPR2024-01439 (Paper 20) 27



Motivation to Combine: *Ono* (Ex. 1005) and *Corbett* (Ex. 1007)

[0066] The remote controller 69 is an example of the selecting section 69 shown in FIG. 3, and selects one information terminal apparatus from the list 71 displayed on the screen 5. In addition, using the remote controller 69, operations such as configuring the connection to the wireless network, switching the connection and disconnection with the plurality of information terminal apparatuses, and so forth are performed.

Ex. 1005, ¶66; see IPR2024-01439 (Paper 20) 22

(57)

ABSTRACT

A Universal Serial Bus (USB) flash drive comprising a controller including a USB interface and a nonvolatile computer readable medium interface. The USB flash drive may also comprise a nonvolatile computer readable medium in communication with the nonvolatile computer readable medium interface and storing data and a USB connector in communication with the USB interface. The USB flash drive may also comprise a transmitter for transmitting at least a portion of data from the nonvolatile computer readable medium to an external device external to the USB flash drive. The transmitter may be substantially simultaneously operable with the USB connector, may send a modulated data signal, and/or may send the at least portion data in a compressed format.

Ex. 1007, Abstract; see IPR2024-01439 (Paper 20) 23



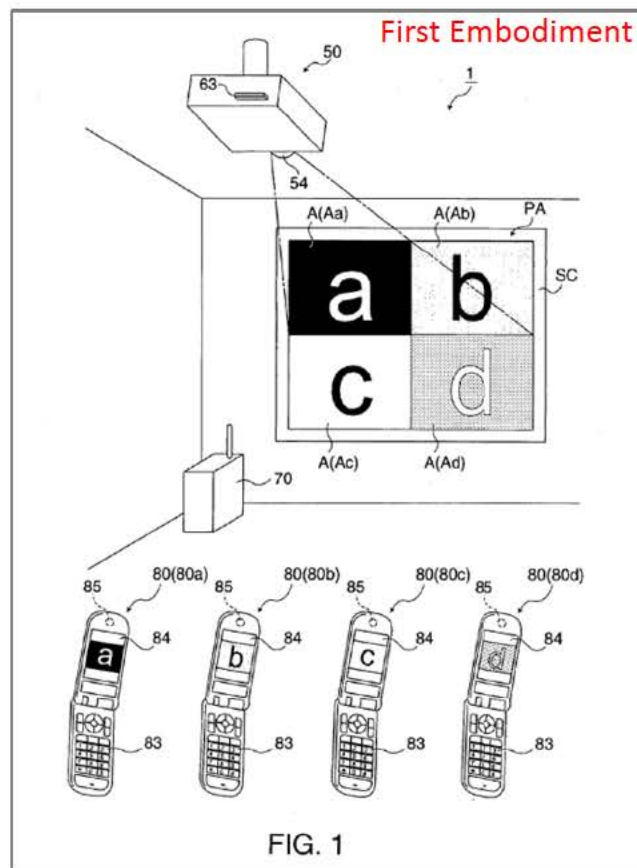
Ground 3: *Ichieda* (Ex. 1006)

At this stage of the proceeding, we find that Patent Owner's argument has merit. We find a deficiency with Petitioner's contention because it lacks a factually supported reason for why a skilled artisan would have modified the third embodiment of *Ichieda* to use information terminal 80 to trigger the transfer of a user selected arbitrary media content associated with PC 90 to the wireless communications network and to projector 50. *Ichieda* teaches that, in the third embodiment, after receiving user inputs from operation section 93, "the control section 91 retrieves the image data to be projected by the projector 50 from the hard disk drive 92, and transmits the image data from the communication section 96 to the projector 50 as the image signal."

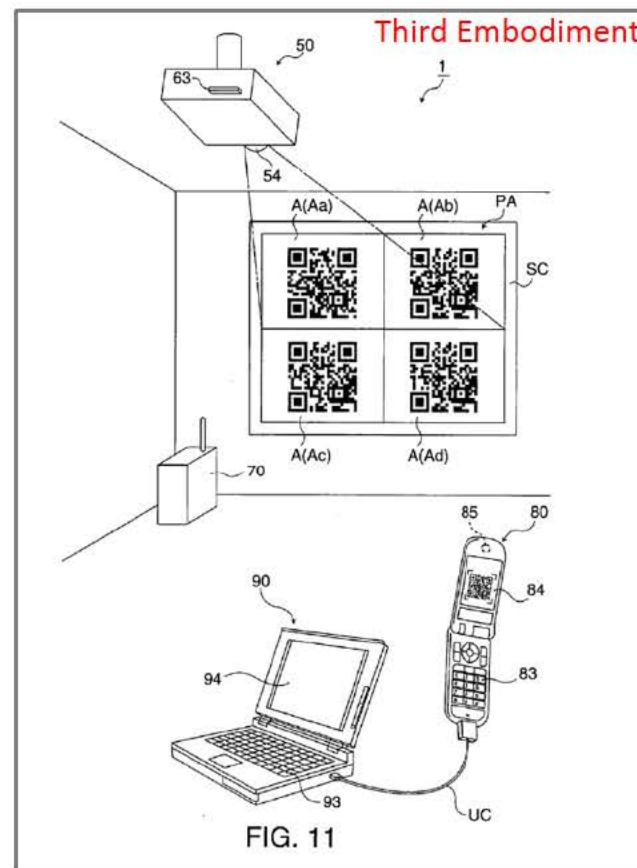
Ex. 1006 ¶¶ 133, 139, 150. Petitioner, however, relies on operation section 83 of information terminal 80 to transmit image data from PC 90 without providing any reasoned basis for such a modification.

IPR2024-01439 (Paper 12) 23

Ground 3: *Ichieda* (Ex. 1006)



Ex. 1009, Fig. 1; see IPR2024-01439 (Paper 20) 33-34



Ex. 1009, Fig. 11; see IPR2024-01439 (Paper 20) 33-34



Ground 3: *Ichieda* (Ex. 1006)

At this stage of the proceeding, we find that Patent Owner’s argument has merit. We find a deficiency with Petitioner’s contention because it lacks a factually supported reason for why a skilled artisan would have modified the third embodiment of *Ichieda* to use information terminal 80 to trigger the transfer of a user selected arbitrary media content associated with PC 90 to the wireless communications network and to projector 50.

IPR2024-01439 (Paper 12) 23

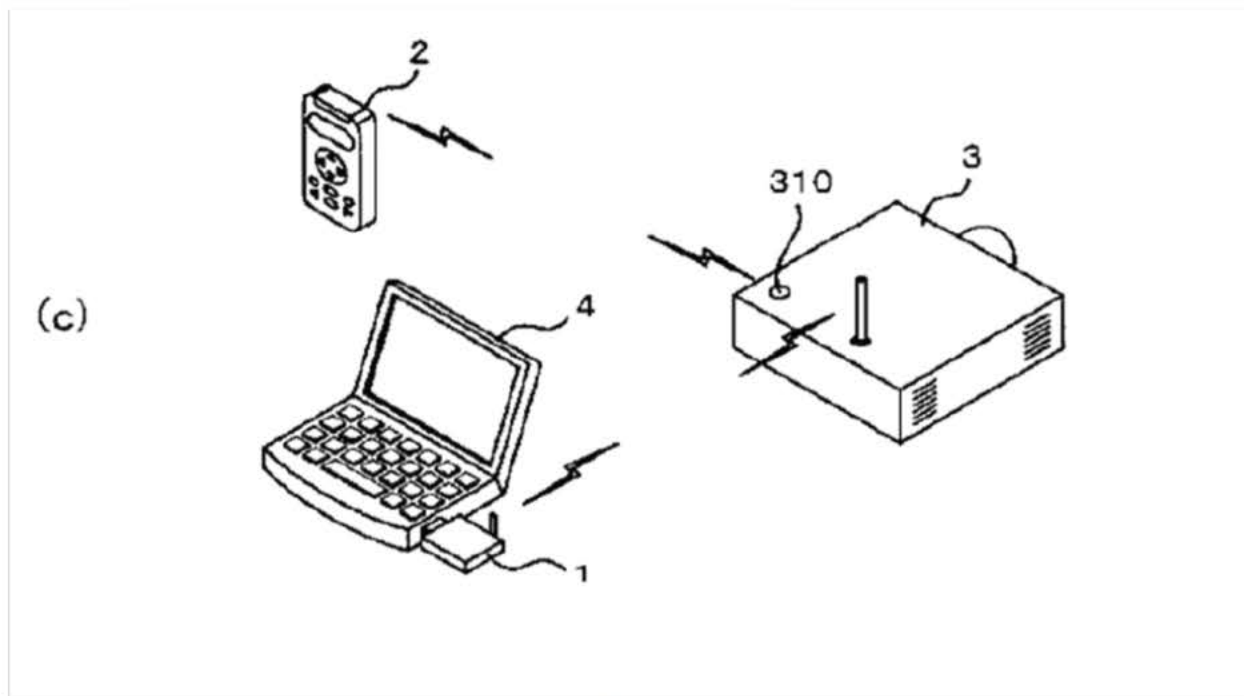
[0139] In the condition in which the power is applied to the laptop PC, when the user operates the operation section 93 to instruct the start of the connection establishing program PN, the control section 91 starts the operation with the connection establishing program PN stored in the hard disk drive 92, and displays an image for prompting various kinds of operations to the user on the display section 94, and also waits for signal input from the operation section 93. In this state, the user is allowed to make an instruction for starting the wireless LAN connection with the projector 50 by performing a predetermined operation using the operation section 93.

