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

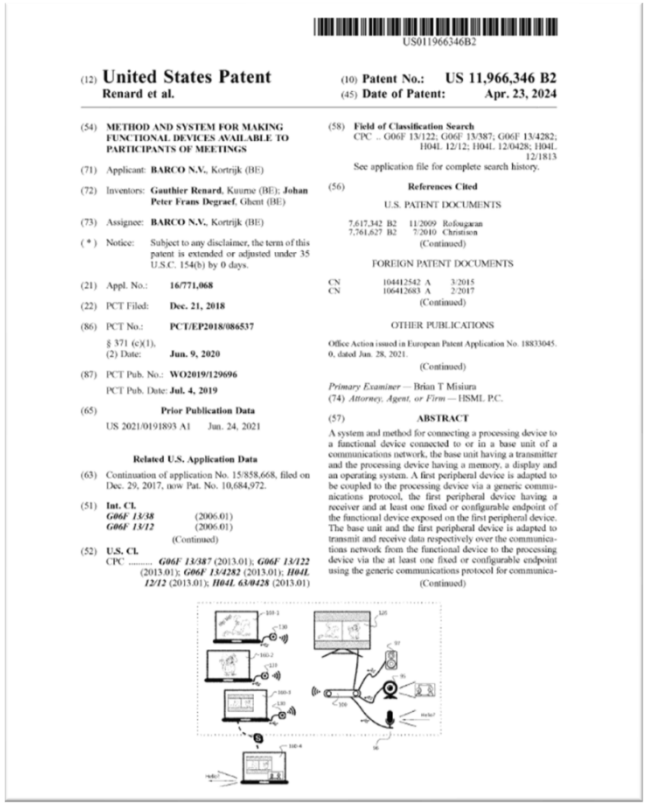
Case No. IPR2025-00597 (U.S. Patent No. 11,966,346)
Case No. IPR2025-00598 (U.S. Patent No. 11,966,347)
Patent Owner Demonstrative Slides

Thursday, July 9, 2026
1:00 PM Eastern

BARCO EXHIBIT 2034
Yealink v. Barco
IPR2025-00598

Overview

U.S. Patent Nos. 11,966,346 and 11,966,347



US011966346B2

(12) **United States Patent**
Renard et al.

(10) **Patent No.: US 11,966,346 B2**
(45) **Date of Patent: Apr. 23, 2024**

(54) **METHOD AND SYSTEM FOR MAKING FUNCTIONAL DEVICES AVAILABLE TO PARTICIPANTS OF MEETINGS**

(71) Applicant: **BARCO N.V.**, Kortrijk (BE)

(72) Inventors: **Gauthier Renard**, Kuurne (BE); **Johan Peter Frans Degraef**, Ghent (BE)

(73) Assignee: **BARCO N.V.**, Kortrijk (BE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/771,068**

(22) PCT Filed: **Dec. 21, 2018**

(86) PCT No.: **PCT/EP2018/086537**
§ 371 (c)(1),
(2) Date: **Jun. 9, 2020**

(87) PCT Pub. No.: **WO2019/129696**
PCT Pub. Date: **Jul. 4, 2019**

(65) **Prior Publication Data**

US 2021/0191893 A1 Jun. 24, 2021

Related U.S. Application Data

(63) Continuation of application No. 15/858,668, filed on Dec. 29, 2017, now Pat. No. 10,684,972.

(51) **Int. Cl.**
G06F 13/38 (2006.01)
G06F 13/12 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ***G06F 13/387*** (2013.01); ***G06F 13/122*** (2013.01); ***G06F 13/4282*** (2013.01); ***H04L 12/12*** (2013.01); ***H04L 63/0428*** (2013.01)

(58) **Field of Classification Search**
CPC .. G06F 13/122; G06F 13/387; G06F 13/4282; H04L 12/12; H04L 12/0428; H04L 12/1813
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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7,761,627 B2 7/2010 Christison
(Continued)

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CN 104412542 A 3/2015
CN 106412683 A 2/2017
(Continued)

OTHER PUBLICATIONS

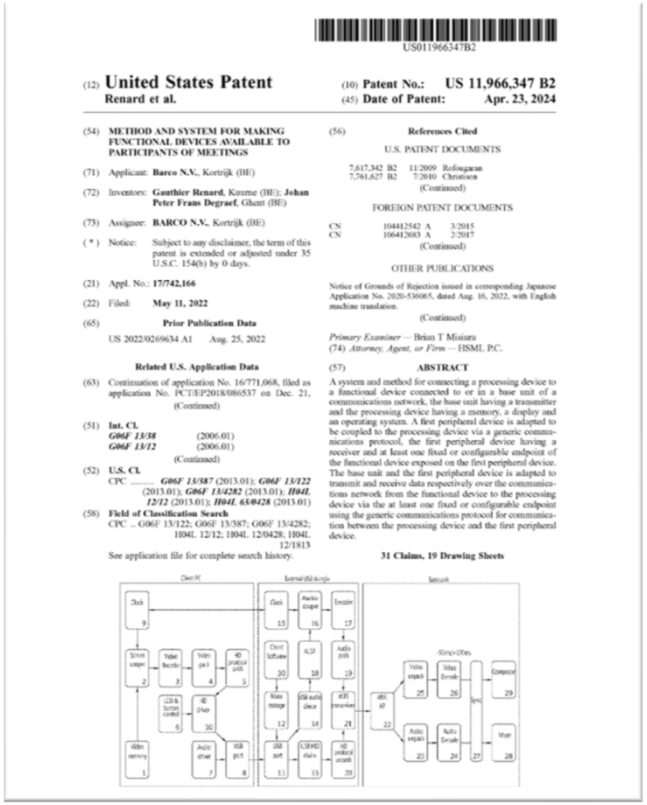
Office Action issued in European Patent Application No. 18833045.0, dated Jan. 28, 2021.
(Continued)

Primary Examiner — Brian T Misiura
(74) *Attorney, Agent, or Firm* — HSML P.C.

(57) **ABSTRACT**

A system and method for connecting a processing device to a functional device connected to or in a base unit of a communications network, the base unit having a transmitter and the processing device having a memory, a display and an operating system. A first peripheral device is adapted to be coupled to the processing device via a generic communications protocol, the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device exposed on the first peripheral device. The base unit and the first peripheral device is adapted to transmit and receive data respectively over the communications network from the functional device to the processing device via the at least one fixed or configurable endpoint using the generic communications protocol for communica-
(Continued)

IPR2025-00597, Ex. 1001



US011966347B2

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **17/742,166**

(22) Filed: **May 11, 2022**

(65) **Prior Publication Data**

US 2022/0269634 A1 Aug. 25, 2022

Related U.S. Application Data

(63) Continuation of application No. 16/771,068, filed as application No. PCT/EP2018/086537 on Dec. 21,
(Continued)

(51) **Int. Cl.**
G06F 13/38 (2006.01)
G06F 13/12 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ***G06F 13/387*** (2013.01); ***G06F 13/122*** (2013.01); ***G06F 13/4282*** (2013.01); ***H04L 12/12*** (2013.01); ***H04L 63/0428*** (2013.01)

(58) **Field of Classification Search**
CPC .. G06F 13/122; G06F 13/387; G06F 13/4282; H04L 12/12; H04L 12/0428; H04L 12/1813
See application file for complete search history.

(56) **References Cited**

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OTHER PUBLICATIONS

Notice of Grounds of Rejection issued in corresponding Japanese Application No. 2020-536085, dated Aug. 16, 2022, with English machine translation.
(Continued)

Primary Examiner — Brian T Misiura
(74) *Attorney, Agent, or Firm* — HSML P.C.

