

Yealink

**Yealink (USA) Network Technology
Co., Ltd., and Yealink Network
Technology Co., Ltd. v. Barco NV**

IPR2025-00597 — U.S. Patent No. 11,966,346

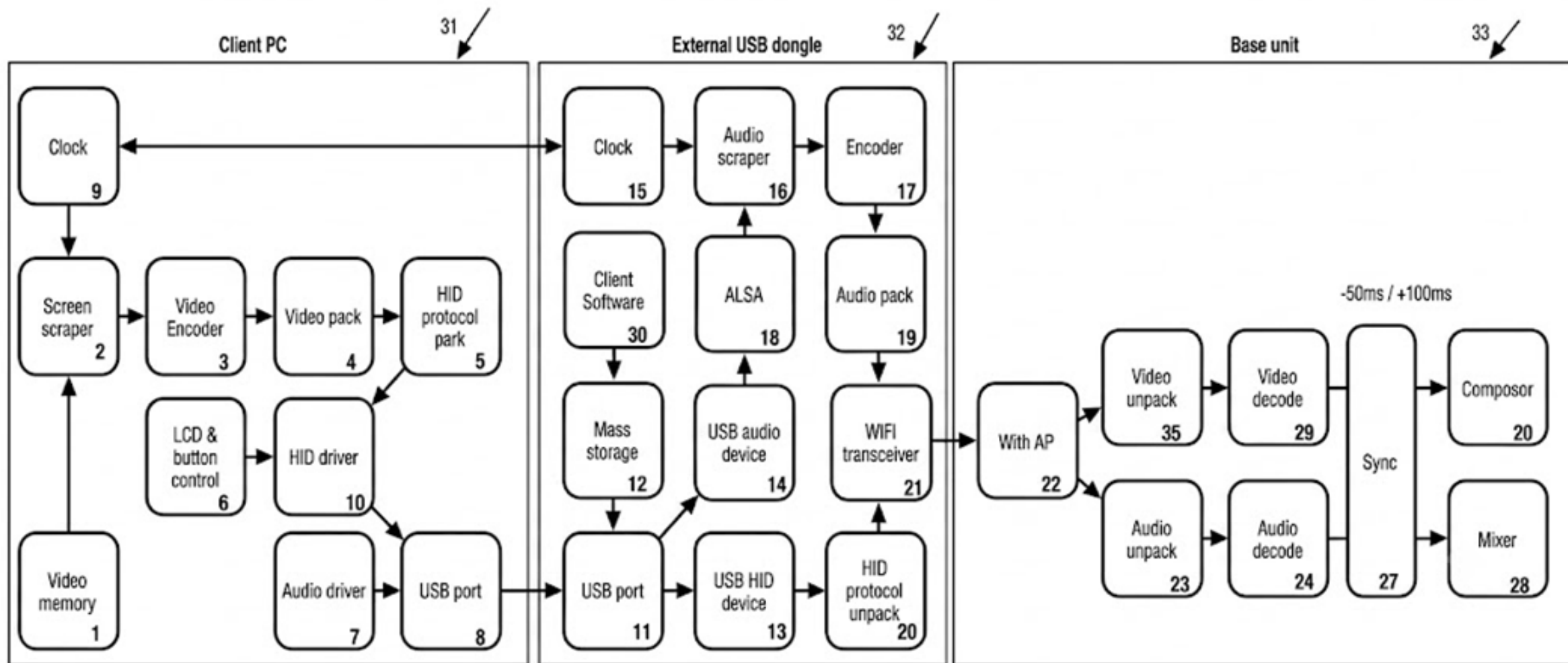
Summary and Key Arguments

- Ground 1 (Beel-Dinka-Christison): Beel's 3rd/4th embodiments teach direct communication — the same architecture as the '346 Patent
- Ground 2 (Van de Laar-Kaplan-Christison): Van de Laar's flexible dockee architecture — one device acts as both primary and secondary dockee

Ground 1: Beel in View of Dinka and Optionally Christison

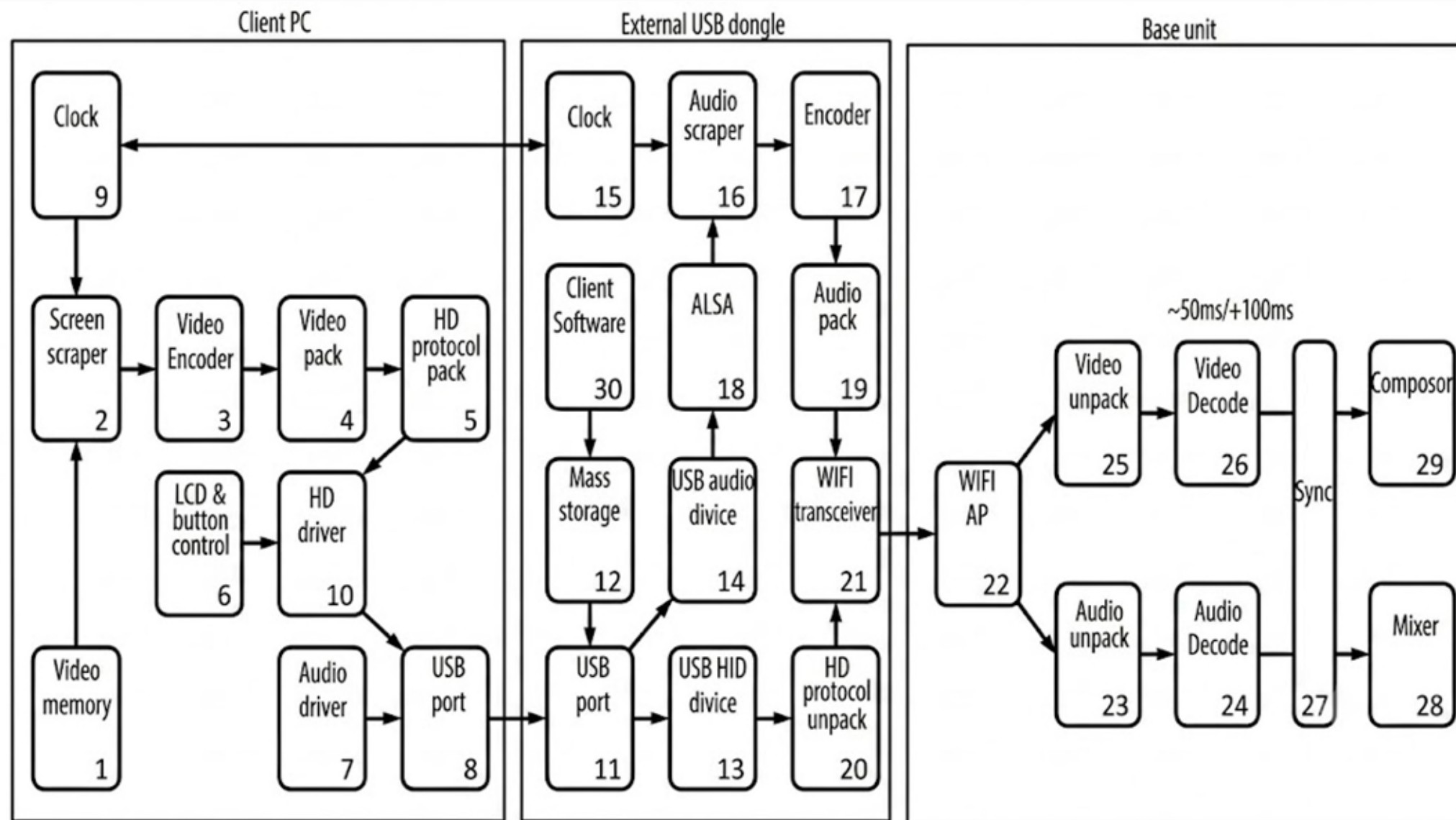
Renders Obvious Claims 1–22

Ground 1: Beel Teaches the Same Architecture



Ex-1005, FIG. 11.