Ex. 1009, ¶139; see IPR2024-01439 (Paper 20) 32

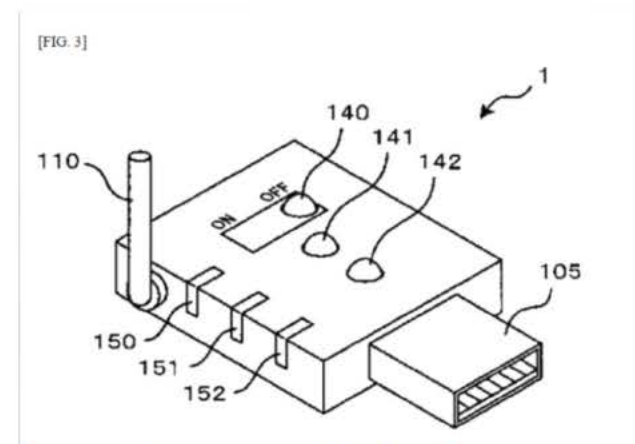
[0149] In the step S329, the control section 91 judges whether or not the connection response command allowing the connection has been received from the projector 50. If it has been received, the wireless LAN connection with the projector 50 is established, and the process proceeds to the step S330. On the other hand, if the connection response command rejecting the connection has been received, a message representing that the connection is not successful is displayed (step S333) and the process is terminated. It should be noted that since the control section 91 performs the wireless LAN connection (network connection) based on the recognized connection information by executing the steps S327 through S329, the control section 91 when executing the steps S327 through S329 corresponds to a network connection section of the embodiment of the invention.

Ex. 1009, ¶149; see IPR2024-01439 (Paper 20) 34

Ground 2: *Uchida* (Ex. 1009) and *Grimshaw* (Ex. 1008)



Ex. 1009, Fig. 2c; see IPR2024-01439 (Paper 20) 44-46



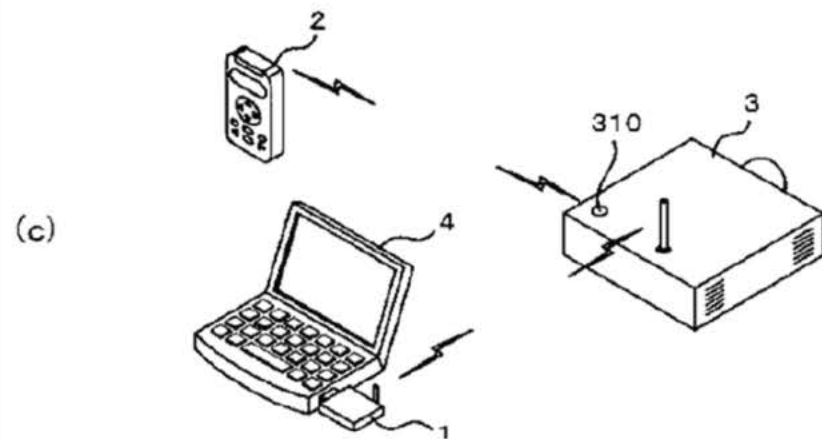
Ex. 1009, Fig. 3; see IPR2024-01439 (Paper 20) 44-46

Ground 2: *Uchida* (Ex. 1009) and *Grimshaw* (Ex. 1008)

[0071]

The 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. When the image transfer stop switch 140 is operated to the image stop ON mode side while connected to the computer device 4 via the USB connector 105, the CPU 101 notifies the computer device 4 of this information. When the CPU 405 of the computer device 4 receives the information, it executes an image transfer application and transmits a request to the image projection device 3 via the wireless communication unit 107 to project a specific image (here, a black screen image) on the image projection device 3.

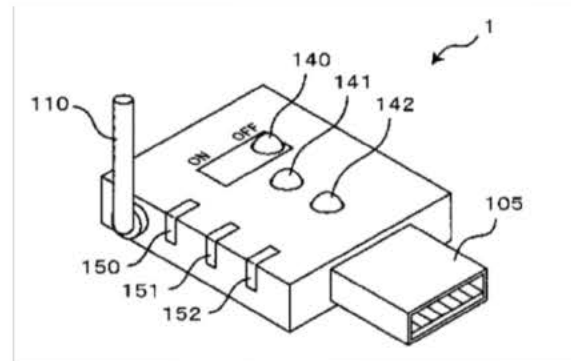
Ex. 1009, ¶71; see IPR2024-01439 (Paper 20) 44



Ex. 1009, Fig. 2c; see IPR2024-01439 (Paper 20) 44-46

(c) 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.

Ex. 1001 ('951 Patent), Cl. 1



Ex. 1009, Fig. 3; see IPR2024-01439 (Paper 20) 44-46

Ground 2: *Uchida* (Ex. 1009) and *Grimshaw* (Ex. 1008)