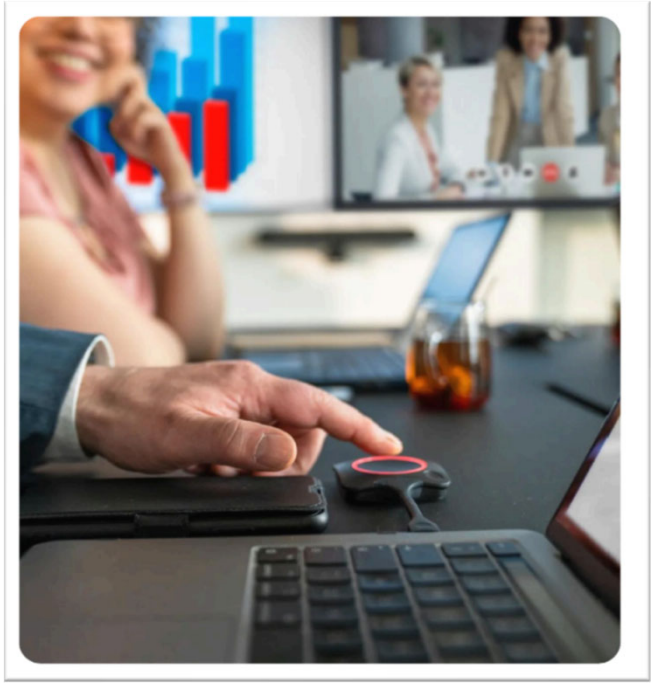
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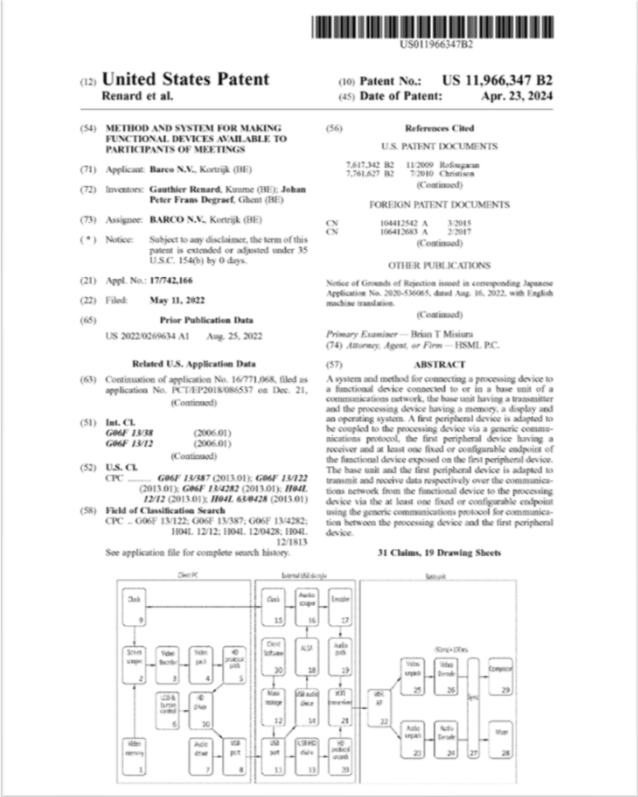
31 Claims, 19 Drawing Sheets

IPR2025-00598, Ex. 1001

U.S. Patent No. 11,966,347



Ex. 2014



US011966347B2

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Renard et al.

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(45) **Date of Patent: Apr. 23, 2024**

(54) **METHOD AND SYSTEM FOR MAKING FUNCTIONAL DEVICES AVAILABLE TO PARTICIPANTS OF MEETINGS**

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(52) **U.S. Cl.**
CPC ***G06F 13/387*** (2013.01); ***G06F 13/122*** (2013.01); ***G06F 13/4282*** (2013.01); ***H04L 12/12*** (2013.01); ***H04L 65/0428*** (2013.01)

(58) **Field of Classification Search**
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See application file for complete search history.

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(Continued)

FOREIGN PATENT DOCUMENTS

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CN 106412683 A 2/2017
(Continued)

OTHER PUBLICATIONS

Notice of Grounds of Rejection issued in corresponding Japanese Application No. 2020-536085, dated Aug. 16, 2022, with English machine translation.
(Continued)

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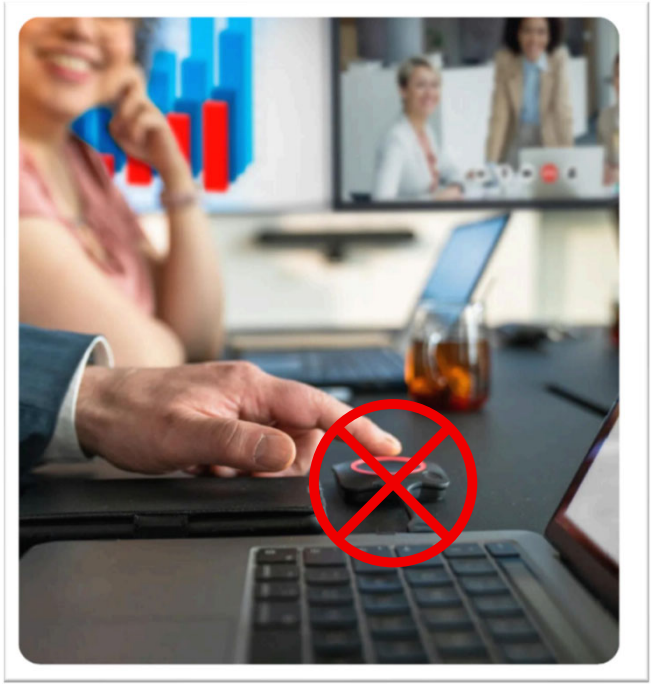
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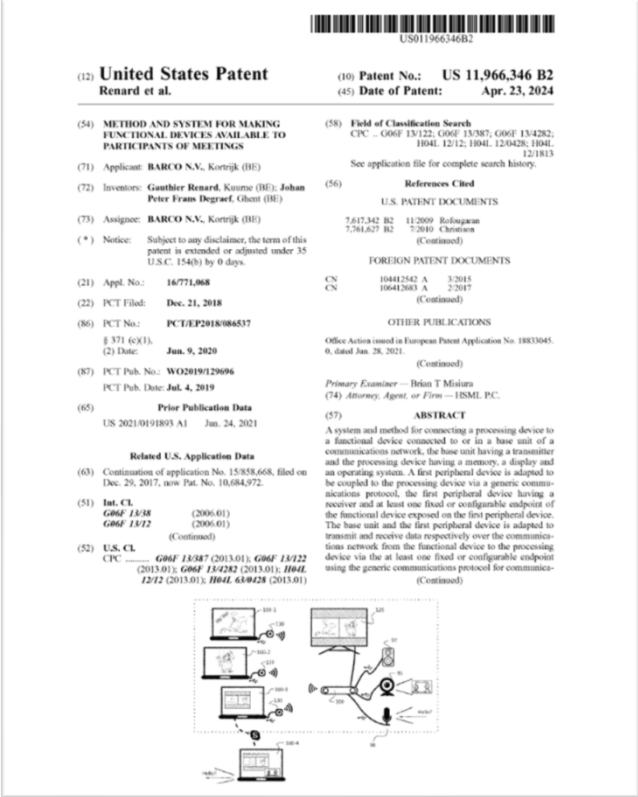
31 Claims, 19 Drawing Sheets

IPR2025-00598, Ex. 1001

U.S. Patent No. 11,966,346



Ex. 2014



US011966346B2

(12) **United States Patent**
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G06F 13/12 (2006.01)
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(52) **U.S. Cl.**
CPC ***G06F 13/387*** (2013.01); ***G06F 13/122*** (2013.01); ***G06F 13/4282*** (2013.01); ***H04L 12/12*** (2013.01); ***H04L 63/0428*** (2013.01)

(58) **Field of Classification Search**
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See application file for complete search history.

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(Continued)

Primary Examiner — Brian T Misiura
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(57) **ABSTRACT**
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(Continued)

IPR2025-00597, Ex. 1001

U.S. Patent No. 11,966,346

Ground 1 – Beel, Dinka, and Christison

"processing device interact directly with the base unit"

1. A system for connecting a processing device to a functional device connected to or in a base unit of a wireless connection, the system comprising:

the base unit having a transmitter,

a first display device connected to or in the base unit,

at least one functional device connected to or in the base unit, and

the processing device having a memory, a second display device, an operating system, a third party software for a Unified Communication call, a driver and a client software, when executed on the processing device, is configured to have the processing device interact directly with the base unit over a wireless connection,

wherein the base unit, via the transmitter, is configured to transmit data over the wireless connection to the processing device,

wherein the client software, when executed by a processor of the processing device, is configured to provide any simulations or translations, as required, to allow interaction between the first display device and the processing device, and wherein the client software and the driver, when executed on the processing device, are configured to present the at least one functional device to the operating system of the processing device as a virtual functional device, and the third party software for the Unified Communication call is presented with the virtual functional device for the Unified Communication call, the processing device being configured to host the Unified Communication between two or more other processing devices, and

wherein the client software is further configured to provide data transformations based on a type of functional data from the at least one functional device to the processing device.

IPR2025-00597, Ex. 1001, Cl. 1

“processing device interact directly with the base unit”

11. A method for connecting a processing device to a functional device connected to or in a base unit of a communications network, the base unit having a transmitter and a first display device, the processing device having a memory, a second display device and an operating system, a third party software for a Unified Communication call, and a driver and a client software wherein, the client software, when executed by a processor on the processing device:

interacts directly with the base unit over a wireless connection and provides any simulations or translations, as required, to allow interaction between the first display device and the processing device, wherein the base unit transmits data over the wireless connection to the processing device,

the client software and a driver, when executed on the processing device, present the functional device to the operating system of the processing device as a virtual functional device,

third party software for a Unified Communication call is presented with the virtual functional device which it then uses for the call,

wherein the processing device hosts the Unified Communication call between two or more processing devices,

wherein the client software is further configured to provide data transformations based on a type of functional data from the at least one functional device to the processing device.