Ground 1: Beel Teaches the Same Architecture



Ex-1001, FIG. 4.

Ground 1: Beel Teaches the Same Architecture

Beel discloses the same system using a “driver,” “client software,” and “*end points*.”

These are fixed and are a combination of vendor specific endpoints and a number of standard endpoints and can be interpreted or understood as a custom Driver, a default OS driver and/or a host application as has been described with reference to FIG. 4 do screen sharing and audio.

Ex-1001, 17:65–18:3; see *also* Pet. 31–35; Pet. Rply., 4–7, 13–16.

Beel Teaches Embodiments Without Peripheral Devices

Third Embodiment

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

[0215] In the third embodiment, the portable application is stored on a solid state memory such as a regular USB memory stick (FIG. 7).

[0222] The first user operation then comprises:

[0223] plugging in the solid state device such as a USB memory stick,

[0224] starting the portable application (if autorun is disabled)

[0225] configuring the transmitter, such as a wired or wireless network interface, on the client processing device to connect to the correct base node, using the configuration parameters (22) shown on the central display

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

Ex-1005, ¶¶215–249.

See *also* Ex-1060, 49:15–50:1 (Dr. Brogioli confirmed: software executes on the “Windows laptop”); *Id.*, 34:6–35:23 (Dr. Brogioli could not identify any technical reason code “could not be implemented using software on the client device”); see *also* Pet. 27–28, 33–34; Pet. Rply., 4–7.

Ground 1: Beel Discloses the Claimed Data Path

[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.

Ex-1005, ¶120; Pet., 28, 31–35; Pet. Rply. 4–7.

Ground 1: Beel Discloses the Claimed Data Path

Step 1: Functional-device media content enters the meeting network via the base node. Ex-1005, ¶120; Pet., 28.

Step 2: Transceivers on both sides; WiFi is the only interface in FIGS. 4, 5, and 11. Ex-1005, FIGS. 5, 11, ¶¶128–129; Ex-1002, ¶¶123, 133; Ex-1062, ¶36.

Step 3: “a third software code portion for receiving media content from the network and for displaying the media content on the display” using “the generic communication protocol for transferring the media content between the peripheral device and the processing device.” Ex-1005, ¶71; Pet., 33, 35–36.

Peripheral device = composite USB device (UAC, HID, MSD). Ex-1005, ¶¶43, 50, 313, 317, 319.

Endpoints = data sources or sinks. Ex-1001, 7:64–8:3; Ex-1002, ¶¶124–130. Pet., 28, 31–35; Pet. Rply., 12–13.

“Transformations Based On a Type of Functional Data”

[0317] Thus, instead of “scraping” the audio like e.g. prior art products do, embodiments of the present invention provide a channel, as described above, which is adapted to capture the audio on the peripheral device using only standard drivers and not requiring any software installation in or on the processing device. The peripheral device preferably acts as a composite device comprising for instance a (virtual) audio speaker device. However instead of operating like a speaker the audio is channeled over the communications network. The peripheral device can preferably capture the audio stream with a device driver, for instance a built in ALSA UAC1, and stream the audio to the base unit. In addition, to provide lip synchronisation, embodiments of the present invention further provides a timer or uses a timer present in a processing device that preferably time stamps both the audio and the video stream. This time stamp is encoded in the video frames and passed on in the ALSA communication stream to the peripheral device. The peripheral device then encodes this time stamp into the audio stream (for instance RTP audio stream) that is streamed to the base unit. At the receiving end, the audio and video streams are then preferably recombined taking into account the time stamp to reach lip synchronization.

Ex-1005, ¶317; see also
Pet., 31–33; Pet. Rply., 13–15.

Claims 10 and 20: Endpoints in Peripheral-Less Embodiments

“further comprising at least one fixed or a configurable endpoint of the virtual functional device”

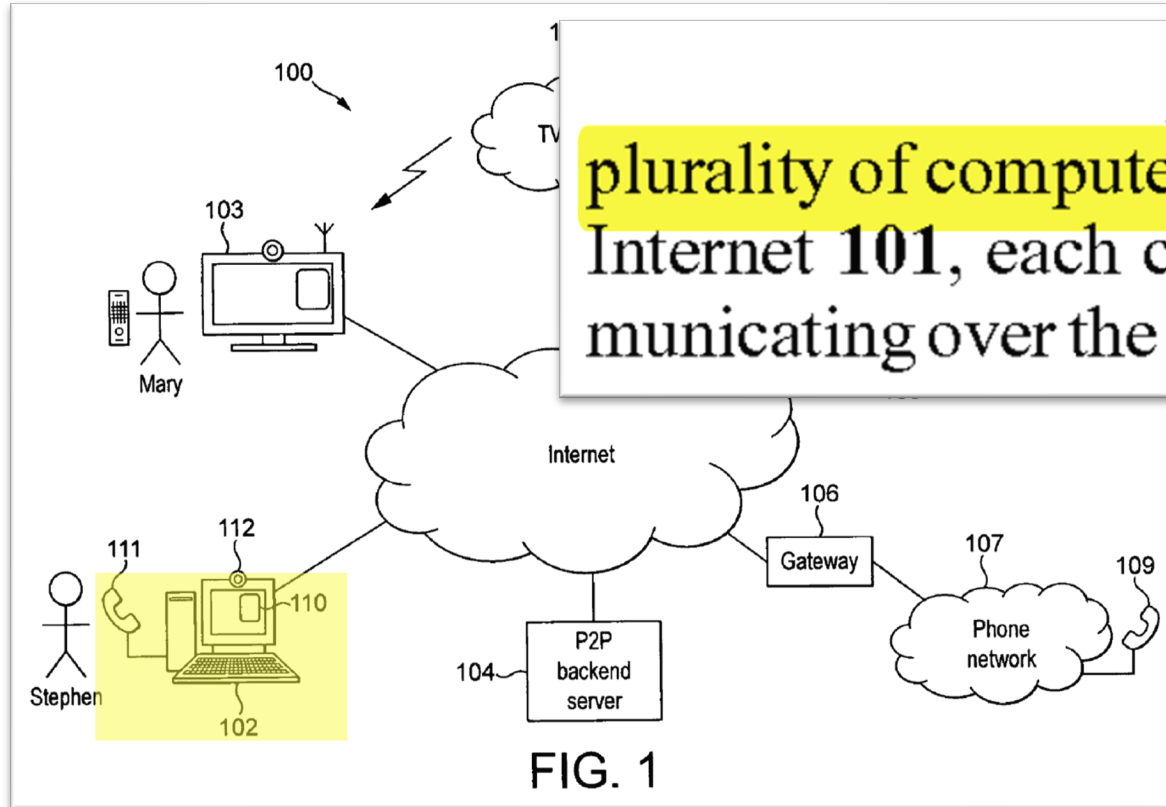
The '346 patent admits that Beel's FIG. 11 (which the '346 patent copied as FIG. 4) discloses endpoints:

These are fixed and are a combination of vendor specific endpoints and a number of standard endpoints and can be interpreted or understood as a custom Driver, a default OS driver and/or a host application as has been described with reference to FIG. 4 do screen sharing and audio.

Ex-1001, 17:65-18:3; *see also id.*, 5:35-40, 17:10-23; Ex-1002, ¶157, 180.

Pet., 41; *see also* Pet. Rply., 20–21; Ex-1002, ¶¶93–99; 156–161; Ex-1062, ¶¶41–43, 95–99.

Dinka Complements Beel — Does Not Teach Away



A plurality of computer terminals 102 are shown coupled to the Internet 101, each comprising a network interface for communicating over the Internet.