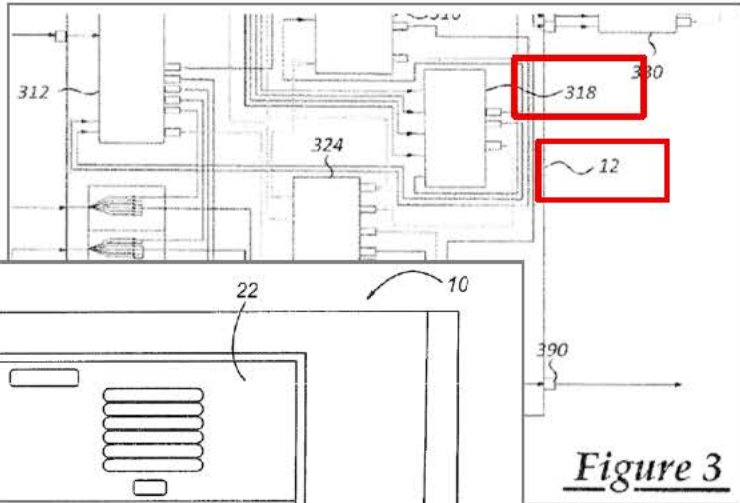


Figure 3

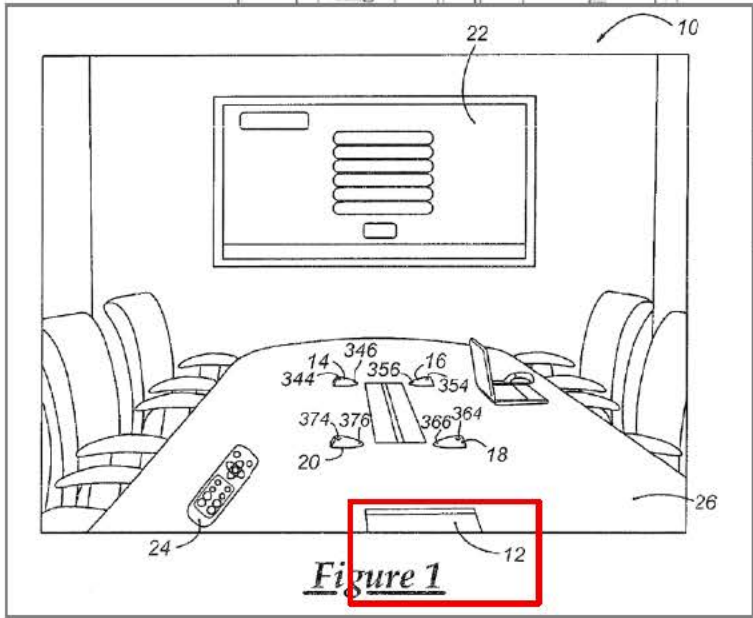


Figure 1

[0019] Switch controller 318 receives audio, video and/or data signals from one or more user modules 14-20 and/or communication accessories 302 and, based on a user selection and arbitration method described below, provides the selected signals to an appropriate destination. For example, consider the case where separate laptop computers are connected to user modules 14-20 and are vying for control of the display module 22; that is, each of the connected computers is outputting data signals through data connections 342, 352, 362, 372 for presentation on display module 22. The display module 22 may not simultaneously display the information from all four computers/user modules. Thus, the users of modules 14, 16, 18, 20 can take control of the display module 22 by respectively engaging buttons 344, 354, 364, 374, which causes switch controller 318 to pass the data signals from the selected user module on to the display module. This process and feature is described below in more detail. Depending on the particular embodiment, switch controller 318 may be a hub, router, switch, bridge, multiplexor, or any other device where one or more input signals are received but a single input signal is selected according to a command signal. It is also possible for communication accessories 302, like a DVD player, to provide switch controller 318 with another input for selection.

Ex. 1008, ¶19; see IPR2024-01439 (Paper 20) 46

The '951 Patent Claims

2. The electronic meeting tool according to claim 1, wherein said base node is integrated in the first display.

8. The electronic meeting tool according to claim 1, wherein the first display has a processing unit and the base node is integrated into the processing unit.

10. The electronic meeting tool according to claim 9, wherein said base node is integrated in the first display.

17. The method according to claim 16, wherein said base node is integrated in the first display.

Ex. 1001 ('951 Patent), Cls. 2, 8, 10, 17, 21

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

a base node, the base node being integrated into a first display of a wireless communications network, the base node being adapted to receive user selected arbitrary media content from a user processing device via the wireless communications network, and to control display of the user selected arbitrary media content on the first display; and

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

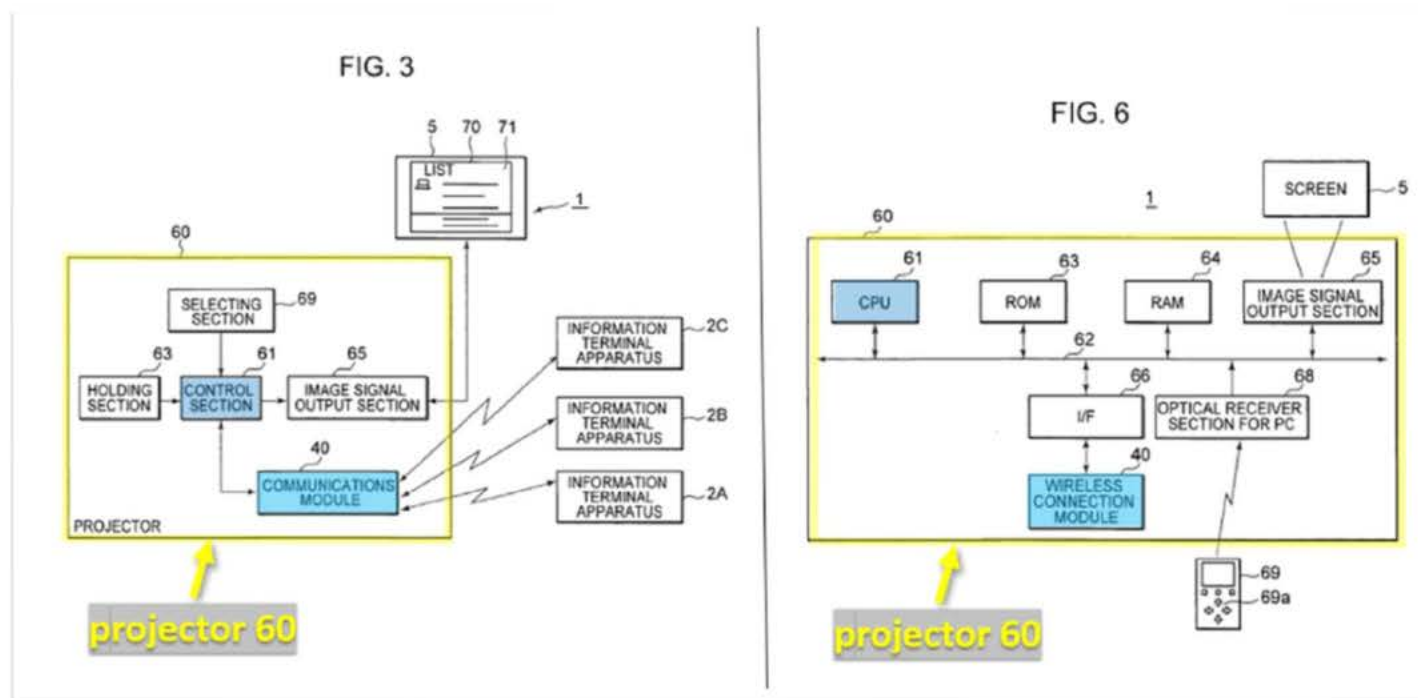
wherein the at least one peripheral device is a connection unit comprising:

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

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

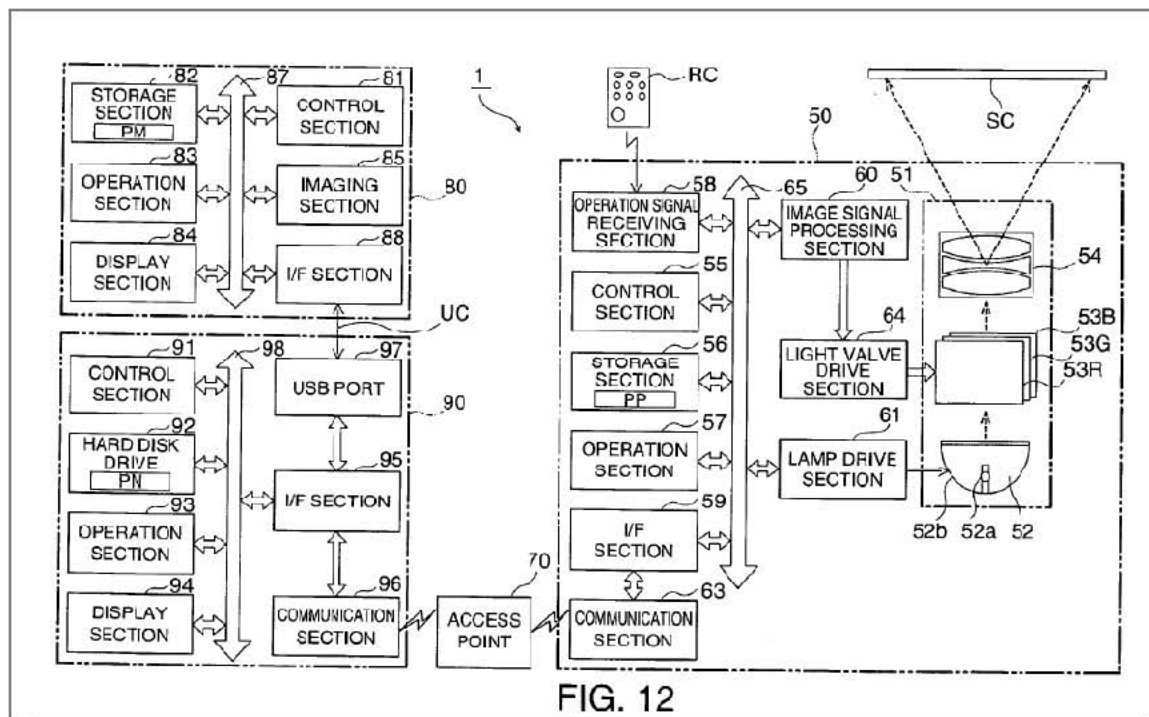
(c) an input device configured to allow the user to carry out a user action on the input device that triggers transfer of said user selected arbitrary media content of said user processing device to said transmitter on the at least one peripheral device through said port, and from the transmitter to the wireless communications network to the base node of 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.