IPR2025-00597, Ex. 1001, Cl. 11

Beel's Multiple Embodiments

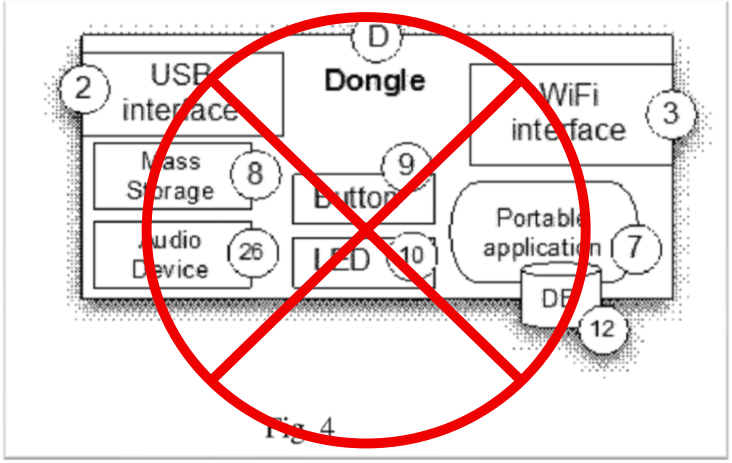


Fig. 4

Third Embodiment

Portable Application Stored on Standard Solid State Memory Such as a USB Stick

Fourth Embodiment

Software Only Client Installed on the Client Processing Device

"Whether a rejection is based on combining disclosures from multiple references, combining multiple embodiments from a single reference, or selecting from large lists of elements in a single reference, there must be a motivation to make the combination and a reasonable expectation that such a combination would be successful, otherwise a skilled artisan would not arrive at the claimed combination." *In re Stepan Co.,* 868 F.3d 1342, 1346 n1. (Fed. Cir. 2017)

Ex. 1005, ¶¶215–250, Fig. 6; IPR2025-00596, POR, 16–20, PO SR, 2–4

“the base unit…configured to transmit”

1. A system for connecting a processing device to a functional device connected to or in a base unit of a wireless connection, the system comprising:

the base unit having a transmitter,

a first display device connected to or in the base unit,

at least one functional device connected to or in the base unit, and

the processing device having a memory, a second display device, an operating system, a third party software for a Unified Communication call, a driver and a client software, when executed on the processing device, is configured to have the processing device interact directly with the base unit over a wireless connection,

wherein the base unit, via the transmitter, is configured to transmit data over the wireless connection to the processing device,

IPR2025-00597, Ex. 1001, Cl. 1

11. A method for connecting a processing device to a functional device connected to or in a base unit of a communications network, the base unit having a transmitter and a first display device, the processing device having a memory, a second display device and an operating system, a third party software for a Unified Communication call, and a driver and a client software wherein, the client software, when executed by a processor on the processing device:

interacts directly with the base unit over a wireless connection and provides any simulations or translations, as required, to allow interaction between the first display device and the processing device, wherein the base unit transmits data over the wireless connection to the processing device,

the client software and a driver, when executed on the processing device, present the functional device to the operating system of the processing device as a virtual functional device,

IPR2025-00597, Ex. 1001, Cl. 11

Beel Fails To Teach "the base unit… configured to transmit"

Third Embodiment

Portable Application Stored on Standard Solid State Memory Such as a USB Stick

[0221] This embodiment provides a peripheral interface such as the USB interface on any processing device acting as a host device such as a computer in a manner that is largely operating system independent. Installation of drivers and/or applications onto such a processing device as a computer is not necessary wherever pre-installed generic drivers are present. Administrator rights on the processing device such as a computer are preferably not necessary. To avoid the need for administrator rights, this embodiment uses other peripheral device pre-installed drivers such as USB class drivers supported without any extra installation. This embodiment of the present invention routes at least screen scraped data presented by client software running on the processing device for transfer to a communications network via a network connection of the processing device. The client software is launched from the peripheral device such as the USB device as a portable application.

Fourth Embodiment

Software Only Client Installed on the Client Processing Device

[0247] This embodiment is similar to the third embodiment, with as only difference that the software is copied on the client operating device (FIG. **9**). In this case, no plug and play port such as a USB port is required on the client operating device.

[0248] This embodiment will typically be used for tablet PC's and mobile devices. In that case

[0249] there is often no USB port available

[0250] application distribution is easy and widely accepted through application stores

Ex. 1005, ¶¶221, 247–250; IPR2025-00597, POR, 15–18, PO SR, 4–7

Beel Fails To Teach "the base unit… configured to transmit"

[0120] Optional equipment can be cameras **39**, **40**, **41** for recording the progress of the meeting. These cameras can be linked by a network **51**, e.g. a cable network to the router **42** and/or the base node **36**. Another optional item is a microphone or microphones **38** that can be used to transfer audio, e.g. to the processing devices **31** and to loud speakers (not shown) attached to the base node **36** or part of the display **44**.

[0085] "Electronic meeting systems" (EMS) need to be distinguished on the one hand from classic groupware, on the other from web conferencing systems. In reality, there is some overlap between minor features of products of the named categories. The main difference from groupware is the intensity of collaboration. EMS should be distinguished from systems with which it is possible to show the contents of an individual computer screen on a remote display with multiple users at the same time.

Ex. 1005, ¶¶85, 120, Fig. 1a; IPR2025-00597, POR, 15–18, PO SR, 4–7

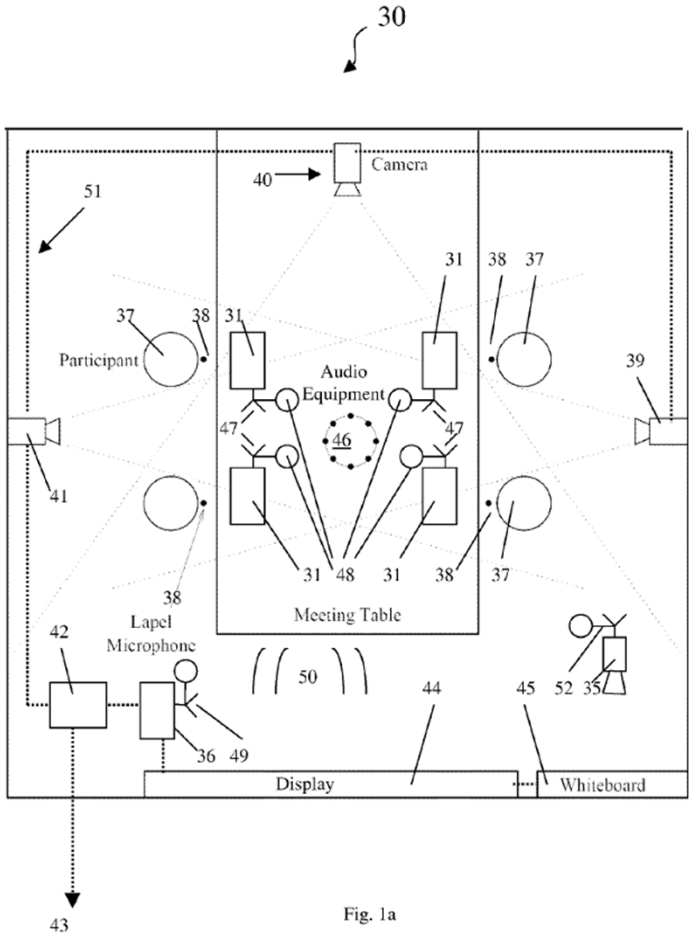


Fig. 1a

“transformations based on type of functional data”

wherein the client software, when executed by a processor of the processing device, is configured to provide any simulations or translations, as required, to allow interaction between the first display device and the processing device, and wherein the client software and the driver, when executed on the processing device, are configured to present the at least one functional device to the operating system of the processing device as a virtual functional device, and the third party software for the Unified Communication call is presented with the virtual functional device for the Unified Communication call, the processing device being configured to host the Unified Communication between two or more other processing devices, and

wherein the client software is further configured to provide data transformations based on a type of functional data from the at least one functional device to the processing device.

IPR2025-00597, Ex. 1001, Cl. 1

third party software for a Unified Communication call is presented with the virtual functional device which it then uses for the call,

wherein the processing device hosts the Unified Communication call between two or more processing devices,

wherein the client software is further configured to provide data transformations based on a type of functional data from the at least one functional device to the processing device.

IPR2025-00597, Ex. 1001, Cl. 11

Beel Fails To Teach "based on type of functional data"

[0314] The virtual audio device on the peripheral device is preferably adapted to analyse the incoming signal. If no audio is received, the incoming signal is discarded. If audio is received, the peripheral device preferably will initiate an additional TCP/IP socket connection to the base unit and the communications network. The audio can be then optionally time-stamped synchronous with the video stream for lip synchronization, optionally encoded into for instance Orgg/Vorbis, optionally encrypted using for instance CryptoPP and sent over the TCP/IP link using the RTP/RTCP protocol. If no audio signal is received, then no audio packets will preferably be sent over the network to limit bandwidth usage. The audio channel over TCP/IP is disconnected synchronously with the video channel.

[0321] On the peripheral device **32** the video packets are received at the corresponding plug and play port, e.g. the USB port **11**, read by the Human Interface Driver (HID) interface handler **13**, unpacked to remove HID protocol headers in an unpacker **20** and then transmitted to the communications network by a transmitter **21**. The network can be wireless for example WiFi or LiFi network.

