IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

BARCO, INC. and BARCO NV,	§	
	§	
Plaintiffs,	§	
	§	
v.	§	
	§	NO. 2:23-CV-00521-JRG-RSP
YEALINK (USA) NETWORK TECHNOLOGY CO., LTD., and YEALINK NETWORK TECHNOLOGY CO., LTD.,	§	
	§	
Defendants.	§	

CLAIM CONSTRUCTION ORDER

Barco, Inc., and Barco NV (together, "Barco") allege infringement by Yealink (USA) Network Technology Co., Ltd., and Yealink Network Technology Co., Ltd. (together, "Yealink") of claims from six patents relating to electronic meeting tools. *See* Dkt. No. 71 at 1 (identifying six asserted patents); *see also* U.S. Patent 10,762,002 at 1:4–6 ("The present invention relates to electronic tools for meetings with audio including methods or devices for providing connection to a communications network . . . ."), U.S. Patent 10,904,103 at 1:20–22 (similar); U.S. Patent 11,258,676 at 1:21–23 (similar).

Yealink challenges four terms from three of the patents as indefinite.[1] Specifically, Yealink contends three similar means-plus-functions terms from the '002 Patent and '676 Patent are indefinite because the specifications fail to disclose adequate corresponding structure. Yealink

[1] The parties once disputed the definiteness of a fifth term—"the audio device" in Claim 2 of U.S. Patent 11,403,237—but they advised the Court during the hearing that dispute has been resolved.

BARCO EXHIBIT 2016
Yealink v. Barco
IPR2024-01439

challenges the fourth term as indefinite because the term could be referencing multiple elements. Having considered the parties' briefing and arguments of counsel at a March 11, 2025 hearing, the Court rejects each of those challenges.

I. BACKGROUND

The patents generally relate to electronic meeting tools. *See, e.g.*, '002 Patent at 1:4–6 ("The present invention relates to electronic tools for meetings with audio including methods or devices for providing connection to a communications network . . . ."), '103 Patent at 1:20–22 (similar), '676 Patent at 1:21–23 (similar). Although none of the three patents are directly related, they share substantially identical disclosures and all claim priority to the same 2011 and 2012 provisional applications. *See* '002 Patent at [60], '103 Patent at [60], '676 Patent at [60].

The patents describe four prior-art methods of "bring[ing] the display content of a computer to a projector." '002 Patent at 3:3–4. First, and most obviously, a cable connects a computer's graphics card to a video input of the projector. *Id.* at 3:4–6. This method, however, is time-consuming, not scalable, and cumbersome, as switching between presenters requires disconnecting the cable from one presenter's computer and connecting it to another computer. *Id.* at 3:16–33. Second, software captures the display contents and sends it to another computer connected to the projector. *Id.* at 3:7–9. But this method might expose computers to viruses or copying of confidential information. *Id.* at 3:47–53. Third, a special device might capture, encode, and stream the display content to the projector. *Id.* at 3:12–15. The special device, however, might require significant processing power. *Id.* at 3:58–64. Finally, the patent describes using a USB interface to connect the computer to the projector rather than the graphics card, but even this—at least on the priority date of the underlying application—requires special drivers or special hardware. *Id.* at 3:65–4:10.

The patents purport to solve the "problems remaining for holding a face-to-face meeting

using electronic tools." *Id.* at 4:37–60 (summarizing the remaining problems). They do so using "[a] peripheral device adapted to communicate . . . user selected arbitrary media content via [a] communications network." *Id.* at [57]. The peripheral device "is a connection unit comprising a connector adapted to couple to a port of a processing device having a second display, a memory and an operating system, and a transmitter." *Id.* Figure 10 (below) of the patents shows an embodiment of the peripheral device, which is also called a "dongle." When installed in a USB port of a user's computer, pressing the dongle's button starts the process of sending the user's content from the computer to a base node for display. *Id.* at 20:26–30.