Ground 1: *Ono* (Ex. 1005) and *Corbett* (Ex. 1007)



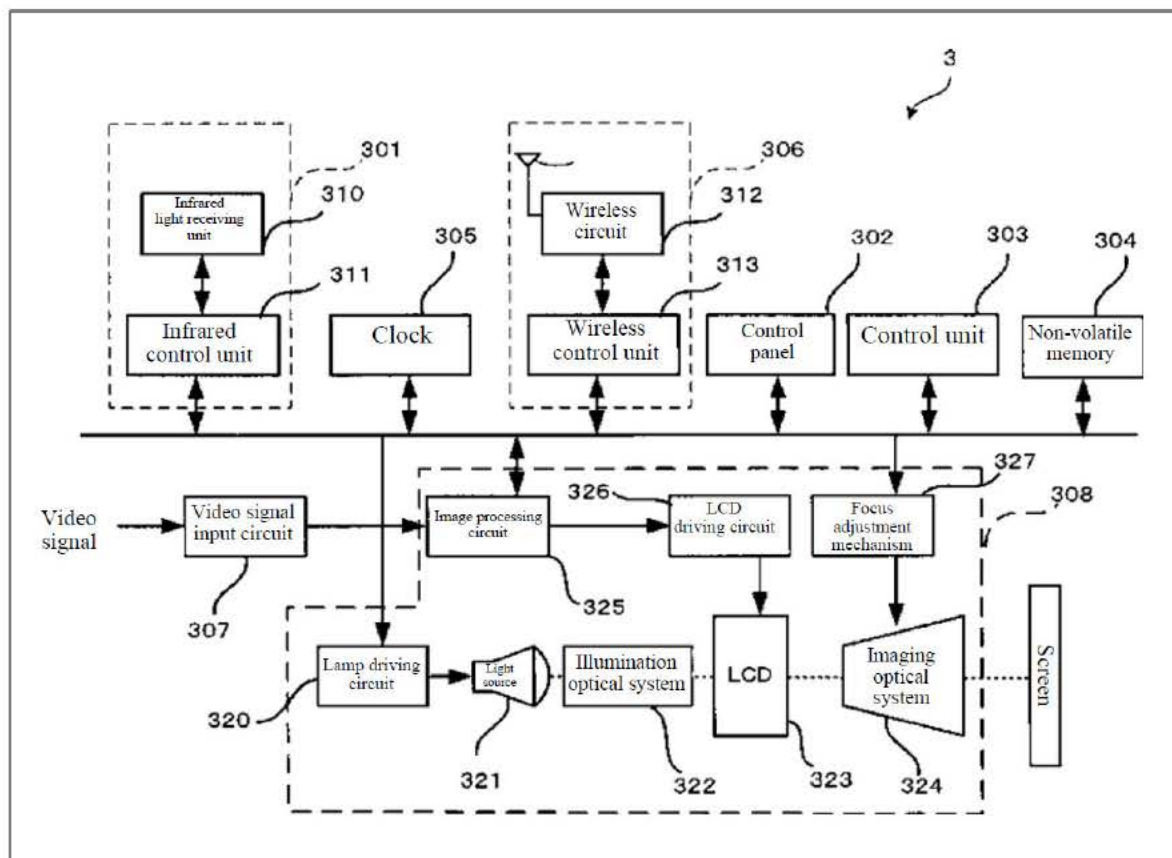
IPR2024-01439 (Paper 2) 34; see IPR2024-01439 (Paper 20) 28

Ground 3: *Ichieda* (Ex. 1006)



Ex. 1006, Fig. 12; see IPR2024-01439 (Paper 20) 35

Ground 2: *Uchida* (Ex. 1009) and *Grimshaw* (Ex. 1008)



Ex. 1009, Fig. 14; see IPR2024-01439 (Paper 20) 47.

The '237 Patent

[REDACTED] - Demonstrative Only – Not Evidence

PO-51



The '237 Patent Claims

1. A method for connecting a processing device to a communications network, the processing device having a memory, a display, an operating system and communication between processing device and a class of peripheral devices, the method comprising:

- a) coupling an external peripheral device physically to a port of the processing device, the external peripheral device having a transceiver and a connector configured to couple to the port of the processing device, and presenting the external peripheral device to the processing device as a human interface device;
- b) communicating at least one of audio data and display data from the processing device to the external peripheral device via the human interface device;
- c) reading the audio data from the port,
- d) connecting the processing device to a communications network via the transceiver, and
- e) display data and audio data being routed between the processing device and the communication network via the transceiver and further to a base node.

Ex. 1001 ('237 Patent), Cl. 1

The '237 Patent Claims

9. A system for connecting a processing device to a communications network, the processing device having a memory, a display and an operating system and communication between processing device and a class of peripheral devices, the system comprising:

- a) means for coupling an external peripheral device physically to a port of the processing device, the external peripheral device having a transceiver and a connector configured to couple to the port of the processing device;
 - b) means for presenting the external peripheral device to the processing device as a human interface device;
 - c) means for at least one of display data communication and audio communication between the external peripheral device and the processing device via the human interface device;
- wherein the external peripheral device is configured to connect the processing device to a communications network via the transceiver; and
- d) means for routing display data and audio data between the processing device and the communication network via the means for display data and audio data communication and the transceiver to a base node.

Ex. 1001 ('237 Patent), Cl. 9

18. A peripheral device for providing communication connectivity to a processing device which is provided with memory, a display and an operating system and for communication between the processing device and a class of peripheral devices, the peripheral device comprising a connection configured to be physically coupled to a port of the processing device and the peripheral device being adapted to work with executable software code, said executable software code comprising:

- a fourth software code for presenting the external peripheral device to the processing device as a human interface device;
- a first software code portion for setting up, a means for at least one of display data communication and audio data communication between the peripheral device and the processing device via the human interface device;
- a second software code portion for connecting the processing device to a communications network via a transceiver of the external peripheral device;
- a third software code portion for routing the display data and the audio data between the processing device and the communication network via the transceiver to a base node.

Ex. 1001 ('237 Patent), Cl. 18

19. A method for connecting a processing device to a communications network, the processing device having a memory, a display and an operating system, the method comprising:

- a) coupling an external peripheral device physically to a port of the processing device, wherein the peripheral device comprises a wireless transceiver and a connector, said connector configured to couple to the port of the processing device;
- b) presenting the external peripheral device to the processing device as a human interface device;
- c) setting up one of an audio communication between the peripheral device and the processing device and a display data communication between the peripheral device and the processing device via the human interface device;
- d) the peripheral device being configured to connect the processing device to a communications network via the wireless transceiver;
- e) routing audio data from the processing device to the wireless transceiver via the connector of the peripheral device and the audio communication and routing display data from the processing device to the wireless transceiver via the connector of the peripheral device and the display data communication;
- f) routing the display data and the audio data from the wireless transceiver of the peripheral device to a base node over the communications network via at least one channel created between the external peripheral device to the base node.

Ex. 1001 ('237), Cl. 19



Nonanalogous Art: *Mardiks* (Ex. 1026)

[0001] The Universal Serial Bus (USB) standard provides communication protocols for interfacing between a host and its peripheral devices. For example, a personal computer implementing the Microsoft Windows® operating system may use the USB standard for communicating with a keyboard, a compact disc (CD) player, or a USB flash drive. The USB standard may also be implemented in Macintosh® and Linux® operating systems.

Ex. 1026, ¶1; see IPR2024-01437 (Paper 15) 22

[0005] Accordingly, it would be desirable to configure a USB flash drive so that, upon connection to a host supporting the USB standard, or upon restarting the host if the USB flash drive were already connected, the USB flash drive would automatically launch an application residing in its memory.

Ex. 1026, ¶5; see IPR2024-01437 (Paper 15) 24

Ground 1: Kaplan (Ex. 1027) and Mardiks (Ex. 1026)

[0046] In some embodiments, when the transmitter 120 is connected to computer 220 for the first time, the transmitter may identify itself to the computer 220 as a mass storage device, such as a removable disk drive. In one embodiment, for instance, after the transmitter 120 is coupled to the computer 220, the transmitter 120 may identify itself as a removable disk drive to an operating system executing on the computer 220. The operating system can then treat the internal non-volatile memory 420 of the transmitter 120 like any other removable disk. This behavior is similar to the behavior discussed in relation to the camcorder described in U.S. patent application Ser. No. 11/497,039, filed on Jul. 31, 2006, the disclosure of which is hereby incorporated herein by reference in its entirety for all purposes.