Ex. 1005, ¶¶ 314, 321; IPR2025-00597, POR, 22–25, PO SR, 9–10

Dinka Teaches Special Purpose Hardware

A problem with packet-based communications is that their accessibility to users is limited. In particular, such communications are most commonly accessed using a personal computer. This has the disadvantage that the user must be sufficiently technically competent to download, install and operate the packet-based communication client software on their personal computer, which provides a barrier to the take-up. Even when the communication client is installed and executed on a personal computer, its use may be limited because personal computers are often not located in a place where the user is either familiar or comfortable with communicating. For example, a personal computer is often located in a study which for many users is not the most natural or comfortable environment for making phone calls.

Whilst packet-based communication systems can also be accessed via certain mobile devices, these generally do not have processing resources or display screens available to offer a full range of features, such as video calling.

It would therefore be desirable to make packet-based communications more accessible to users. One way to do this would be to run a packet-based communication client on a processor embedded in a familiar household media appliance like a television set or set-top box for plugging into a television. Embedded in this context means within the casing of the appliance. The ability to integrate an embedded processor into a television set or set-top box is known, and indeed many modern televisions and boxes already contain a processor for performing at least some of the digital signal processing required to decode and output viewable television signals to the screen.

Ex. 1006, 2:1–30; IPR2025-00597, POR, 28–31, PO SR, 12–15

Dinka Teaches Special Purpose Hardware

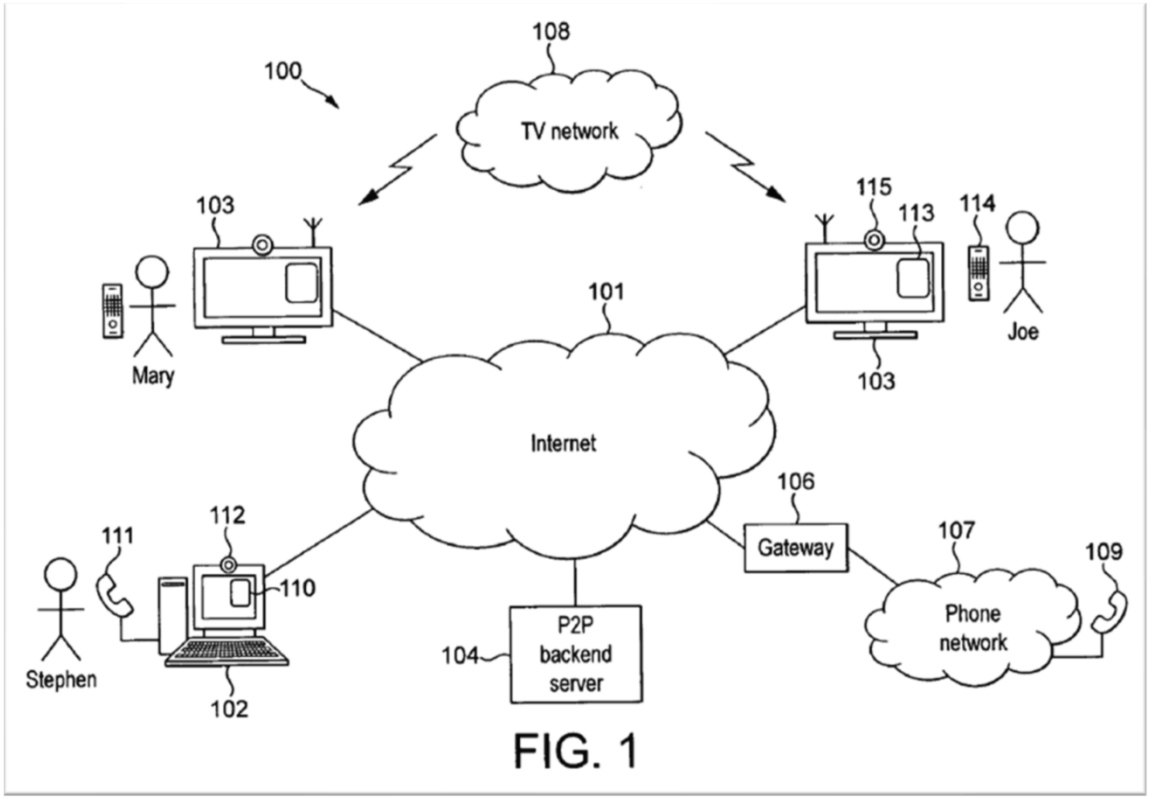


FIG. 1

Ex. 1006, Fig. 1; IPR2025-00597, POR, 28–31, PO SR, 12–15

Ground 2 – Kaplan, Van de Laar, and Christison

Van de Laar Fails To Teach "as a virtual functional device"

Patent Owner argues that "the Petition relies on the secondary dockee with respect to teachings of the virtual functional device" and "on the primary dockee's use of Skype," and "provides no evidence to reconcile these differences, but instead draws upon the primary dockee and secondary dockee indiscriminately." Prelim. Resp. 34.

We share Patent Owner's concern. At this stage of the proceeding, we are not persuaded that Petitioner's evidence and argument show that van de Laar teaches one processing device, e.g., dockee device, that meets all requirements of a processing device in claim 1.[7] We note that Petitioner

IPR2025-00597, Institution Decision, 32

Kaplan Does Not Teach "as a virtual functional device"

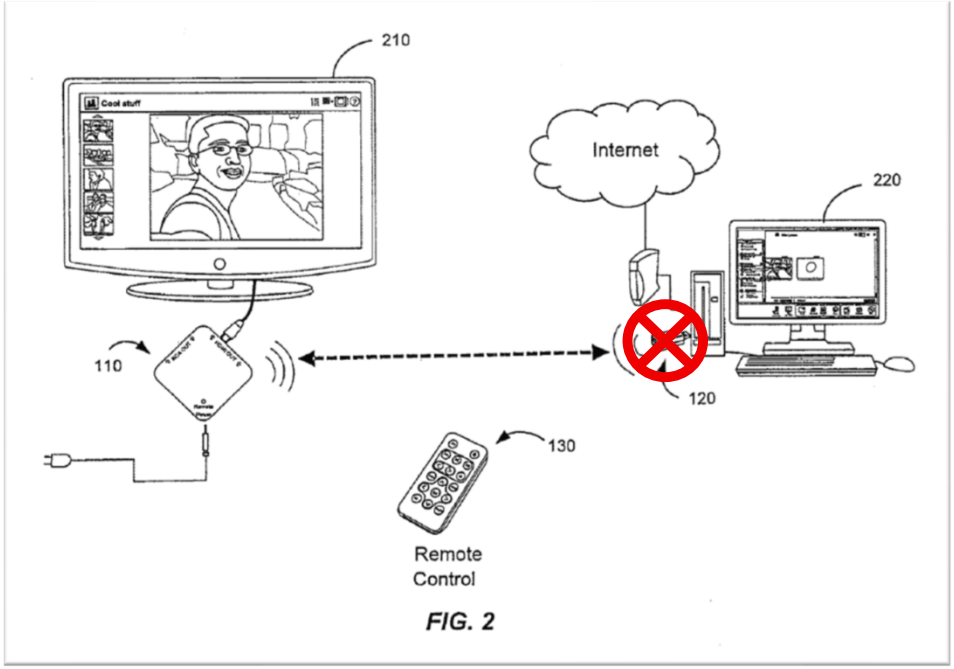


FIG. 2

[0054] The host may be further arranged to make the AV output for the secondary dockee available as a peripheral for docking (e.g. simulated webcam), that will appear to the dockee as a real peripheral (e.g. USB webcam) through the docking protocol as would normally would happen when a dockee docks with a WDH. So, in effect, the host may offer one set of peripherals to the primary dockee and another set of peripherals, which may include such simulated peripherals for secondary dockees. In that case the secondary docking device may have control and/or access to a secondary peripheral that receives and renders the at least part of the AV data that is rendered via the corresponding primary peripheral without having control and/or access to the primary peripheral.

Ex. 1007, ¶54; Ex. 1008, Fig. 2; IPR2025-00597, POR, 37–39, PO SR, 15–17.

Van de Laar Fails To Teach "host the Unified Communication"

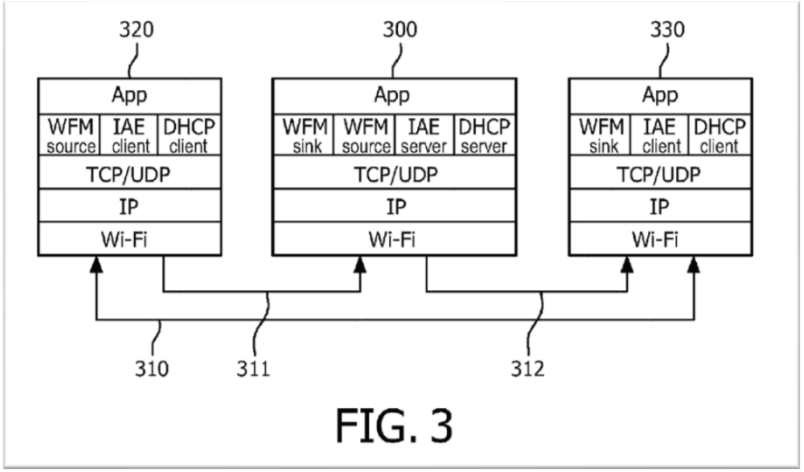


FIG. 3

[0128] In another embodiment, the WDH may enable primary dockees to provide output to the WDH and/or its audio peripherals through an audio stream between the dockee and the WDH. This may be based on WSB Audio, Wi-Fi Direct Play Service, VoIP, XMPP, Skype, DLNA or other audio streaming mechanism. The WDH can mix this with the audio output for the audio peripherals so that all people in the room can hear it.