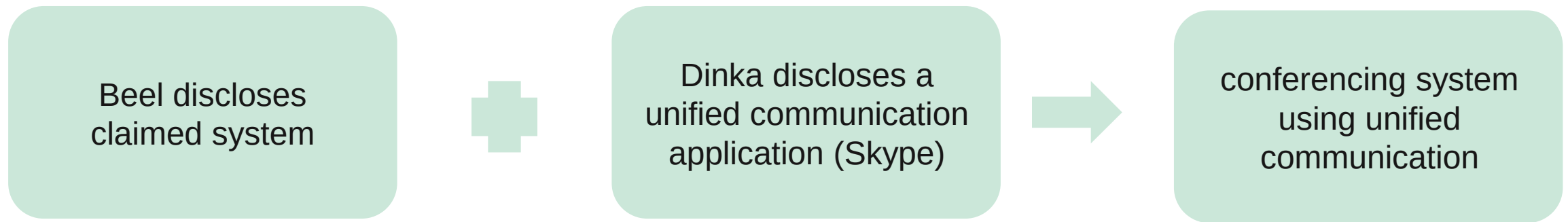
Q. Does Dinka ever state that having a VoIP call between multiple personal computers would not work?

A. I don't recall specifically that Dinka is making the statement that a VoIP call would be nonfunctional between two laptops, for example.

Ex-1006, FIG. 1, 5:45–46; see also Pet. 16, Pet. Rply., 8–10.

Dr. Brogioli, Ex-1060, 99:14–17.

Ground 1: Motivation to Combine



Christison: known technique of presenting remote USB devices as native devices.
Ex-1011, 9:21–32; Ex-1002, ¶¶110–111; Pet. 23–25; Pet. Rply., 7–8; Ex-1062, ¶¶55–67.

Ground 1: Motivation to Combine — “How”

Beel and Dinka: same technological domain — electronic meeting and conferencing systems. Ex-1005, ¶122; Ex-1006, Abstract.

Christison: known technique of presenting remote USB devices as native devices. Ex-1011, 9:21–32; Ex-1002, ¶¶110–111.

Modifying Beel in view of Dinka and Christison would be a predictably beneficial variation of Beel’s system and within a skilled artisan’s flexible capabilities.

Pet., 19–25; Pet. Rply., 10–12.

Ground 1: Motivation to Combine — “Why”

Both references address bi-directional conferencing systems.

Pet., 20–21; Pet. Rply., 10–13, 19–20; Ex-1062, ¶¶32–33, 39–40.

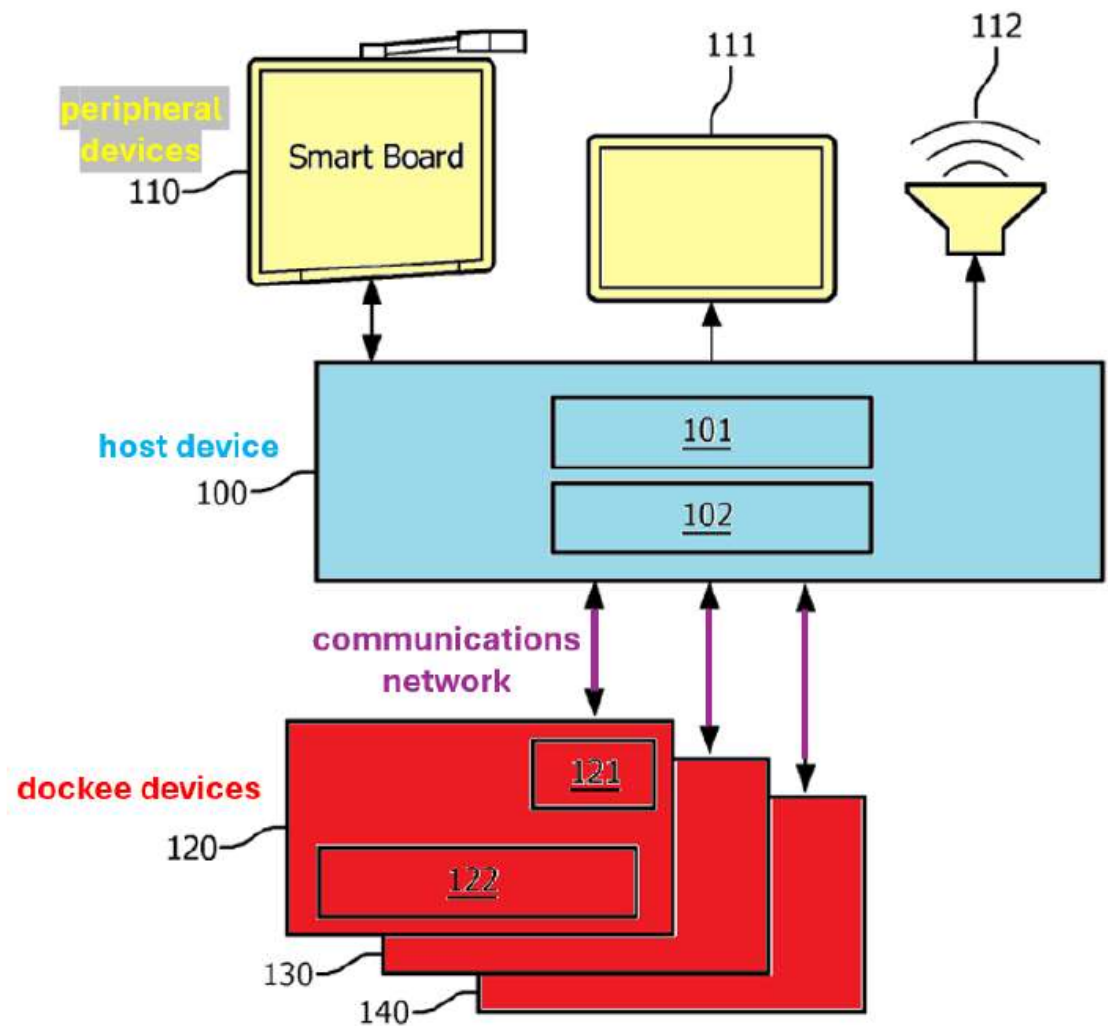
Christison: ability to expose remote peripherals as native devices — a well-understood USB/wireless AV concept.

Ex-1002, ¶139; Ex-1062, ¶¶15–16, 34; Ex-1011, 4:39–6:12.