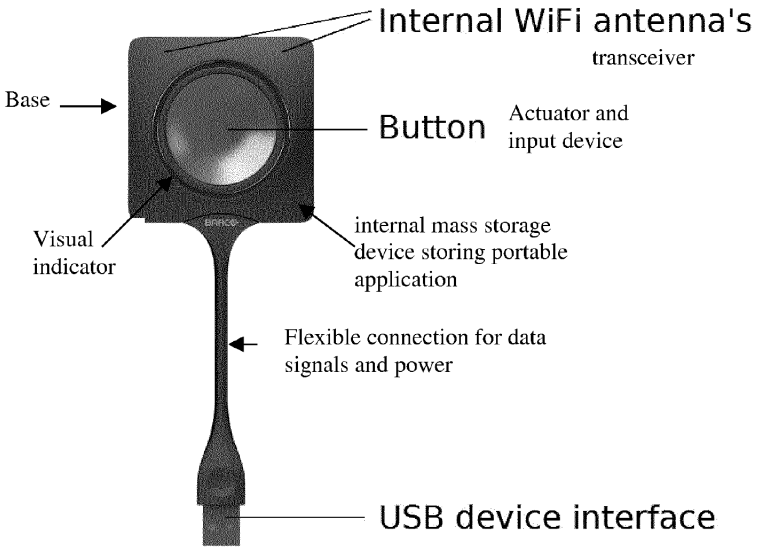

FIG. 10 of the '002 Patent, '676 Patent, and '103 Patent

For claim construction, only Claim 1 is at issue from the '002 Patent. The claim recites:

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

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

'002 Patent at 33:41–34:3 (disputed terms in bold). Yealink challenges "means for audio communication" and "means for data communication" as indefinite because the specification does not disclose an algorithm for either term. Dkt. No. 74 at 11–18.

Only Claim 1 of the '676 Patent is at issue, which is similar to Claim 1 of the '002 Patent:

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

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

'676 Patent at 32:40–33:14 (disputed term in bold). Yealink challenges "means for communication" as indefinite for the same reason it challenges the two "means" terms from the '002 Patent. Dkt. No. 74 at 19.

Claim 1 of the '103 Patent is directed to a "computer peripheral device," such as Figure 10's dongle:

> 1. A computer peripheral device comprising:
>
> a base,
>
> a connector for connection to a serial plug and play port of a host processing device,
>
> a flexible connection between the base and the connector, a transceiver for communicating with a communications network,
>
> a physical actuator on the base configured to allow user action to actuate the physical actuator to trigger transfer of a signal

> to the connector to transfer to the serial plug and play port via at least one pre-installed generic driver for the serial plug and play port, and the serial plug and play port being configured to receive arbitrary media content on the host processing device,
>
> wherein the base has a visual indicator which is also activated by the user action applied to the physical actuator,
>
> wherein the physical actuator is configured to be activated by the user action applied to the physical actuator to trigger delivery of the arbitrary media content on the host processing device to said transceiver on the computer peripheral device through said serial plug and play port, and from the transceiver to the communications network,
>
> wherein the visual indicator is configured in a way such that the user action by actuating the physical actuator indicates to the user whether or not the arbitrary media content is being sent from **the at least one peripheral device** to the communications network.

'103 Patent at 32:7–35 (disputed term in bold). Yealink asserts this claim is invalid because "the at least one peripheral device" in the last limitation has no antecedent basis and the specification discloses multiple different suitable peripheral devices to which this term might refer. Dkt. No. 74 at 20–24.

II. LEGAL STANDARDS

A. Generally

"[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.,* 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*). As such, if the parties dispute the scope of the claims, the court must determine their meaning. *See, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.,* 503 F.3d 1295, 1317 (Fed. Cir. 2007) (Gajarsa, J., concurring in part); *see also Markman v. Westview Instruments, Inc.,* 517 U.S. 370, 390 (1996), *aff'g,* 52

F.3d 967, 976 (Fed. Cir. 1995) (*en banc*).

Claim construction, however, "is not an obligatory exercise in redundancy." *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Rather, "[c]laim construction is a matter of [resolving] disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims . . . ." *Id.* A court need not "repeat or restate every claim term in order to comply with the ruling that claim construction is for the court." *Id.*

When construing claims, "[t]here is a heavy presumption that claim terms are to be given their ordinary and customary meaning." *Aventis Pharm. Inc. v. Amino Chems. Ltd.,* 715 F.3d 1363, 1373 (Fed. Cir. 2013) (citing *Phillips,* 415 F.3d at 1312–13). Courts must therefore "look to the words of the claims themselves . . . to define the scope of the patented invention." *Id.* (citations omitted). The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.,* as of the effective filing date of the patent application." *Phillips,* 415 F.3d at 1313. This "person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.*

Intrinsic evidence is the primary resource for claim construction. *See Power-One, Inc. v. Artesyn Techs., Inc.,* 599 F.3d 1343, 1348 (Fed. Cir. 2010) (citing *Phillips,* 415 F.3d at 1312). For certain claim terms, "the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips,* 415 F.3d at 1314; *see also Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) ("We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must

look at the ordinary meaning in the context of the written description and the prosecution history.”). But for claim terms with less-apparent meanings, courts consider “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean . . . [including] the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Phillips,* 415 F.3d at 1314.