Ex. 1007, ¶128, Fig. 3; IPR2025-00597, POR, 40–43, PO SR, 17–18

Dr. Almeroth On "based on type of functional data"

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.

Q Is the computer able to transmit audio information to the transmitter when the transmitter has identified itself as a mass storage device?

...

It's kind of what I described earlier, a way of using a basic interface or a mode and then data is data and you can send it. And once it's received, the device can do anything it wants with it.

Ex. 1002, ¶212; Ex. 2002, 121:2–19; IPR2025-00597, POR, 43–45

Kaplan Does Not Teach "interact directly"

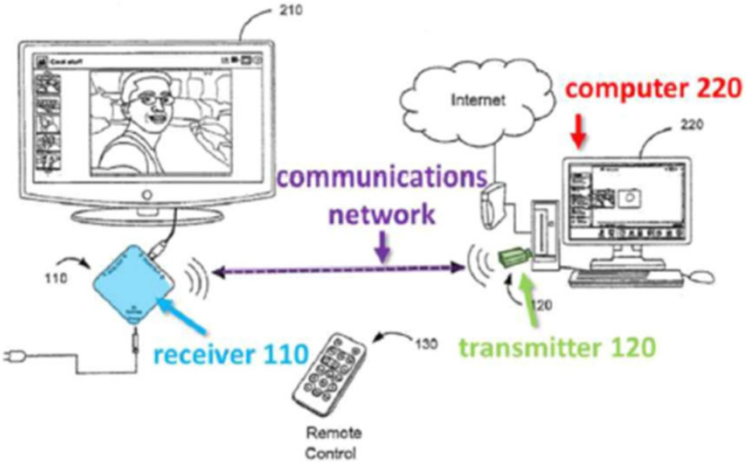


FIG. 2

Ex-1008, FIG. 2

b. ***the base unit having a transmitter,***

Van De Laar discloses the "the host device [or WDH 200] comprising a host communication unit for accommodating said wireless communication." Ex-1007, ¶1. *See also id.*, ¶¶, 60, 75, claims 1, 11, 12, 14, and FIG. 1; Ex-1002, ¶192. The wireless communication would obviously use a transmitter similar to the one that Kaplan discloses. *See* Ex-1008, ¶¶6, 16, 42, FIG. 3; Ex-1002, ¶193.

IPR2025-00597, Petition, 50; POR, 47–51

U.S. Patent No. 11,966,347

Ground 1 – Beel, Dinka, and Christison

“transmit and…receive”

1. A method for connecting a processing device to a functional device, the functional device being connected to or in a base unit of a communications network, the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, further comprising: a first peripheral device being configured to be coupled to the processing device via a generic communications protocol, the base unit having a transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the method further comprising:

the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network,

the functional device being configured for first video data to flow into the base unit or first video data is captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices,

wherein third video data, received from the host application and/or from the 3rd party application running on the processing device, is sent to an endpoint of the first peripheral device via a standard generic driver, the first peripheral device receiving the third video data and processing the third video data to form second processed video data, and

wherein the base unit receives the second processed data, and decodes and/or enhances the second processed data and forwards it to a functional device which is connected or attached to the base unit through a serial connection.

IPR2025-00598, Ex. 1001, Cl. 1

“transmit and…receive”

12. A system for making a functional device available to a processing device, the functional device being connected to or in a base unit of a communications network, the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, further comprising: a first peripheral device being configured to be coupled to the processing device via a generic communications protocol, the base unit having a transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the system further comprising:

the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network,

the functional device being configured for first video data to flow into the base unit or first video data to be captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices,

wherein third video data, received from the host application and/or from the 3rd party application running on the processing device, are sent to an endpoint of the first peripheral device via a generic driver, the first peripheral device being configured to receive the third video data and to process the third video data to form second processed video data, and

wherein the base unit is configured to receive the second processed video data, to decode and/or to enhance the second processed video data and to subsequently forward it to a functional device or a second peripheral device which is connected or attached to the base unit through a serial connection.

IPR2025-00598, Ex. 1001, Cl. 12

“transmit and…receive”

23. A method for connecting a processing device to a functional device, the functional device being connected to or in a base unit of a communications network, the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, further comprising: a first peripheral device being configured to be coupled to the processing device via a generic communications protocol, the base unit having a transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the method further comprising:

the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network,

the functional device being configured for first video data to flow into the base unit or first video data is captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices,

wherein third video data, received from the host application and/or from the 3rd party application running on the processing device, is sent to an endpoint of the first peripheral device via a standard generic driver, the first peripheral device receiving the third video data and processing the third video data to form second processed video data,

wherein the third video data is enhanced, and/or encoded to form the second processed data and the second processed data is sent through a wireless link to the base unit,

wherein the base unit decrypts the second processed data, and

wherein the base unit is configured to expose and make available the functional device that is connected to the base unit, simultaneously with a plurality of first peripheral devices by interpreting, processing and translating the electronic signals coming from the functional device.

IPR2025-00598, Ex. 1001, Cl. 23

“transmit and…receive”

27. A system for making a functional device available to a processing device, the functional device being connected to or in a base unit of a communications network, the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, further comprising: the first peripheral device being configured to be coupled to the processing device via a generic communications protocol, the base unit having a transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the system further comprising:

the base unit being configured to transmit and the first peripheral device being configured to receive first processed video data over the communications network,

the functional device being configured for first video data to flow into the base unit or first video data to be captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices, and

wherein the base unit is configured to expose and to make available the functional device that is connected to the base unit, simultaneously with a plurality of first peripheral devices by interpreting, processing and translating the electronic signals coming from the functional device.

IPR2025-00598, Ex. 1001, Cl. 27

Beel Fails To Teach "transmit and…receive"

[0071] In another aspect of the invention a peripheral device is provided 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 standard class of peripheral devices, the peripheral device comprising a memory in which executable software code is stored for execution on the processing device, said executable software code comprising:

…

a third software code portion for receiving media content from the network and for displaying the media content on the display in accordance with a set of rules; wherein the first software code portion is adapted to use the generic communication protocol for transferring the media content between the peripheral device and the processing device.

[0075] The present invention also provides a method for providing communication connectivity from a processing device,
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, 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.

Ex. 1005, ¶¶71, 75; IPR2025-00598, POR 14–16, PO SR 2–3

“captured in the base unit”

the functional device being configured for first video data to flow into the base unit or first video data is captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data

IPR2025-00598, Ex. 1001, Cl. 1

the functional device being configured for first video data to flow into the base unit or first video data is captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available

IPR2025-00598, Ex. 1001, Cl. 23

the functional device being configured for first video data to flow into the base unit or first video data to be captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to

IPR2025-00598, Ex. 1001, Cl. 12

the functional device being configured for first video data to flow into the base unit or first video data to be captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data avail-

IPR2025-00598, Ex. 1001, Cl. 27

Beel Fails To Teach "captured in the base unit"

[0120] Optional equipment can be cameras **39**, **40**, **41** for recording the progress of the meeting. These cameras can be linked by a network **51**, e.g. a cable network to the router **42** and/or the base node **36**. Another optional item is a microphone or microphones **38** that can be used to transfer audio, e.g. to the processing devices **31** and to loud speakers (not shown) attached to the base node **36** or part of the display **44**.

[0121] Any or all of the outputs of the processing devices **31**, the cameras, the whiteboard, etc. can be recorded and stored digitally, e.g. in node **36** or elsewhere to provide a complete record with correct time sequence.