Ground 2: Van de Laar-Kaplan-Christison

Renders Obvious Claims 1–22

Ground 2 Overview – Van de Laar



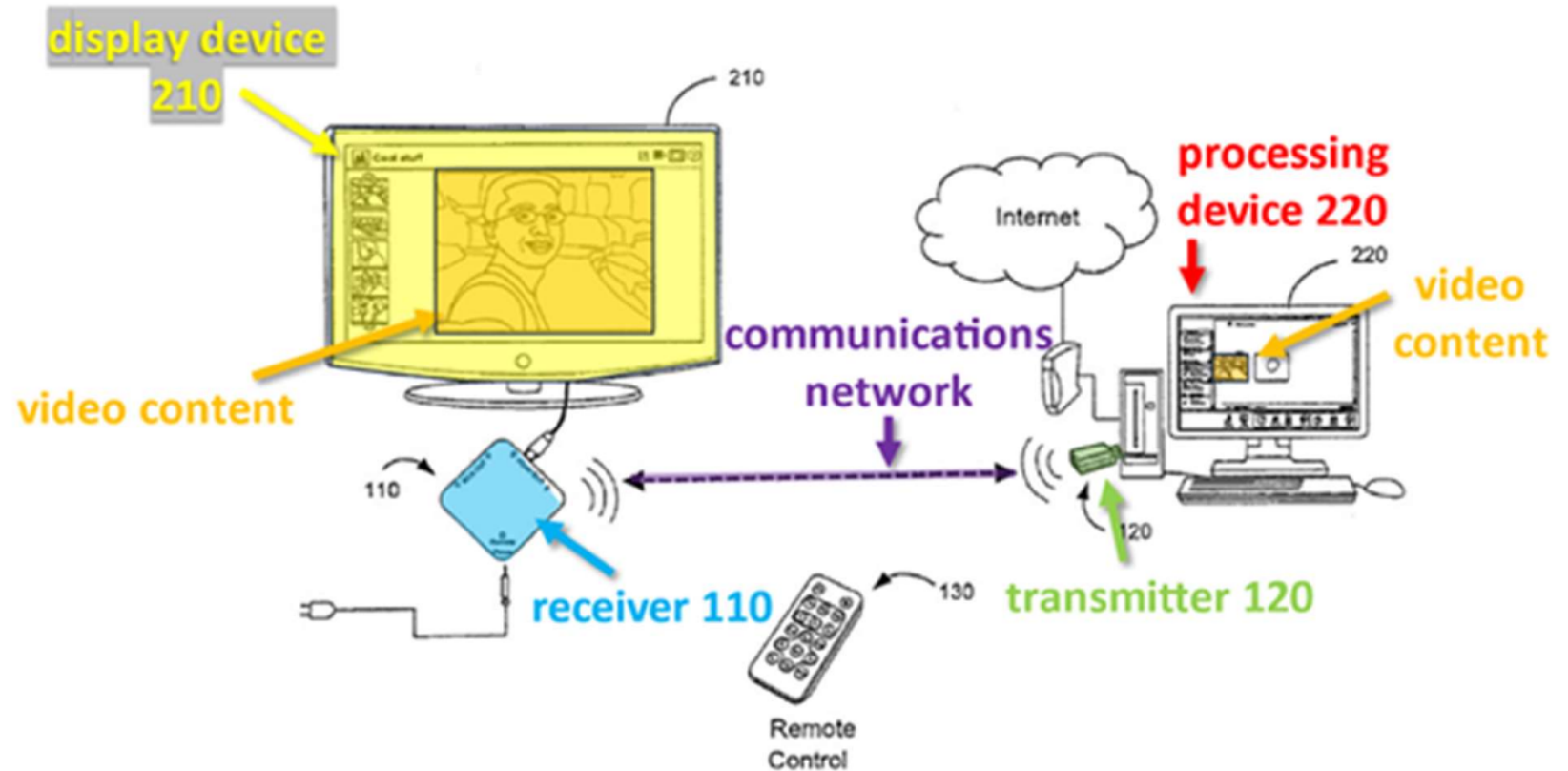
Id. FIG. 1.

Van de Laar discloses
bidirectional
communication with
functional devices

Pet. 17–18; Pet. Rply., 21–22.

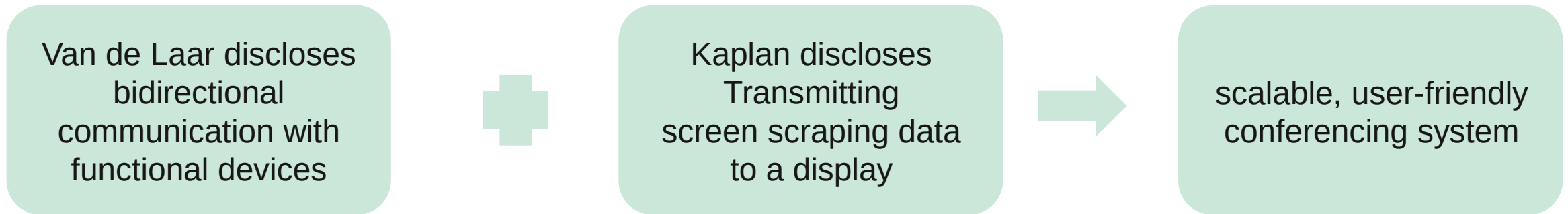
Ground 2 Overview – Kaplan

Kaplan discloses
Transmitting
screen scraping data
to a display



Pet., 18–22; Pet. Rply, 21–29.

Ground 2: Motivation to Combine



Pet. 46–48; Pet. Rply., 24–26; Ex-1002, ¶¶182–184; Ex-1062, ¶¶81–82.

Van de Laar's Flexible Dockee Architecture

[0093] It is noted that the difference between the primary and secondary dockees may include having either access or no access to a particular peripheral. Moreover, primary dockees may have a different type of access to a specific peripheral, in particular write access. The primary dockees may have read and write access to a display screen and/or audio, while the secondary dockees may only have read access. For example such difference may apply for the lecture room use case and for the meeting room use case. The primary dockee may share a peripheral by enabling a same peripheral. Other peripherals may be shared by dividing the capability, e.g. a shared display may be made available in small sections to multiple dockees. Moreover, the A/V output of a secondary dockee through a simulated peripheral (e.g. a webcam) that would appear to be a normal peripheral.

[0059] Optionally, the docking processor is arranged for docking multiple primary dockee devices. Furthermore, the docking processor may be arranged for providing, to the multiple primary dockee devices, shared control over the at least one peripheral for determining the AV data to be rendered. The shared control may for example enable multiple primary dockees to control the volume of a shared loudspeaker system. Furthermore, the docking processor may be arranged for providing shared AV output for the multiple dockees, providing at least one of split screen, split window, video scaling, audio mixing, etc. The docking processor may for example enable multiple dockees to share A/V output peripherals in a meeting room.

[0060] Optionally, the docking processor is arranged for, upon instruction of a primary and/or secondary dockee device, transforming a secondary device into a primary dockee device, or a primary dockee device into a secondary dockee device. Advantageously, in a group of dockees, the assignment of the primary and secondary dockee function can be modified later. Furthermore, the docking processor may be arranged for accommodating direct communication between two dockee devices, for example to enable an exchange of questions and answers, or data. Such direct communication may be applied to enable messaging as a user function. Furthermore, the docking processor may be arranged for assigning multiple dockee devices to a group and accommodating direct communication between dockee devices of the group.

Ex-1007, ¶¶93, 59–60;
see also Pet., 53;
Pet. Rply., 21–22.

Kaplan Is Not Limited to the “Walled Garden”

Both references are directed to the same domain and common protocols (USB, Wi-Fi, HDMI).

Ex-1062, ¶¶31–34.

Christison further confirms the claimed endpoints are a well-understood USB technique used by Kaplan’s USB architecture.

Ex-1062, ¶¶16–18.

The POSA would have been motivated to modify the receiver 110 of Kaplan to have features of the WDH of Van De Laar to improve usability, allow use of multiple functional devices, in addition to the display of Kaplan, to access the functional device(s) in a unified communications call.

Pet., 32–33, 40–43, 47–48; Pet. Rply., 24–26; Ex-1007, ¶9; Ex-1002, ¶182–83.

Drivers Are Obvious

The term “pre-installed generic driver” is intended to mean a driver which is installed on a processing device such as a computer as a standard driver, e.g. is installed with the installation of the operating system. Such a driver is standard for the operating system and can drive a standard class of peripheral devices coupled to or connected to the device. The installation of a specific driver for a peripheral device is not required. Such a generic driver

Ex-1001, 8:53–67.

[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

Ex-1008, ¶¶47–49; see also Pet., 22–23; Pet. Rply., 24–26.

Dr. Brogioli could not identify any OS that functions without drivers — Ex-1060, 149:18–150:1.

Skype and Miracast Can Coexist

- Skype and Miracast work on different layers and perform different functions:
 - Skype = application layer (manages UC calls)
 - Miracast = transport layer (display mirroring)
- Modern devices run WiFi + Bluetooth + Miracast simultaneously
- Claim requires “*the Unified Communication call is presented with the virtual functional device*”
- See Pet. 33, Pet. Rply., 19; Ex-1062, ¶¶82–85.

Claims 9 and 18: Skype Teaches UC Between Processing Devices

[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 streaming mechanism. The WDH can mix this output for the audio peripherals so that all people can hear it.

Ex-1007, ¶128.