Ex. 1027, ¶46; see IPR2024-01437 (Paper 15) 28

[0006] A design approach based in part on the foregoing observations enables a USB flash drive to automatically launch an application residing in its memory after it is connected to a host or after restarting a host, if the USB flash drive is already connected thereto. Various embodiments are possible, including a USB peripheral device able to control a host and a method of using such USB peripheral device.

Ex. 1026, ¶6; see IPR2024-01437 (Paper 15) 28

[0019] FIG. 1A illustrates an example embodiment of a USB peripheral device, which is able to control a host. FIG. 1A shows a USB peripheral device 10, which controls a host 12. The USB peripheral device 10 includes a USB interface 14, a controller 16, and a non-volatile memory 18. The controller 16, which has a processor 20 and a ROM 22, executes instructions for sending and receiving messages through the USB interface 14. When executing the instructions, the controller 16 may send to the host 12 a stream of emulated keystrokes, which cause the host 12 to generate and execute a startup script. The instructions may reside in the ROM 22 or the non-volatile memory 18.

Ex. 1026, ¶6; see IPR2024-01437 (Paper 15) 28



Motivation To Combine: *Kaplan* (Ex. 1027) and *Mardiks* (Ex. 1026)

[0047] In one embodiment, a resident software application is stored in the non-volatile memory 420 of the transmitter 120. When a connection between the transmitter 120 and the computer 220 is detected by the computer 220, an operating system executing on the computer may automatically execute the resident software application. For example, a Windows® operating system may be configured to check the contents of the non-volatile memory of the transmitter for an “autoplay.inf” file upon detecting a connection between the transmitter and the computer. The “autoplay.inf” file then directs the operating system to the resident software application, which is stored in the non-volatile memory 420 of the transmitter 120. The operating system of the computer 220 then executes the resident software application.

Ex. 1027, ¶47; see IPR2024-01437 (Paper 15) 24-27

(57)

ABSTRACT

A USB peripheral device may automatically launch an application residing in its memory after it is connected to a host or after restarting the host if the USB flash drive has already been connected. Alternatively, the USB peripheral device can automatically launch an application residing on the host or on a network, which is accessible by the host. The USB peripheral device has a USB interface and a controller, which is operative to execute instructions for sending and receiving messages through the USB interface. The controller is further operative, when executing the instructions, to send to a host a stream of emulated keystrokes, which emulated keystrokes cause the host to generate and execute a startup script. Embodiments of the invention include a USB peripheral device able to control a host and a method of using a USB peripheral device to control a host.

Ex. 1026, Abstract; see IPR2024-01437 (Paper 15) 19-20



Ground 2: *Maeda* (Ex. 1031) and *Deforche* (Ex. 1026)

Maeda's

disclosure, however, does not discuss presenting a peripheral device to the processing device as a “human interface device.”

IPR2024-01437 (Paper 2) (The Petition) 41; *see* IPR2024-01437 (Paper 15) 37

[0004] It is an aim of the present invention to provide a wireless modem device and a method for operating same, with which the need for installation of an appropriate driver can be avoided.

Ex. 1030, ¶14; *see* IPR2024-01437 (Paper 15) 28

[0015]

In the present embodiment, an example is described in which a PC is used as an image generation device that generates images and audio, and the images and audio are transmitted to a projector, which is an image projection device, using a wireless LAN.

Ex. 1031, ¶15; *see* IPR2024-01437 (Paper 15) 38



Ground 2: *Maeda* (Ex. 1031) and *Deforche* (Ex. 1026)

212. In my view, the combination of Van de Laar and Kaplan disclose this limitation. See § VII.F (definition of “data transformation”). For example, Van De Laar discloses executing software code “to provide data transformations,” such as data scaling, transcoding, and mixing. See, e.g., Ex-1007, ¶¶56, 59-60, 123, 126. I note that a POSA would recognize and find it obvious in the art that data is conventionally scaled, transcoded, or mixed *based on a type of functional data* it represents, such on whether the data is audio data, visual data, or another type of data. A POSA would understand that *different data types require different methods of scaling, transcoding, or mixing, and therefore, must be based on the type of data it is.*

213. In my view, Kaplan also discloses that “*provid[ing] data transformations based on a type of functional data from the at least one functional device to the processing device.*” See, e.g., Ex-1008, ¶¶32 (scaling video data); 48 (compressing data using a codec “*based on a type of functional data*”). A POSA would recognize and understand that codecs, which were well-known in the art, are specific to data type, such as whether the data being compressed, decompressed, encoded or decoded is audio data, visual data, *etc.* Therefore, the codec would provide translations “*based on a type of functional data*” it is.

Ex. 2030, ¶¶212-213; see IPR2024-01437 (Paper 15) 38

Motivation to Combine: *Deforche* (Ex. 1030) – A Zero Footprint System

[0028] Problem Definition: to provide a way to achieve USB (or other interface) modem functionality in any computer (Operating system independent) without leaving a footprint (Zero-Footprint). This means that the need can be avoided to install drivers and/or applications on PC's to give USB modem connectivity. This also means that the need can be avoided for the end user to have administrator rights on the computer. An advantage is the ease of use of e.g. USB modem products which can even be allowed usage in restricted conditions. The invention can give the end user connectivity on any personal computer (PC) without interfering on the PC itself.

Ex. 1030, ¶28; see IPR2024-01437 (Paper 15) 34-35

[0009] In the connection method and the wireless modem device of the invention, a pre-installed generic driver of an operating system installed on the computer device is used for setting up a modem/host communication interface by means of which the wireless modem device and the computer device can communicate with each other. Data traffic from the computer device towards the wireless communication network and vice versa is routed over this modem/host communication interface and uses the generic communication protocol provided by the pre-installed generic driver. This has the advantage that the need for a specific driver for the communication between the wireless modem device and the computer device can be avoided. This has the advantage that a user can use the wireless modem device on a computer device on which he has no administrator rights, i.e. a computer device on which his user rights are restricted so that he cannot install a specific driver for the wireless modem device, for example a computer device in a hotel, on an airport and the like.

Ex. 1030, ¶9; see IPR2024-01437 (Paper 15) 34



Motivation to Combine: *Maeda* (Ex. 1031) – Software Installation

[0022]

As shown in FIG. 3, the PC 100 includes a control unit 121, a screen generation unit 122, an image capture unit 123, an audio generation unit 124, an image output unit 125, an audio output unit 126, a PC communication unit 127, and an audio capture unit 128 as functional components.

Ex. 1031, ¶22; see IPR2024-01437 (Paper 15) 35-36

[0078]

The image and audio transmission system of the present invention can be applied to a system that transmits images and audio from an image generation device such as a PC to an image projection device such as a projector, and is particularly suitable for presentations using a wireless projector.

Ex. 1031, ¶78; see IPR2024-01437 (Paper 15) 35-36; see also Ex.1002, ¶130

The '676 Patent

[REDACTED] - Demonstrative Only – Not Evidence

PO-61

The '676 Patent Claims

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

- a) coupling a peripheral device to the processing device, the peripheral device having a wireless transceiver;
- b) setting up, by means of the pre-installed generic driver of the operating system, a means for communication between the peripheral device and the processing device;
- c) coupling the processing device to the wireless communications network via the peripheral device; running a client application stored on the peripheral device to obtain screen scraped data;
- d) routing the screen scraped data between the processing device and the wireless communications network via the means for communication for display on the one or more first displays of the base node, wherein the generic communication protocol is used for transferring the screen scraped data for display between the processing device and the peripheral device; and

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

Ex. 1001 ('676 Patent), Cl. 1



Petitioner's Claim Construction – “means for communication”

The term “*means for communication*” is presumably means-plus-function language referring to an interface using the generic communication protocol of claim

1. The “*means for communication*” appears to relate to the following passages in the specification:

[O]ne of the pre-installed generic drivers of the operating system on the relevant computer 31, 36 is exploited for setting up communication from the computer device 31, 36 to the network 50 via the connection unit 47 (optionally 49)....the connection unit 47, (optionally 49) operated as a peripheral device communicates with the relevant processing device 31, 36 by using a generic communication protocol provided by the pre-installed generic driver. (EX-1001, 20:35-50).