Ex. 1005, ¶¶120–121, Fig. 1a; IPR2025-00598, POR 17–19, PO SR 3–5

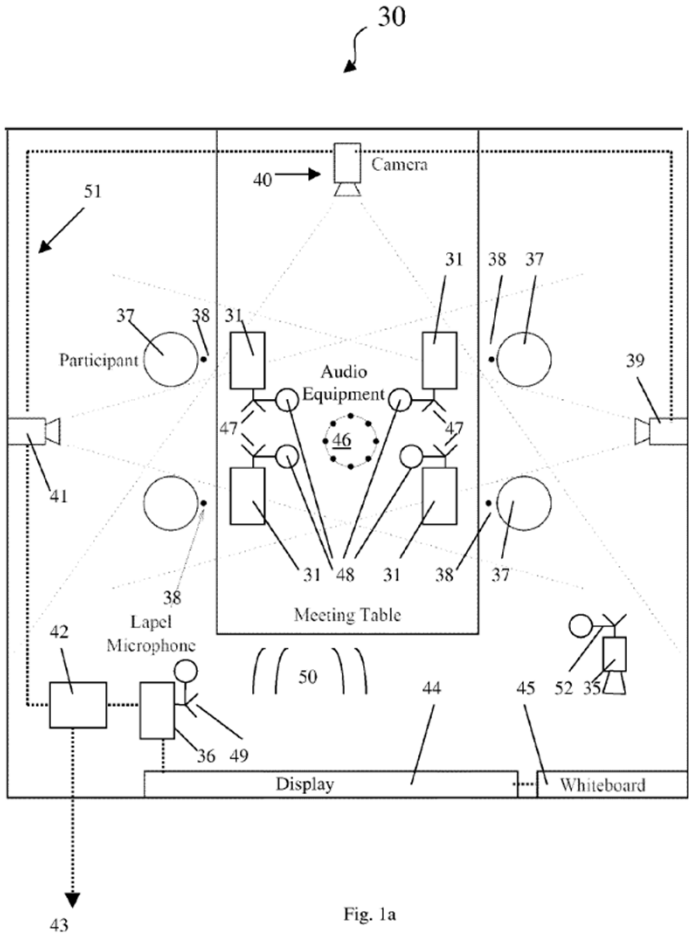


Fig. 1a

“process the first processed video data”

wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the

IPR2025-00598, Ex. 1001, Cl. 1

the functional device being configured for first video data to flow into the base unit or first video data to be captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating

IPR2025-00598, Ex. 1001, Cl. 12

the functional device being configured for first video data to flow into the base unit or first video data to be captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data avail-able through the at least one fixed or configurable

IPR2025-00598, Ex. 1001, Cl. 27

the functional device being configured for first video data to flow into the base unit or first video data is captured in the base unit, the first video data being processed in the base unit to generate the first processed video data, wherein the first processed video data is sent to the first peripheral device, the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available

IPR2025-00598, Ex. 1001, Cl. 23

Beel Fails To Teach "process the first processed video data"

[0321] On the peripheral device **32** the video packets are received at the corresponding plug and play port, e.g. the USB port **11**, read by the Human Interface Driver (HID) interface handler **13**, unpacked to remove HID protocol headers in an unpacker **20** and then transmitted to the communications network by a transmitter **21**. The network can be wireless for example WiFi or LiFi network.

Ex. 1005, ¶321; IPR2025-00598, POR, 20, PO SR, 5–6

"the operating system…being configured to capture"

configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices,

IPR2025-00598, Ex. 1001, Cl. 1

through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices,

IPR2025-00598, Ex. 1001, Cl. 23

generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices,

IPR2025-00598, Ex. 1001, Cl. 12

endpoint of the first peripheral device, the operating system of the processing device being configured to capture the second video data and to make it available through a custom or standard driver to either the host application or a 3rd party application running on the processing device or to other processing devices, and wherein the base unit is configured to expose and to make available the functional device that is connected to the base unit, simultaneously with a plurality of first peripheral devices by interpreting, processing and translating the electronic signals coming from the functional device.

IPR2025-00598, Ex. 1001, Cl. 27

Beel Fails To Teach "the operating system…being configured to capture"

[0113] Embodiments of the present invention provide solutions to three major problems with meetings:

[0114] a) the time taken to prepare for a meeting. This is mainly achieved by allowing "on-the-fly" presentation of any displayable information. This information does not have to be linked into any particular presentation software, nor to be compatible with any such presentation software,

[0115] b) the time taken to conduct the meeting using electronic meeting tools. This is achieved by reducing the time to connect computers to the display or projection system.

[0116] c) the time taken to reflect and review and document the meeting afterwards. This is achieved by providing the possibility of recording the course of the meeting in the same time sequence that it was carried out as well as be able to store all data presented and who presented it.

Ex. 1005, ¶¶113–116; IPR2025-00598, POR, 20–21.

“endpoint of the first peripheral device”

transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the method further comprising:

...

second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the

IPR2025-00598, Ex. 1001, Cl. 1

transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the system further comprising:

...

generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to

IPR2025-00598, Ex. 1001, Cl. 12

transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the method further comprising:

...

received by the first peripheral device to generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to capture the

IPR2025-00598, Ex. 1001, Cl. 23

transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the system further comprising:

...

generate second video data, the first peripheral device being configured to make the second video data available through the at least one fixed or configurable endpoint of the first peripheral device, the operating system of the processing device being configured to

IPR2025-00598, Ex. 1001, Cl. 27

Beel Fails To Teach “endpoint of the first peripheral device”

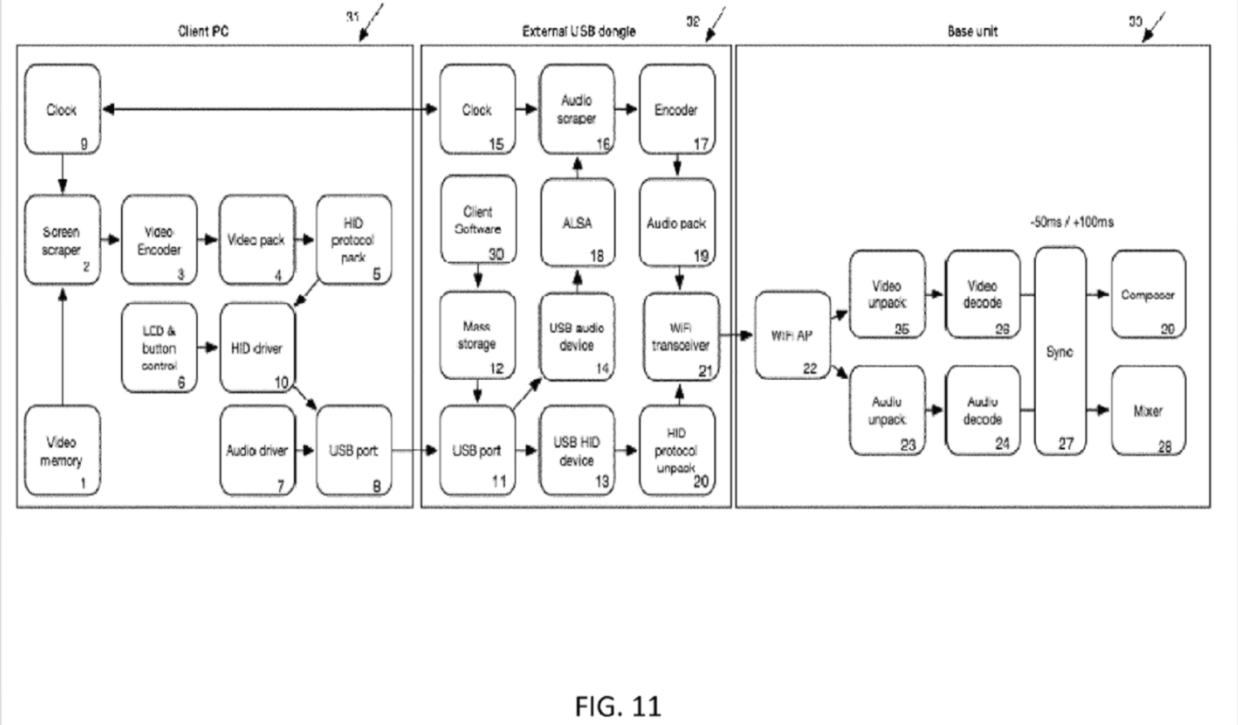


FIG. 11

Ex. 1005, Fig. 11 IPR2025-00598, POR, 21–23, PO SR, 7–8

Dinka Teaches Away From The Claimed Invention

A problem with packet-based communications is that their accessibility to users is limited. In particular, such communications are most commonly accessed using a personal computer. This has the disadvantage that the user must be sufficiently technically competent to download, install and operate the packet-based communication client software on their personal computer, which provides a barrier to the take-up. Even when the communication client is installed and executed on a personal computer, its use may be limited because personal computers are often not located in a place where the user is either familiar or comfortable with communicating. For example, a personal computer is often located in a study which for many users is not the most natural or comfortable environment for making phone calls.

Whilst packet-based communication systems can also be accessed via certain mobile devices, these generally do not have processing resources or display screens available to offer a full range of features, such as video calling.

It would therefore be desirable to make packet-based communications more accessible to users. One way to do this would be to run a packet-based communication client on a processor embedded in a familiar household media appliance like a television set or set-top box for plugging into a television. Embedded in this context means within the casing of the appliance. The ability to integrate an embedded processor into a television set or set-top box is known, and indeed many modern televisions and boxes already contain a processor for performing at least some of the digital signal processing required to decode and output viewable television signals to the screen.