[0093] It is noted that the difference between the primary and secondary dockees may include having either access or no access to a particular peripheral. Moreover, primary dockees may have a different type of access to a specific peripheral, in particular write access. The primary dockees may have read and write access to a display screen and/or audio, while the secondary dockees may only have read access. For example such difference may apply for the lecture room use case and for the meeting room use case. So the system enables to share a peripheral by enabling different types of access to a same peripheral. Other peripherals may be shared by subdividing the capability, e.g. a shared storage peripheral may be made available in small sections to respective secondary dockees. Moreover, the A/V output may be offered to a secondary dockee through a simulated peripheral (e.g. simulated webcam) that would appear to the dockee as if it were a normal peripheral.

Id., ¶93, see also ¶54; Pet., 40; Pet. Rply., 28–29.

Ground 2: Data Transformations Are Type-Specific

[0123] In a further embodiment, the set of peripherals contains one or more display peripherals. The WDH may be configured to provide a video stream representing the output that is sent by the primary dockees to the one or more display peripheral. If two or more primary docking devices send output to the same display peripherals simultaneously, the display output may be merged by the WDH using split screen, PIP, overlay or any other means of audio and video mixing, scaling and/or re-encoding. The WDH may also enable dockees to monitor the output of the primary dockees to the audio peripherals through an audio stream provided

Ex-1007, ¶123.

[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.

Ex-1007, ¶126; see also Pet., 57–58; Pet. Rply., 27–28.

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IPR2025-00598 — U.S. Patent No. 11,966,347

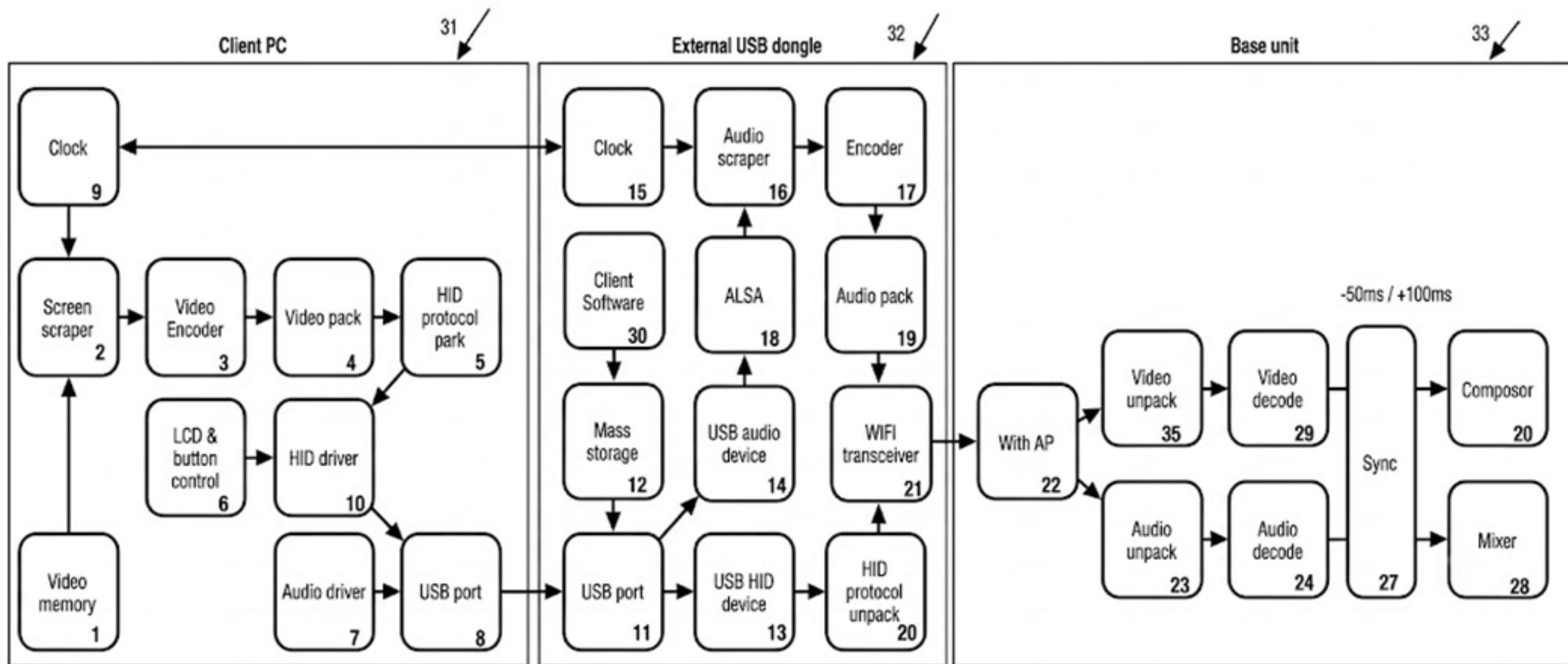
Summary and Key Arguments — '347 Patent

- Ground 1 (Beel-Dinka-Christison): Beel discloses peripheral-device architecture with bidirectional communication and USB endpoints
- Ground 2 (Kaplan-Van de Laar-Christison): Kaplan's USB peripheral implements Van de Laar's communication unit
- Secondary Considerations: Evidence lacks nexus.