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

See IPR2024-01438 (Paper 2) 9-10; IPR2024-01438 (Paper 15) 26-27



Ground 1: *Ono* (Ex. 1005) and *Deforche* (Ex. 1030)

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

Ex. 1001 ('676 Patent), Cl. 1

[0051] The image display apparatus 1 has, in advance at the time of shipment, a connection application 41 for network connection, a driver 42 for driving the wireless connection module, and configuration information 43 for network connection written within a ROM, which will be described later. In addition, the image display apparatus 1 comes with the wireless connection module 40 as an accessory.

Ex. 1005, ¶51; IPR2024-01438 (Paper 15) 28

[0055] In order to connect the projector 60 of the image display apparatus 1 and the information terminal apparatus 2A to the wireless network, the user clicks on a set-up file with a mouse after plugging the USB memory 45 in a USB jack on the information terminal apparatus 2A. As a result, an installer will automatically be activated on the information terminal apparatus 2A, and the connection application 46, the driver 47 and the configuration information 48 will automatically be stored in the HDD (Hard Disk Drive). Then, if the user inserts the wireless connection module 44 into the USB jack (slot) on the information terminal apparatus 2A, connection configuration for the wireless network will be completed, and transmission and reception of data with the projector 60 of the image display apparatus 1 that is already running will be carried out via the wireless network.

Ex. 1005, ¶55; See IPR2024-01438 (Paper 15) 28



The '676 Patent Claims

18. The method according to claim 1, wherein running said program **does not require installation** of the program or configuration of the processing device.

20. The method according to claim 1, further comprising a program adapted to be loaded onto the processing device and to run on an operating system of the processing device, said program being adapted to obtain the media content from the processing device, running said program on the processing device **does not require installation** of the program or configuration of the processing device.

Ex. 1001 ('676 Patent), Cl. 18, Cl. 19, and Cl. 20

The '676 Patent Claim 14

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

setting up a communications network between a base node of the communications network and a peripheral device coupled to the processing device;

transferring media content between the processing device and the peripheral device; the media content being screen scraped data from a screen of the processing device;

transmitting the media content from the peripheral device to the communications network;

receiving media content from the communications network at the base node and displaying the media content on a display in accordance with a set of rules, one of the rules being a forcing rule, whereby the forcing rule determines that the displaying of media content on the display is obtained by a user action on any one of the user devices involved in the meeting, without requiring the agreement of another participant, the media content from the any one of the user devices overriding or replacing any data displayed on the display by the same or another participant of the meeting.

Ex. 1001 ('676 Patent), Cl. 14

Indeed, the '676 patent contains

applicant-admitted prior art that screen scraping was known in the art (EX-1001, 13:59-62) and could have been predictably implemented in an image display system like that of Ono using known techniques, as described in Slobodin, which is directed to wireless transmission of screen scraped data to a projector (*see, e.g.*, EX-1033, ¶¶11-12).

IPR2024-01437 (Paper 2) 36; *see* IPR2024-01437 (Paper 15) 33-34

The '676 Patent Claim 4 and 16

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

Ex. 1001 ('676 Patent) Cl. 4

16. An electronic meeting tool for communicating arbitrary media content, being data for display, from users at a meeting, the tool comprising:

- a base unit of a wireless communications network, the base unit being coupled to one or more first displays, the base unit being adapted to receive user selected arbitrary media content from a processing device via the wireless communications network, and to control display of the user selected arbitrary media content on the one or more first displays;
- at least one peripheral device adapted to communicate the user selected arbitrary media content from the processing device to the base unit via the wireless communications network;
- a program adapted to be loaded onto the processing device and to run on an operating system of the processing device, said program being adapted to obtain user selected arbitrary media content from the processing device;
- an input device to allow the user to carry out a user action that triggers transfer of said user selected arbitrary media content from said processing device to a transmitter and to the wireless communications network, the input device being an actuator coupled to the peripheral device and the base unit is adapted to display said user selected arbitrary media content on the first display in accordance with a set of rules, wherein one of the rules is a forcing rule, whereby the forcing rule is that the display on the one or more first displays is obtained by the action of only one participant involved in the meeting, without requiring the agreement of another participant, the data of any participant for display

Ex. 1001 ('676 Patent) Cl. 16

Ground 3: *Ono* (Ex. 1005), *Deforche* (Ex. 1030), and *Grimshaw* (Ex. 1008)

[0045] The control section 61 generates a connection request signal with respect to the information terminal apparatus selected by the selecting section 69. The communications module 40 transmits the above-mentioned connection request signal from the control section 61 to the appropriate information terminal apparatus 2A, 2B or 2C.

Ex. 1005, ¶45; see IPR2024-01438 (Paper 15) 39

[0083] FIG. 9 is a sequence diagram of a case where the information terminal apparatus 2A accepts a connection request from the projector 60 of the image display apparatus 1. In the sequence diagram of FIG. 9, the connection request signal generated by the CPU 61 of the projector 60 of the image display apparatus 1 with respect to the information terminal apparatus 2A selected by the remote controller 69 is handed over to the wireless connection module 40 via the I/F 66, and is transmitted from the wireless connection module 40 to the wireless connection module 44 of the appropriate information terminal apparatus 2A in step S1.

Ex. 1005, ¶83; see IPR2024-01438 (Paper 15) 39

[0091] In addition, as shown in FIG. 10, the information terminal apparatus 2A is also capable of rejecting a connection request from the projector 60 of the image display apparatus 1. In the sequence diagram of FIG. 10, the connection request signal generated by the CPU 61 of the projector 60 with respect to the information terminal apparatus 2A selected by the remote controller 69 is handed over to the wireless connection module 40 via the I/F 66, and is transmitted from the wireless connection module 40 to the wireless connection module 44 of the appropriate information terminal apparatus 2A in step S1.

Ex. 1005, ¶91; see IPR2024-01438 (Paper 15) 39



Ground 3: *Ono* (Ex. 1005), *Deforche* (Ex. 1030), and *Grimshaw* (Ex. 1008)

[0019] Switch controller 318 receives audio, video and/or data signals from one or more user modules 14-20 and/or communication accessories 302 and, based on a user selection and arbitration method described below, provides the selected signals to an appropriate destination. For example, consider the case where separate laptop computers are connected to user modules 14-20 and are vying for control of the display module 22; that is, each of the connected computers is outputting data signals through data connections 342, 352, 362, 372 for presentation on display module 22. The display module 22 may not simultaneously display the information from all four computers/user modules. Thus, the users of modules 14, 16, 18, 20 can take control of the display module 22 by respectively engaging buttons 344, 354, 364, 374, which causes switch controller 318 to pass the data signals from the selected user module on to the display module. This process and feature is described below in more detail. Depending on the particular embodiment, switch controller 318 may be a hub, router, switch, bridge, multiplexor, or any other device where one or more input signals are received but a single input signal is selected according to a command signal. It is also possible for communication accessories 302, like a DVD player, to provide switch controller 318 with another input for selection.

Ex. 1008, ¶19; see IPR2024-01438 (Paper 15) 40, 47

The '676 Patent Claims

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

- a) coupling a peripheral device to the processing device, the peripheral device having a wireless transceiver;
- b) setting up, by means of the pre-installed generic driver of the operating system, a means for communication between the peripheral device and the processing device;
- c) coupling the processing device to the wireless communications network via the peripheral device; running a client application stored on the peripheral device to obtain screen scraped data;
- d) routing the screen scraped data between the processing device and the wireless communications network via the means for communication for display on the one or more first displays of the base node, wherein the generic communication protocol is used for transferring the screen scraped data for display between the processing device and the peripheral device; and

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

Ex. 1001 ('676 Patent), Cl. 1



Ground 4: *Uchida* (Ex. 1009) and *Deforche* (Ex. 1030)

The term “*means for communication*” is presumably means-plus-function language referring to an interface using the generic communication protocol of claim

1. The “*means for communication*” appears to relate to the following passages in the specification:

[O]ne of the pre-installed generic drivers of the operating system on the relevant computer 31, 36 is exploited for setting up communication from the computer device 31, 36 to the network 50 via the connection unit 47 (optionally 49)...the connection unit 47, (optionally 49) operated as a peripheral device communicates with the relevant processing device 31, 36 by using a generic communication protocol provided by the pre-installed generic driver. (EX-1001, 20:35-50).