Ex. 1006, 2:1–30; IPR2025-00598, POR, 25–28, PO SR, 10–12

Ground 2 – Kaplan, Van de Laar, and Christison

“a first peripheral device”

1. A method for connecting a processing device to a functional device, the functional device being connected to or in a base unit of a communications network, the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, further comprising: a first peripheral device being configured to be coupled to the processing device via a generic communications protocol, the base unit having a transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the method further comprising:

IPR2025-00598, Ex. 1001, Cl. 1

23. A method for connecting a processing device to a functional device, the functional device being connected to or in a base unit of a communications network, the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, further comprising: a first peripheral device being configured to be coupled to the processing device via a generic communications protocol, the base unit having a transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the method further comprising:

IPR2025-00598, Ex. 1001, Cl. 23

12. A system for making a functional device available to a processing device, the functional device being connected to or in a base unit of a communications network, the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, further comprising: a first peripheral device being configured to be coupled to the processing device via a generic communications protocol, the base unit having a transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the system further comprising:

IPR2025-00598, Ex. 1001, Cl. 12

27. A system for making a functional device available to a processing device, the functional device being connected to or in a base unit of a communications network, the processing device having a memory, a display and an operating system, wherein the processing device hosts a host application, further comprising: the first peripheral device being configured to be coupled to the processing device via a generic communications protocol, the base unit having a transmitter and the first peripheral device having a receiver and at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device, the system further comprising:

IPR2025-00598, Ex. 1001, Cl. 27

“a first peripheral device”

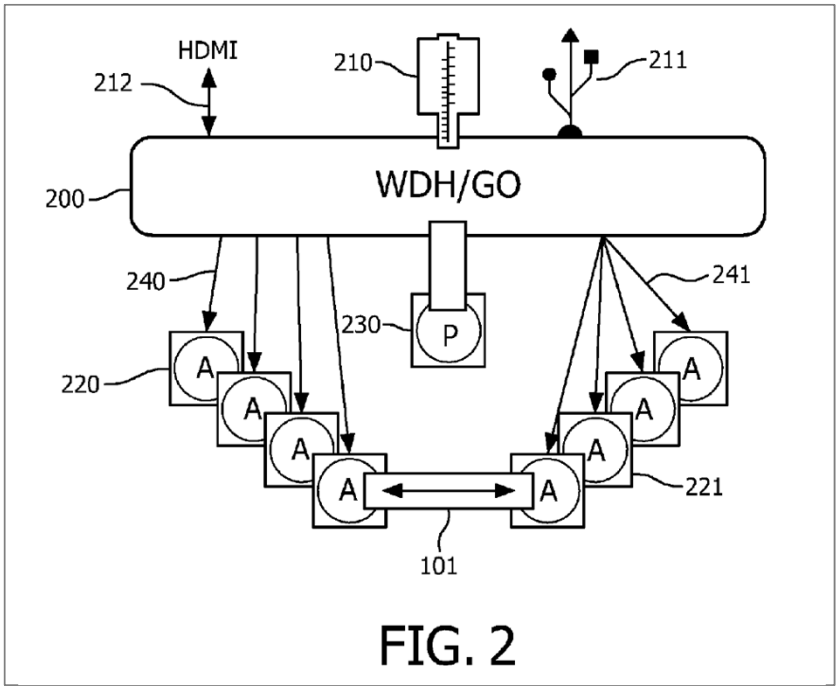


FIG. 2

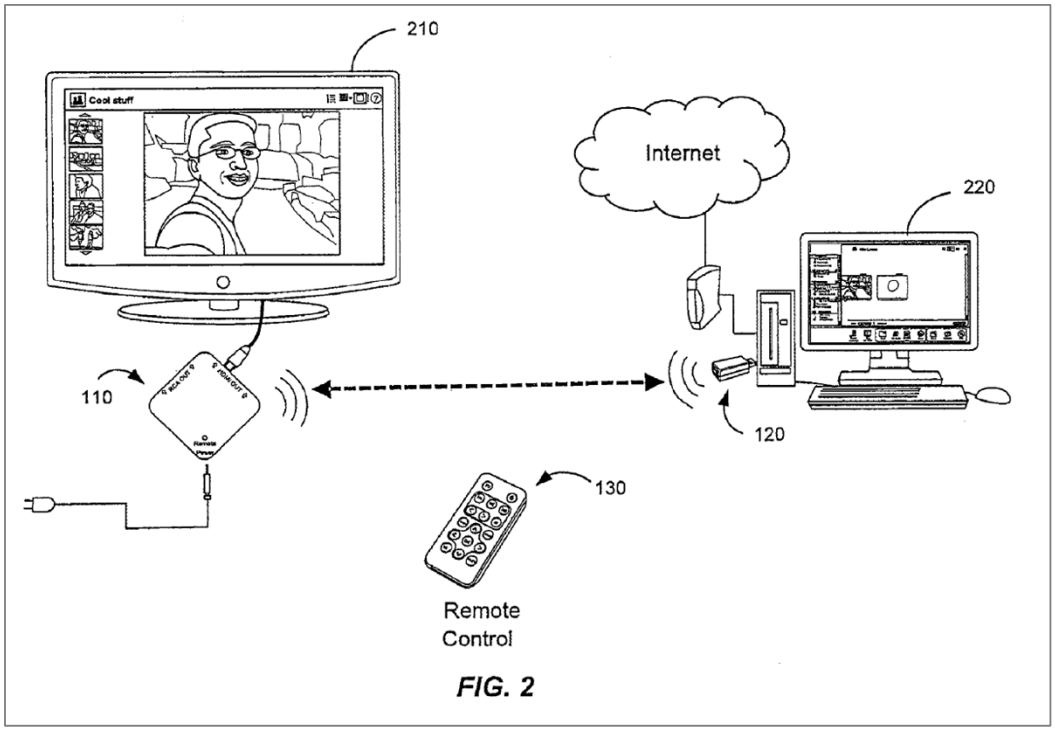


FIG. 2

Ex. 1008, Fig. 2; Ex. 1007, Fig. 2; IPR2025-00598, POR, 33–36, 49–54; PO SR, 12–13, 20–21

Van de Laar Fails To Teach An "endpoint of the first peripheral device"

[0126] The figure illustrates a primary dockee running a docking application using Wi-Fi Miracast (WFM) over IP and connected to a WDH functioning as group owner (GO) in a Wi-Fi Direct network, for example in intra BSS mode. The primary dockee will function as a WFM source and the WDH as both a WFM sink and source. In order to allow the secondary dockee(s) to function as a WFM sink the WDH should forward the WFM packets in broadcast mode. Optionally the WDH may scale the audio/video data to constrain bandwidth.

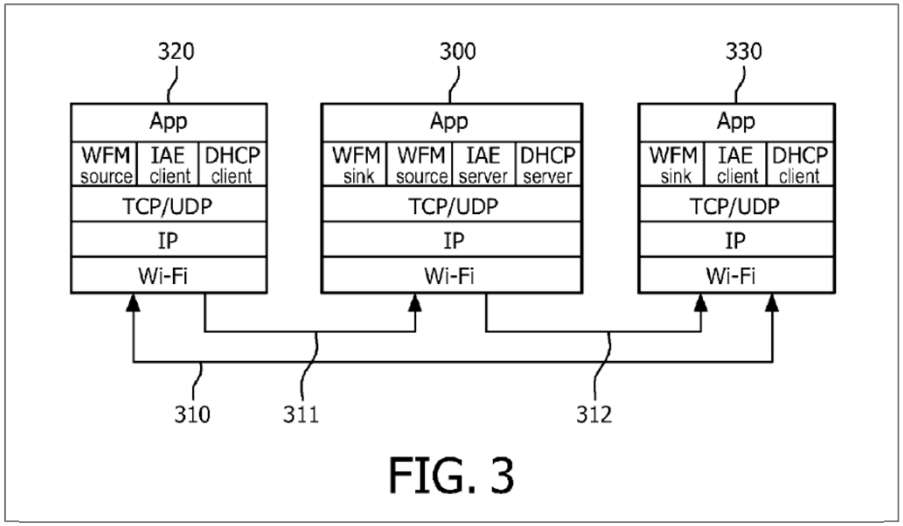


FIG. 3

Ex. 1007, ¶126, Fig. 3; IPR2025-00598 POR, 36–37, PO SR, 14

Van de Laar Fails To Teach "transmit and…receive"

Patent Owner argues that "the Petition relies on the secondary dockee with respect to teachings of the virtual functional device" and "on the primary dockee's use of Skype," and "provides no evidence to reconcile these differences, but instead draws upon the primary dockee and secondary dockee indiscriminately." Prelim. Resp. 34.

We share Patent Owner's concern. At this stage of the proceeding, we are not persuaded that Petitioner's evidence and argument show that van de Laar teaches one processing device, e.g., dockee device, that meets all requirements of a processing device in claim 1.[7] We note that Petitioner

IPR2025-00597, Institution Decision, 32

[0115] A primary dockee/presenter P can use the WDH peripherals for giving a presentation to multiple attendees. The secondary dockees indicated by A together may form a messaging group which allows them to interact, share content and send messages to each other, e.g. through routing or bridging IP traffic. The WDH provides an A/V stream representing the output being sent by presenter P to the WDH peripherals. This allows the users of the secondary dockee devices to follow the presentation (audio and/or video showing slides, smartboard contents, chats, etc.) on his or her own portable docking device, in addition to following the presentation by looking at and/or listening to the WDH peripherals. The primary dockee/presenter can use the local network created between the secondary dockees to send for example poll/multiple-choice/survey questions or push content such as lecture notes, weblinks and agenda items to the attendees. The attendees may answer questions and send messages to one another if needed or permitted. When needed, the primary dockee/presenter can handover the WDH peripherals to another presenter. At the end of the presentation(s) all (attendees) secondary devices can be undocked at once by the last presenter.