Ground 1: Beel in View of Dinka and Optionally Christison

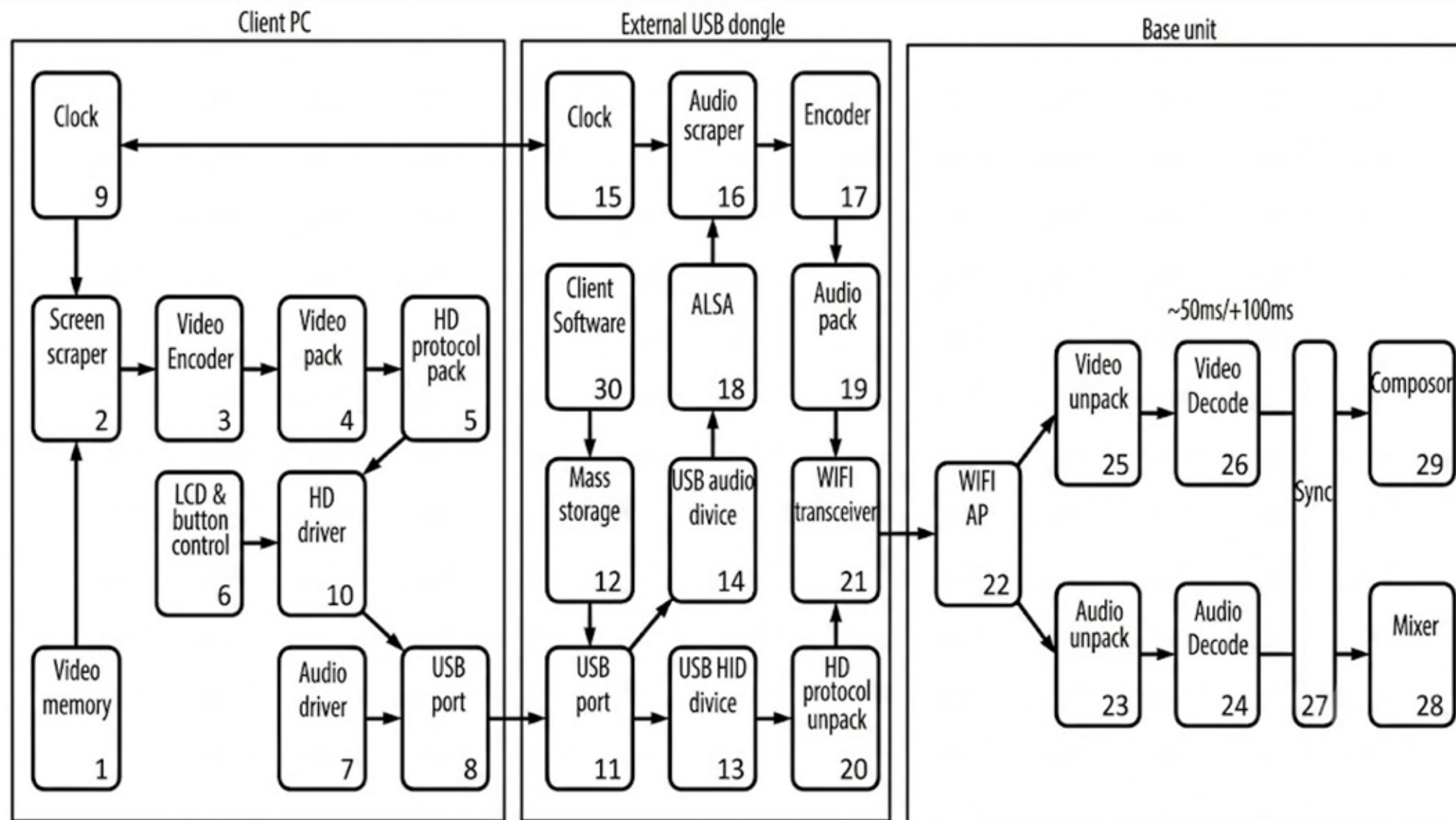
Renders Obvious Claims 1–31

Ground 1: Beel Teaches the Same Architecture



Ex-1005, FIG. 11.

Ground 1: Beel Teaches the Same Architecture



Ex-1001, FIG. 4.

Beel Teaches “*functional device being configured for first video data to flow into the base unit*”

36 may have a decision module. The base node 36 may be a host computer having a processing engine such as a micro-processor and a memory. Preferably, the base node 36 is adapted to treat media content passed to the base node 36 from any or all of the connection units 47 in an equal manner. The base node 36 may be adapted to auto compose the media content on the central display 44 connected to it, e.g. from one or more processing devices 31.

[0143] The base node 36 receives the plurality of arbitrary media content coming from one or more connection units 47, and auto composes this media content for rendering on the central display.

Ex-1005, ¶¶123, 143; see also Pet., 24–25; Pet. Rply., 7–8.

Beel's "base unit [is] configured to transmit and the first peripheral device being configured to receive first processed video data"

[0119] The display node 36 is coupled to and adapted to allow display of media on some kind of display 44. The display node is in embodiments of the present invention a base node of the communications network 50. The display 44 may be a projector and/or screen, the projector being coupled to the base node 36. A whiteboard 45 can optionally be provided that can be optionally coupled to the display 44 and/or the base node 36, e.g. when the whiteboard can record electronically what is written on it. Optionally, a camera 35 may be provided to record the entries on the whiteboard 45. The camera 35 may have a third connection unit 52 for connecting the camera 35 to the network 50 so that the data from the whiteboard can be recorded and stored or transmitted to other networks via router 42. The connection unit 52 may have an input device 53 as described above for the connection unit 47.

[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.

Ex-1005, ¶¶119–120; see also Pet., 23–24; Pet. Rply., 5–7.

Beel Teaches “the first peripheral device being configured to process the first processed video data received by the first peripheral device to generate second video data”

[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.

composited image on display. The executable software code can comprise eleventh code for providing a means for receiving, decrypting and decoding incoming arbitrary media content. The executable software code can comprise twelfth code for scaling of incoming arbitrary media streams. The executable software code can comprise thirteenth code for providing a means for displaying incoming arbitrary media content in accordance with a set of rules.

Ex-1005, ¶¶71–72; see also Pet. 23–24; Pet. Rply., 12–14; Ex-1062, ¶¶48–53.

Beel Teaches USB Endpoints of the Functional Device

Beel discloses “*at least one fixed or configurable endpoint of the functional device is exposed on the first peripheral device*”

“Audio data is captured at this interface 8-11 internally in the peripheral device 32. This data is then optionally re-encoded and streamed to the communications network.”

Ex-1005, ¶319.

“[T]he audio [of the (virtual) audio speaker device] is channeled over the communications network.”

Ex-1005, ¶317.

Bidirectional peripheral device can “receiv[e] media content from the network.” Ex-1005, ¶71; see *also* ID, 30; Pet. 35–36; Ex-1002, ¶¶120–121; Ex-1062, ¶¶44–46.

Ex-1062, ¶¶32–35; Pet., 21–23; Pet. Rply., 8–11.

Dr. Brogioli's Endpoint Double Standard

- “there are endpoints associated with the USB spec for a mass storage device”
 - Ex-1060, 95:14–98:1
- Beel FIG. 11 includes “mass storage device 12”
 - Ex-1060, 95:14–98:1
- According to Dr. Brogioli, “Beel does not mention endpoints at all”
 - Ex-1060, 106:2–108:14
- ClickShare's webcam is an endpoint “exposed via a USB”
 - Ex-1060, 146:1–3
- ClickShare also doesn't use the word “endpoint”
 - Ex-1060, 146:15–24; see *also* Pet. 21–22; Pet. Rply., 9–11.

Beel teaches “the [OS] of the processing device being configured to capture the second video data and to make it available through a custom or standard driver”

“audio data is captured through a virtual sound card interface added as a logical device over the physical interface provided in the peripheral device. On the processing device only a generic sound driver such as a USB sound driver is required which is generally standard on any modern processing devices such as a PC (UAC1 or UAC2).”

Ex-1005, ¶71.

Dinka complements Beel: unified communication data sent and received by endpoints.

Ex-1006, 1:7–39, FIGS. 1, 3b; Pet. Rply., 8–9.

Christison: data flow in/out of USB endpoints; remote devices presented as “native.”

Ex-1011, 4:39–6:12, 9:21–32, FIGS. 6A–9.

See also Pet., 26–27, Pet. Rply., 5–7, 18–19; Ex-1062, ¶¶13–18, 19–23.

Motivation to Combine — Ground 1

- Same as slides 13–16 of the '346 patent.

PO's Dependent Claim Arguments Fail

- Claims 2/13 (interpreted/encoded): Beel teaches video encoding video using, for example, the Ogg/Vorbis standard and “auto composes” = interpreting — Ex-1005, ¶¶123, 314, 320–323.
- Claims 3/14 (mix/multiplex/encrypt): Van de Laar 'mixing, scaling and/or re-encoding.” Ex-1007, ¶123.
- Claims 4–5/15–16 (decode/demultiplex): Beel teaches the peripheral device “receiving, decrypting and decoding incoming arbitrary media content” Ex-1005, ¶¶71–72.
- See *also* Pet., 30–32; Pet. Rply., 12–14.

Patent Owner's Waiver Arguments Fail

- Reply responded to POR arguments with evidence already in record. See PO Sur-Rply., 8–10.
- **Claims 2/13:** See Pet., 30–31 (citing Ex-1005, ¶¶119, 155; Ex-1002, ¶¶137, 138, 167)
- **Claims 3/14:** See Ex-1062, ¶¶31, 51–54 (Patent Owner misconstrues Dr. Almeroth's testimony at Ex. 2033, 28:8–32:11 discussing how the meaning of “auto-composing” depends on context).
- **Claims 4/15:** See Pet., 23–25 and 32 (citing Ex-1005, ¶¶71–72, 321; Ex-1002, ¶¶140-41, 169).
- **Claims 5/16:** See Pet., 23–25 and 32 (citing Ex-1005, ¶¶72 (e.g., “eleventh code for providing a means for receiving, decrypting and decoding,”), 322 ; Ex-1002, ¶¶124, 142, 161, 170).
- See *also* Pet. 30–32; Pet. Rply., 12–14.