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

See IPR2024-01438 (Paper 2) 9-10; IPR2024-01438 (Paper 15) 46-47

The '676 Patent Claim 4 and 16

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

Ex. 1001 ('676 Patent) Cl. 4

16. An electronic meeting tool for communicating arbitrary media content, being data for display, from users at a meeting, the tool comprising:

- a base unit of a wireless communications network, the base unit being coupled to one or more first displays, the base unit being adapted to receive user selected arbitrary media content from a processing device via the wireless communications network, and to control display of the user selected arbitrary media content on the one or more first displays;
- at least one peripheral device adapted to communicate the user selected arbitrary media content from the processing device to the base unit via the wireless communications network;
- a program adapted to be loaded onto the processing device and to run on an operating system of the processing device, said program being adapted to obtain user selected arbitrary media content from the processing device;
- an input device to allow the user to carry out a user action that triggers transfer of said user selected arbitrary media content from said processing device to a transmitter and to the wireless communications network, the input device being an actuator coupled to the peripheral device and the base unit is adapted to display said user selected arbitrary media content on the first display in accordance with a set of rules, wherein one of the rules is a forcing rule, whereby the forcing rule is that the display on the one or more first displays is obtained by the action of only one participant involved in the meeting, without requiring the agreement of another participant, the data of any participant for display

Ex. 1001 ('676 Patent) Cl. 16

Ground 4: *Uchida* (Ex. 1009) and *Deforche* (Ex. 1030) and *Grimshaw* (Ex. 1008)

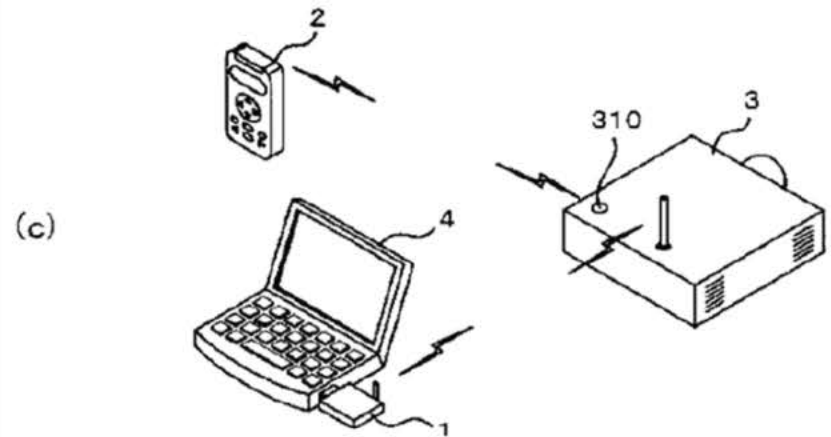
4. The method of claim 1, wherein the peripheral device has an actuator, the method further comprising a user action on the actuator that triggers transfer of the data for display from the processing device to the wireless transceiver and from there to the wireless communications network.

Ex. 1001 ('676 Patent) Cl. 4

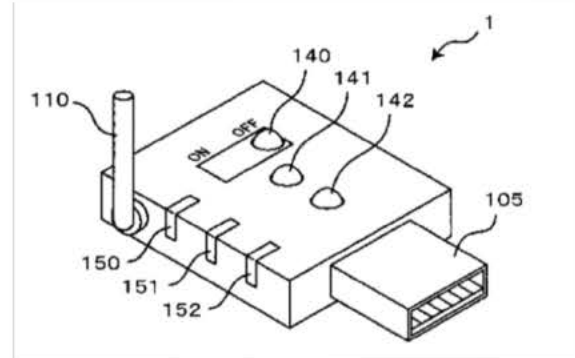
[0071]

The 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. When the image transfer stop switch 140 is operated to the image stop ON mode side while connected to the computer device 4 via the USB connector 105, the CPU 101 notifies the computer device 4 of this information. When the CPU 405 of the computer device 4 receives the information, it executes an image transfer application and transmits a request to the image projection device 3 via the wireless communication unit 107 to project a specific image (here, a black screen image) on the image projection device 3.

Ex. 1009, ¶71; see IPR2024-01438 (Paper 15) 47-48



Ex. 1009, Fig. 2c; see IPR2024-01438 (Paper 15) 47-48



Ex. 1009, Fig. 3; see IPR2024-01438 (Paper 15) 47-48



Ground 4: *Uchida* (Ex. 1009) and *Deforche* (Ex. 1030) and *Grimshaw* (Ex. 1008)

[0019] Switch controller 318 receives audio, video and/or data signals from one or more user modules 14-20 and/or communication accessories 302 and, based on a user selection and arbitration method described below, provides the selected signals to an appropriate destination. For example, consider the case where separate laptop computers are connected to user modules 14-20 and are vying for control of the display module 22; that is, each of the connected computers is outputting data signals through data connections 342, 352, 362, 372 for presentation on display module 22. The display module 22 may not simultaneously display the information from all four computers/user modules. Thus, the users of modules 14, 16, 18, 20 can take control of the display module 22 by respectively engaging buttons 344, 354, 364, 374, which causes switch controller 318 to pass the data signals from the selected user module on to the display module. This process and feature is described below in more detail. Depending on the particular embodiment, switch controller 318 may be a hub, router, switch, bridge, multiplexor, or any other device where one or more input signals are received but a single input signal is selected according to a command signal. It is also possible for communication accessories 302, like a DVD player, to provide switch controller 318 with another input for selection.

Ex. 1008, ¶19; see IPR2024-01438 (Paper 15) 40, 47



The '676 Patent Claims

18. The method according to claim 1, wherein running said program **does not require installation** of the program or configuration of the processing device.

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

20. The method according to claim 1, further comprising a program adapted to be loaded onto the processing device and to run on an operating system of the processing device, said program being adapted to obtain the media content from the processing device, running said program on the processing device **does not require installation** of the program or configuration of the processing device.

Ex. 1001 ('676 Patent), Cl. 18, Cl. 19, and Cl. 20

Motivation to Combine: *Deforche* (Ex. 1030) – A Zero Footprint System

[0028] Problem Definition: to provide a way to achieve USB (or other interface) modem functionality in any computer (Operating system independent) without leaving a footprint (Zero-Footprint). This means that the need can be avoided to install drivers and/or applications on PC's to give USB modem connectivity. This also means that the need can be avoided for the end user to have administrator rights on the computer. An advantage is the ease of use of e.g. USB modem products which can even be allowed usage in restricted conditions. The invention can give the end user connectivity on any personal computer (PC) without interfering on the PC itself.

Ex. 1030, ¶28; see IPR2024-01438 (Paper 15) 24-25

[0009] In the connection method and the wireless modem device of the invention, a pre-installed generic driver of an operating system installed on the computer device is used for setting up a modem/host communication interface by means of which the wireless modem device and the computer device can communicate with each other. Data traffic from the computer device towards the wireless communication network and vice versa is routed over this modem/host communication interface and uses the generic communication protocol provided by the pre-installed generic driver. This has the advantage that the need for a specific driver for the communication between the wireless modem device and the computer device can be avoided. This has the advantage that a user can use the wireless modem device on a computer device on which he has no administrator rights, i.e. a computer device on which his user rights are restricted so that he cannot install a specific driver for the wireless modem device, for example a computer device in a hotel, on an airport and the like.

Ex. 1030, ¶9; see IPR2024-01438 (Paper 15) 24-25

Motivation to Combine: *Ono* (Ex. 1005) – Software Installation

[0055] In order to connect the projector 60 of the image display apparatus 1 and the information terminal apparatus 2A to the wireless network, the user clicks on a set-up file with a mouse after plugging the USB memory 45 in a USB jack on the information terminal apparatus 2A. As a result, an installer will automatically be activated on the information terminal apparatus 2A, and the connection application 46, the driver 47 and the configuration information 48 will automatically be stored in the HDD (Hard Disk Drive). Then, if the user inserts the wireless connection module 44 into the USB jack (slot) on the information terminal apparatus 2A, connection configuration for the wireless network will be completed, and transmission and reception of data with the projector 60 of the image display apparatus 1 that is already running will be carried out via the wireless network.