Ex. 1007, ¶115; IPR2025-00598, POR, 37–40, PO SR, 14–15.

Kaplan Fails To Teach “transmit and receive data respectively ”

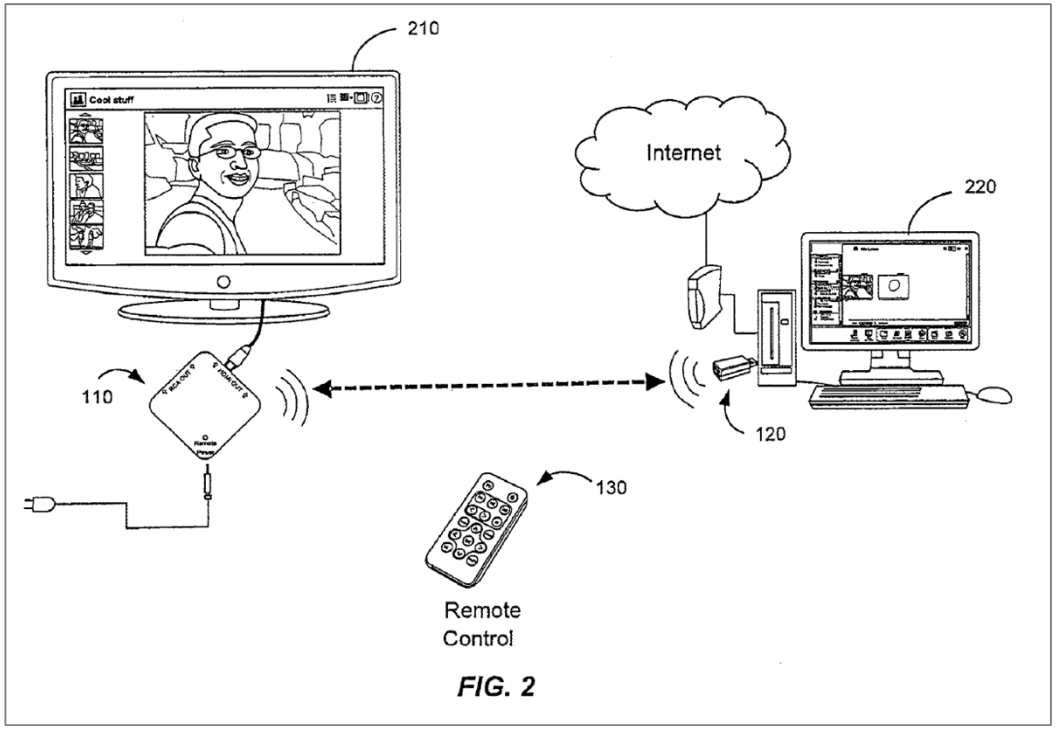


FIG. 2

TABLE 1

Feature	Specification
Wireless Range	Up to 200 ft with clear line of sight with up to 50 ft reduction per wall (construction material dependent)
Wireless Bandwidth	12 Mbits/sec
Wireless Security	Proprietary streams; No access to computer through transmitter
Wireless Interference	Compliance with FCC and WiFi requirements
Pairing	Pre-pairing of receiver, transmitter, and remote control as a component of the manufacturing process
Response Durations	No longer than 3 seconds of latency for starting playback on the display device; Minimal latency for selection/navigation, preferably less than 1/10th of a second; Pause and continue playing - nearly instantaneous; Skip next/previous - up to 3 seconds; Enter new folder (populate one screen’s worth of

Ex. 1008, Table 1, Fig. 2; IPR2025-00598, POR, 37–40, PO SR, 14–15

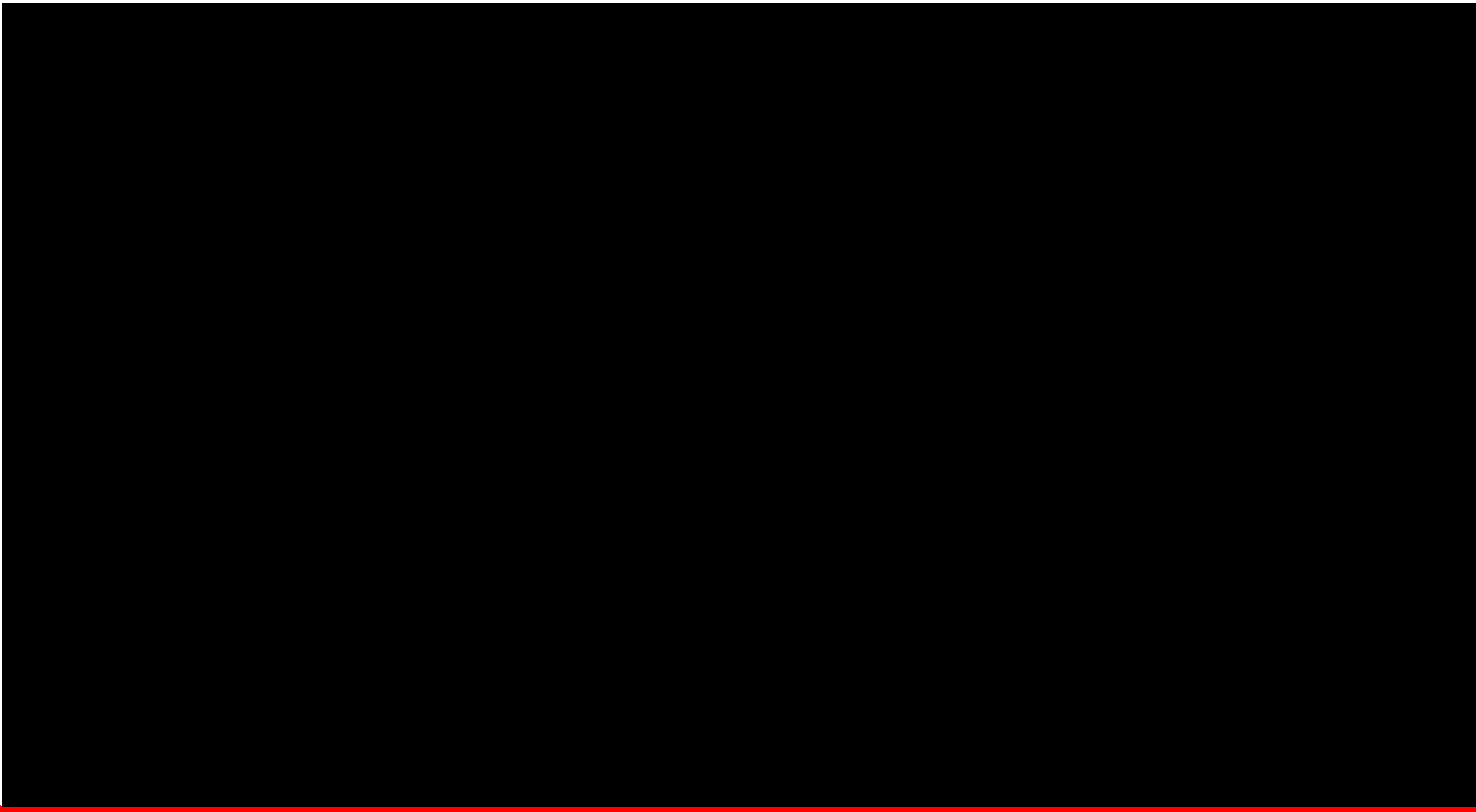
Van de Laar Fails To Teach "process the first processed video data"

[0056] Optionally, in the host device, the docking processor is arranged for providing, to the primary dockee device, write access to the at least one peripheral for said determining the AV data to be rendered, and for providing, to the secondary dockee device, read access to the at least one peripheral for transferring at least part of the AV data to be rendered. For example, the read access may be to the original, full resolution AV data, or to a modified, e.g. scaled and/or transcoded, representation of the primary AV data. By providing write access the primary dockee device is enabled to control the peripheral, whereas by getting read access the secondary dockee device is enabled to receive the AV data as rendered via the peripheral. This allows secondary dockees to monitor the merged display output and/or audio output and follow the presentation on their own screen and/or headphones. This is very useful for large meeting/lecture rooms, which may be noisy and where not everyone may have a good clear visibility and readability of the display peripheral(s) being driven by the primary dockee.

Ex. 1007, ¶56, IPR2025-00598, POR, 40–41, PO SR, 15–16

Objective Indicia Of Non-Obviousness

SEAL HEARING









[redacted] - Demonstrative Only – Not Evidence PO-53





UNSEAL

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; IPR2025-00597, POR, 58–62;
IPR2025-00598, POR, 54–55, 69–71 POR, 70–72

END