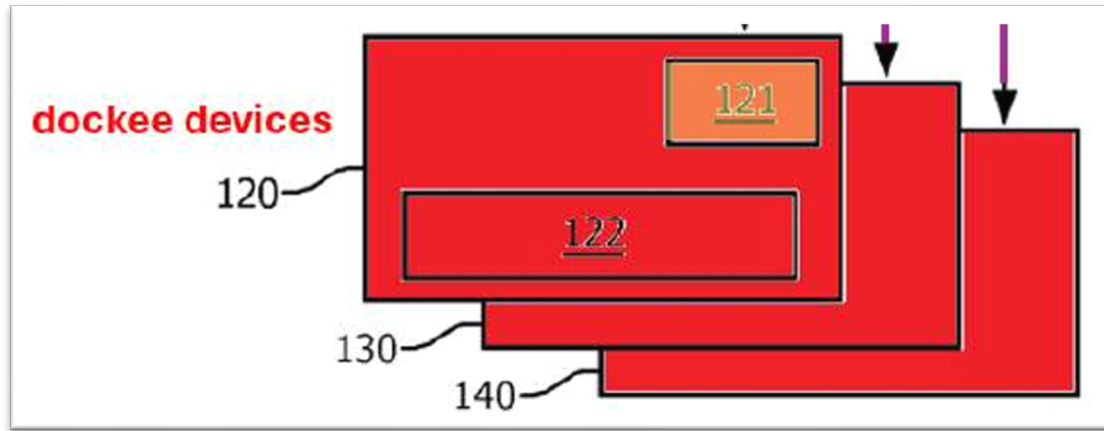
Ground 2: Van de Laar-Kaplan-Christison

Renders Obvious Claims 1–31

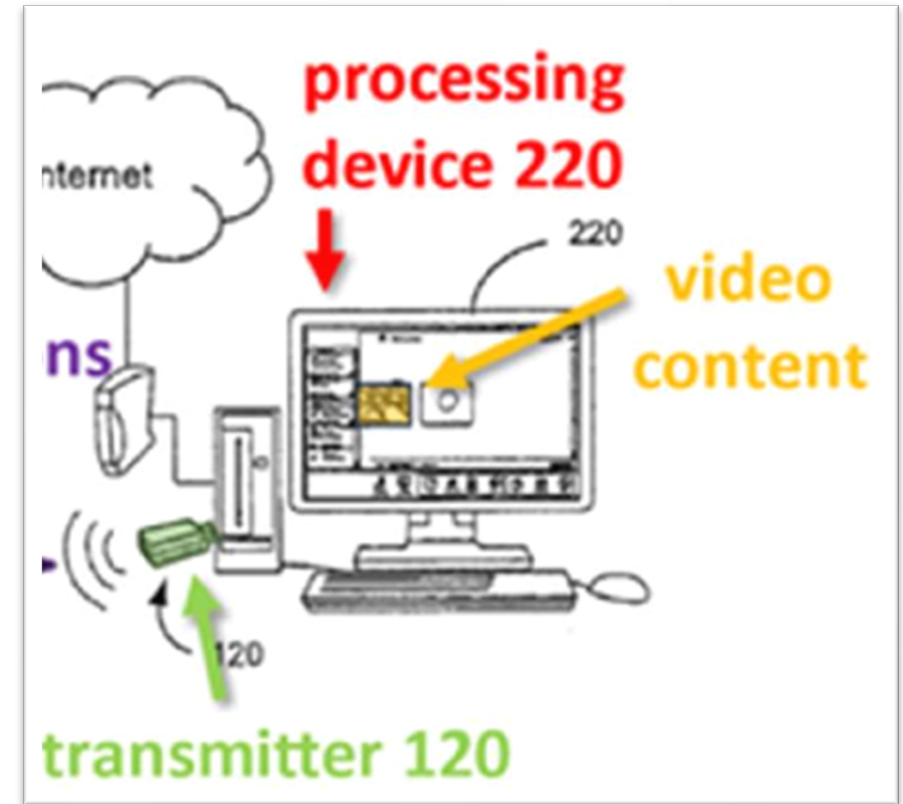
The Combination Is Clear

- Van de Laar's WDH = base unit with functional devices
- Kaplan's USB transmitter/receiver = form factor (first peripheral device)
- In combination: Van de Laar's communication unit can be implemented as a dongle taught by Kaplan

The Combination of Van de Laar and Kaplan Renders Obvious the “Peripheral Device”



Ex-1007, FIG. 1, Pet. 14.



Ex-1008, FIG. 2; see *also* Pet. 14, 47–48; Pet. Rply., 14–16.

Van de Laar's Flexible Dockee Architecture (Slide 20 Same)

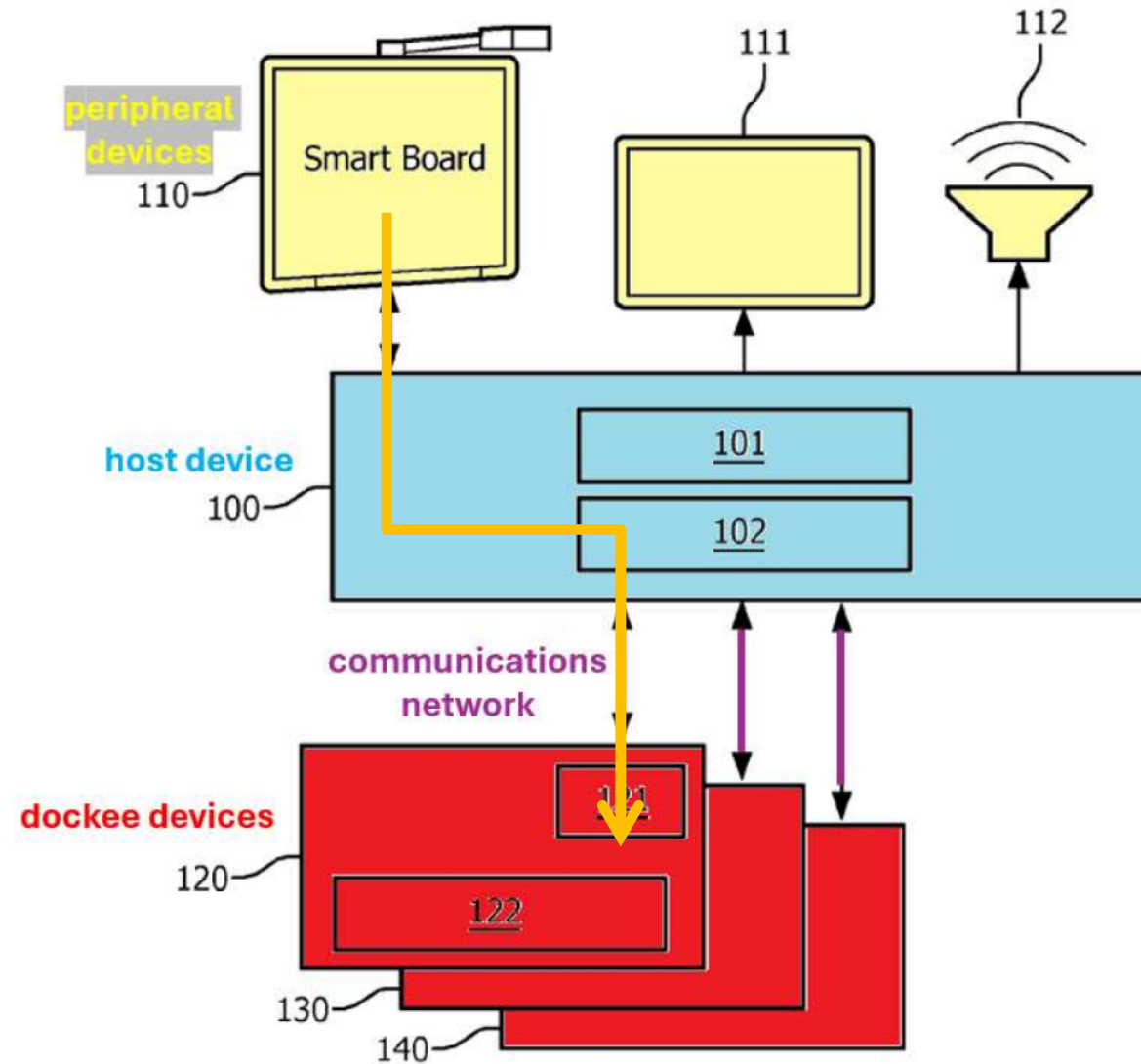
[0093] It is noted that the difference between the primary and secondary dockees may include having either access or no access to a particular peripheral. Moreover, primary dockees may have a different type of access to a specific peripheral, in particular write access. The primary dockees may have read and write access to a display screen and/or audio, while the secondary dockees may only have read access. For example such difference may apply for the lecture room use case and for the meeting room use case. The docking processor may be arranged for enabling a same peripheral. Other peripheral may be arranged for dividing the capability, e.g. a shared peripheral may be made available in small sections to multiple dockees. Moreover, the A/V output of a secondary dockee through a simulated peripheral (e.g. a webcam) that would appear to be a normal peripheral.