Ex. 1005, ¶55; see IPR2024-01438 (Paper 15) 25-26

Motivation to Combine: Uchida (Ex. 1009) – Software Installation

[0048]

When the USB connector 105 of the wireless device 1 is connected to the USB connector 401 of the computer device 4, the computer device 4 installs a device driver program (hereinafter abbreviated as “device driver”), a wireless setting application program (hereinafter abbreviated as “wireless setting application”), and an image transfer application program (hereinafter abbreviated as “image transfer application”) stored in the program storage unit of the wireless device 1. The control unit of the computer device 4 executes the wireless setting application and requests the wireless device 1 to output the wireless setting information written by the remote control device 2. The control unit of the wireless device 1 retrieves the wireless setting information from the wireless setting information storage unit of the wireless device 1 and outputs this wireless setting information to the computer device 4 via the USB connector 105. The computer device 4 acquires the wireless setting information output from the wireless device 1 and sets this wireless setting information in the wireless communication unit of the wireless device 1 using a device driver. The wireless device 1 is thus able to communicate with the wireless unit of the image projection device 3 based on the wireless setting information set by the wireless communication unit, in other words, the wireless setting information written by the remote control device 2. In addition, the control unit of the computer device 4 functions as an image transmission means that transmits image data to the image projection device 3 via the wireless communication unit by executing an image transfer application.

Ex. 1009, ¶48; *see* IPR2024-01438 (Paper 15) 42



Motivation to Combine: *Ono* (Ex. 1005) or *Uchida* (Ex. 1009) with *Grimshaw* (Ex. 1008)

[0008] In addition, the present invention is made in view of the circumstances above, and seeks to provide an image display system including a plurality of information terminal apparatuses connected to a wire or wireless network and an image display apparatus, wherein switching among the plurality of networked information terminal apparatuses and selecting a desired information terminal apparatus therefrom can be performed from the side of the image display apparatus, and image information from the desired information terminal apparatus can be displayed on a display section of the image display apparatus.

Ex. 1005, ¶¶8; see IPR2024-01438 (Paper 15) 35-36

[0031]

Furthermore, according to the invention described in Claim 6, the wireless setting information is updated when the start-up control instruction unit is operated, that is, when an instruction to start or stop the image projection device is given, so that the wireless setting information can be updated every time the image projection device is used. Thus, even if an image projection device is used for a conference such as a presentation, and computer devices of an unspecified number of participants are used, it is possible to prevent image data from being mistakenly sent from a computer device that has previously used the image projection device and then sent from the image projection device.

Ex. 1009, ¶31; see IPR2024-01438 (Paper 15) 45-46

[0019] Switch controller 318 receives audio, video and/or data signals from one or more user modules 14-20 and/or communication accessories 302 and, based on a user selection and arbitration method described below, provides the selected signals to an appropriate destination. For example, consider the case where separate laptop computers are connected to user modules 14-20 and are vying for control of the display module 22; that is, each of the connected computers is outputting data signals through data connections 342, 352, 362, 372 for presentation on display module 22. The display module 22 may not simultaneously display the information from all four computers/user modules. Thus, the users of modules 14, 16, 18, 20 can take control of the display module 22 by respectively engaging buttons 344, 354, 364, 374, which causes switch controller 318 to pass the data signals from the selected user module on to the display module. This process and feature is described below in more detail. Depending on the particular embodiment, switch controller 318 may be a hub, router, switch, bridge, multiplexor, or any other device where one or more input signals are received but a single input signal is selected according to a command signal. It is also possible for communication accessories 302, like a DVD player, to provide switch controller 318 with another input for selection.

Ex. 1008, ¶19; see IPR2024-01438 (Paper 15) 19

END



Dr. Almeroth's Testimony

A Yes. Data is data; right? So whether it's real-time audio/video, whether it's audio/video from a file, whether it's video scraped off of a screen, its source doesn't affect the use of the transfer channels that can be created.

Ex. 2006, 101:1-5; *see* IPR2024-01436 (Paper 21) 14;
IPR2024-01437 (Paper 15) 12; IPR2024-01438 (Paper 15) 11;
IPR2024-01439 (Paper 20) 11

Q So if that's the case, why are there different kinds of drivers?

A Different kinds of drivers depending on what level of functionality that you want to be able to build into the application and how much of the balance of complexity you put in the driver versus into the application itself.

Ex. 2006, 104:3-9; *see* IPR2024-01436 (Paper 21) 14;
IPR2024-01437 (Paper 15) 12; IPR2024-01438 (Paper 15) 11;
IPR2024-01439 (Paper 20) 11



Dr. Almeroth's Testimony

Q Are you aware of any other embodiments in Uchida describing a different origin for wireless setting information?

A I have not specifically looked. My recollection is that where the information comes from to set up the wireless network is not a requirement of the claims of the '951 patent. So how Uchida accomplishes it or how a person of skill in the art would understand that it could be set is not relevant to an aspect of the claim language of the '951 patent.

Ex. 2007, 30:19-31:3; see IPR2024-01436 (Paper 21), 18; IPR2024-01437 (Paper 15) 15-16; IPR2024-01438 (Paper 15), 15; IPR2024-01439 (Paper 20) 15

A I -- I don't have Kaplan memorized. I don't know if it gives that as an option, but it would certainly be an obvious design choice just based on the simple way in which computers have operated for at least a decade before the '002 patent.

Ex. 2006, 63:24-64:3; see IPR2024-01436 (Paper 21), 17; IPR2024-01437 (Paper 15) 15; IPR2024-01438 (Paper 15) 14; IPR2024-01439 (Paper 20) 14

Q And does Ono require the installation of software on the client device?

A My recollection is that it does not. There is an embodiment within Ono where it does describe storing the connection application, the driver and configuration information on the hard drive. But it is not my recollection that that was a limiting aspect of Ono's invention.

Ex. 2009, 21:2-9; see IPR2024-01436 (Paper 21), 17; IPR2024-01437 (Paper 15) 15; IPR2024-01438 (Paper 15) 14; IPR2024-01439 (Paper 20) 14



Dr. Almeroth's Testimony

Q And do you know, does Maeda describe the installation of a driver for communication between its PC and its wireless LAN card?

A At least in claim 1 of the '237 patent, I don't see a reference to a driver. That might actually be a requirement in the context of other patents and claims, and so at least for Maeda for the '237, I don't recall a limitation where I would have needed to point to support in Maeda for that concept. To the extent I'm misremembering what's in the declaration, I would defer to what's there.

Ex. 2008, 33:10-20; see IPR2024-01436 (Paper 21), 16; IPR2024-01437 (Paper 15) 13; IPR2024-01438 (Paper 15) 13; IPR2024-01439 (Paper 20) 13

Q Does Maeda describe drivers?

...

Yeah. I think paragraph 162 points to some places in Maeda. Paragraph 15 is an example, figure 1, and then it uses that functionality to establish the understanding a person of skill in the art would have had about the use of drivers. And that's in 163.

Ex. 2006, 78:14-24; see IPR2024-01436 (Paper 21), 16; IPR2024-01437 (Paper 15) 13-14; IPR2024-01438 (Paper 15) 13; IPR2024-01439 (Paper 20) 13



Dr. Brogioli's Testimony

“setting up, by means of a first pre-installed generic audio driver of the operating system, a means for audio communication between the peripheral device and the processing device” Ex. 1001 ('002), Cl. 1.

Q. All right. So I'd like to look at Deforche now. We had a copy yesterday.

And Limitation B of Claim 1 of the '676 patent, it recites setting up by means of the pre-installed generic driver of the operating system the means for communication between the peripheral device and the processing device.

And I think we've established that Deforche discloses using pre-installed generic drivers. Is that correct?

A. (Pause.)

That's correct. I was just refreshing myself on Deforche, that it uses a pre-installed

generic driver.

Q. And also describes using the pre-installed HID and MSD drivers. Correct?

A. That's correct, yes.

Q. And the MSD driver, for example, sets up a means for communication between a peripheral device and a processing device. Correct?

A. Yes, per the functionality of the mass storage device driver.

Q. And the same is true for the HID driver. Correct?

A. That's correct, per the HID driver or the supported driver functionality.

Ex. 1072, 72:13-73:13; see IPR2024-01436 (Paper 46) 17-18;



Dr. Brogioli's Testimony

"communicating at least one of audio data and display data from the processing device to the external peripheral device via the human interface device" Ex. 1001 ('237), Cl. 1

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Ex. 1072, 72:13-73:13; see IPR2024-01437 (Paper 40), 20



Dr. Brogioli's Testimony

"setting up, by means of the pre-installed generic driver of the operating system a means for communication between the peripheral device and the processing device"
Ex. 1001 ('676), Cl. 1

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Ex. 1072, 72:13-73:13; see IPR2024-01436 (Paper 46) 17-18;