[0059] Optionally, the docking processor is arranged for docking multiple primary dockee devices. Furthermore, the docking processor may be arranged for providing, to the multiple primary dockee devices, shared control over the at least one peripheral for determining the AV data to be rendered. The shared control may for example enable multiple primary dockees to control the volume of a shared loudspeaker system. Furthermore, the docking processor may be arranged for providing AV output for the multiple dockee devices providing at least one of split screen, video scaling, audio mixing, etc. The docking processor may for example enable multiple dockee devices to share A/V output peripherals in a meeting room.

[0060] Optionally, the docking processor is arranged for, upon instruction of a primary and/or secondary dockee device, transforming a secondary device into a primary dockee device, or a primary dockee device into a secondary dockee device. Advantageously, in a group of dockees, the assignment of the primary and secondary dockee function can be modified later. Furthermore, the docking processor may be arranged for accommodating direct communication between two dockee devices, for example to enable an exchange of questions and answers, or data. Such direct communication may be applied to enable messaging as a user function. Furthermore, the docking processor may be arranged for assigning multiple dockee devices to a group and accommodating direct communication between dockee devices of the group.

Ex-1007, ¶¶93, 59–60;
see also Pet., 49–53;
Pet. Rply., 16–17.

Van de Laar Renders Obvious “Video Data Is Sent to the First Peripheral device”



Ex-1007, FIG. 1, ¶¶96, 124–126; Pet., 50–52; Pet. Rply., 15–18; Ex-1062, ¶¶65–67.

Kaplan Is Not Limited to the “Walled Garden” (Slide 21 Same)

Both references are directed to the same domain and common protocols (USB, Wi-Fi, HDMI).

Ex-1062, ¶¶31–34.

Christison further confirms the claimed endpoints are a well-understood USB technique used by Kaplan’s USB architecture.

Ex-1062, ¶¶16–18.

The POSA would have been motivated to modify the receiver 110 of Kaplan to have features of the WDH of Van De Laar to improve usability, allow use of multiple functional devices, in addition to the display of Kaplan, to access the functional device(s) in a unified communications call.

Pet., 42–48; Pet. Rply., 19–22; Ex-1007, ¶9; Ex-1002, ¶182–83.

Drivers Are Obvious (Slide 22 Same)

The term “pre-installed generic driver” is intended to mean a driver which is installed on a processing device such as a computer as a standard driver, e.g. is installed with the installation of the operating system. Such a driver is standard for the operating system and can drive a standard class of peripheral devices coupled to or connected to the device. The installation of a specific driver for a peripheral device is not required. Such a generic driver

Ex-1001, 8:53–67.

[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

Ex-1008, ¶¶47–49; see also Pet. 54–55, Pet. Rply., 18–19.

Dr. Brogioli could not identify any OS that functions without drivers — Ex-1060, 149:18–150:1.

Skype and Miracast Can Coexist (Slide 23 Same)

- Skype and Miracast work on different layers and perform different functions:
 - Skype = application layer (manages UC calls)
 - Miracast = transport layer (display mirroring)
- Modern devices run WiFi + Bluetooth + Miracast simultaneously
- Claim requires “*the 3rd party application is a hosted Unified Communication*”
- See Pet. 54–55, 61–62; Pet. Rply., 17–18; Ex-1062, ¶73; Ex-1007, ¶¶73, 128.

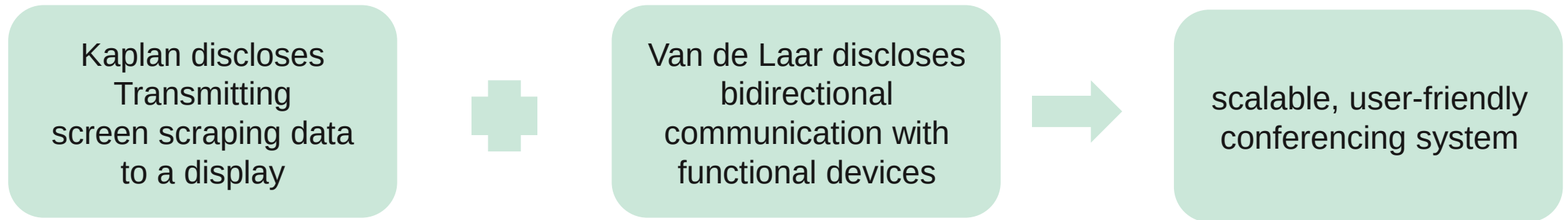
The Combination of Van de Laar and Kaplan Renders Obvious “*Third Processed Video Data*” from the “*Processing Device*” and “*Peripheral Device*”

[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.

[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.

Ex-1007, ¶¶126, 128; see also Pet. 55–57; Pet. Rply., 25–26; Ex-1062, ¶¶66, 75.

Ground 2: Motivation to Combine (Slide 20)



Pet., 42–48; Pet. Rply., 22–23; Ex-1002, ¶¶216–217; Ex-1062, ¶65.

Barco Failed to Demonstrate Nexus for Secondary Considerations

Barco's Product Is Not Coextensive

ClickShare includes significant **unclaimed** features. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988).

Base products work **with and without** the dongle — ClickShare app, Teams, Zoom. Ex-1061.

Three patent families covering patentably distinct inventions. Ex-2011, 15; Ex-1062, ¶91.

Barco's Technology Director: each patent is **independently valuable**. Ex-1031, 141:20–143:18.

'347 Pet. Rply., 27–29.

Barco's Product Is Not Coextensive (cont.)

You can just join a Teams meeting from your laptop, and “business interests” drove deal. Ex-2023, 76:12-18; '347 Ex-1062, ¶ 90. '347 POR, 24.

Dr. Brogioli: could not recall ever using a dongle to share content. Ex-1060, 91:14–23.

Dr. Brogioli did not analyze features driving commercial success. Ex-1060, 142:23–143:9.

No relationship between revenue and claimed features. Base units function independently via Teams/Zoom. '347 Pet. Rply., 27–29.

No Nexus — Crestron License

Ancora: single patent. **Here**: three patent families + international rights. Ex-2011, 15.

More analogous to *Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 838 (multi-patent license = little weight).

Size of payment under multi-patent, multi-family, international license reflects aggregate portfolio value — not nexus to any single claim or patent.

Iron Grip Barbell Co. v. USA Sports, Inc., 392 F.3d 1317, 1324 (Fed. Cir. 2004); see also Pet. Rply., 26–27.

No Nexus — Crestron License

PO must show patent covers licensee's product. *Teva Pharms. Int'l GmbH v. Eli Lilly & Co.*, 8 F.4th 1349, 1364. Pet. Rply., 26–27.

Crestron: **no litigation threat**, no prior art analysis, no opinion on validity. Ex-2023, 58:7–12.

License driven by “**business interests**” factors and “**benefits**” beyond the patents. Pet. Rply. 27 (citing Ex. 2023, 76:12–18); '347 Ex-1062, ¶90.

“When the [product] is not coextensive with the patented invention—for example, if the patented invention is only a component of a commercially successful machine or process,” the patent owner is not entitled to a presumption of nexus. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988).

END