B. Means-Plus-Function Claiming

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112 ¶ 6 (pre-AIA); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Under 35 U.S.C. § 112 ¶ 6, a structure may be claimed as a “means . . . for performing a specified function,” and an act may be claimed as a “step for performing a specified function.” *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002). When it applies, § 112 ¶ 6 limits the scope of the functional term “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347.

For a means-plus-function limitation, the Court must “determine the corresponding structure described in the specification and equivalents thereof. Structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001) (citations and quotations omitted). The corresponding structure “must include all structure that actually performs the recited function.” *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). But § 112 does not permit “incorporation of structure from the written description beyond that necessary to

perform the claimed function." *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

"[S]tructure can be recited in various ways, including [by using] 'a claim term with a structural definition that is either provided in the specification or generally known in the art,' or a description of the claim limitation's operation and 'how the function is achieved in the context of the invention.'" *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1366 (Fed. Cir. 2022) (quoting *Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2005)). For § 112 ¶ 6 limitations implemented by a programmed general-purpose computer or microprocessor, the corresponding structure described in the patent specification must usually include an algorithm for performing the function. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). In that case, the corresponding structure is not a general-purpose computer but rather the special-purpose computer programmed to perform the disclosed algorithm. *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008).

C. Indefiniteness

"[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). The claims "must be precise enough to afford clear notice of what is claimed" while recognizing that "some modicum of uncertainty" is inherent due to the limitations of language. *Id.* at 908.

"Indefiniteness must be proven by clear and convincing evidence." *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017). And in the context of § 112 ¶ 6, "[t]he party alleging that the specification fails to disclose sufficient corresponding structure must make

that showing by clear and convincing evidence." *TecSec, Inc. v. IBM*, 731 F.3d 1336, 1349 (Fed. Cir. 2013) (quoting *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1380–81 (Fed. Cir. 2001)).

III. THE LEVEL OF ORDINARY SKILL IN THE ART

The level of ordinary skill in the art is the skill level of a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In resolving the appropriate level of ordinary skill, courts consider the types of and solutions to problems encountered in the art, the speed of innovation, the sophistication of the technology, and the education of workers active in the field. *Id.* Importantly, "[a] person of ordinary skill in the art is also a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

Here, the parties agree, at least for the purpose of resolving these disputes, a skilled artisan would have had "a Master's Degree in Electrical Engineering and five years of work experience in computer science and embedded systems, or a Master's Degree in Computer Science and five years of work experience in electrical and computer engineering and embedded systems." Dkt. No. 74 at 7 (noting "[f]or the purpose of claim construction, Yealink adopts Barco's definition of a [skilled artisan]"). The Court adopts that characterization for its analysis.

IV. THE DISPUTED TERMS

A. "means for audio communication" ('002 Patent, Claim 1)

Barco's Construction	Yealink's Construction
Not indefinite. Alternatively: **Function:** Provide audio communication between the peripheral device and the processing device **Structure:** an interface using a generic communications protocol	Indefinite. Alternatively: **Function:** Provide audio communication between the peripheral device and the processing device **Structure:** an interface using a generic communications protocol

The parties agree this is a means-plus-function term and on the recited function, but disagree on whether the specification adequately discloses corresponding structure that performs the recited function. According to Yealink, this is a software-implemented limitation for which the specification must disclose an algorithm. Dkt. No. 74 at 11. Barco replies that (1) disclosure of an algorithm is unnecessary, and (2) even if it is necessary, the specification discloses an algorithm in the form of a preinstalled generic driver. Dkt. No. 76 at 4.

The parties agree the correct structure, if the term is not indefinite, is "an interface using a generic communications protocol." Yealink, however, asserts a "complete lack of an algorithm in the '002 patent's specification." Dkt. No. 74 at 12. Yealink also acknowledges the specification discloses various drivers, but contends "drivers differ and are not algorithms." *Id.*

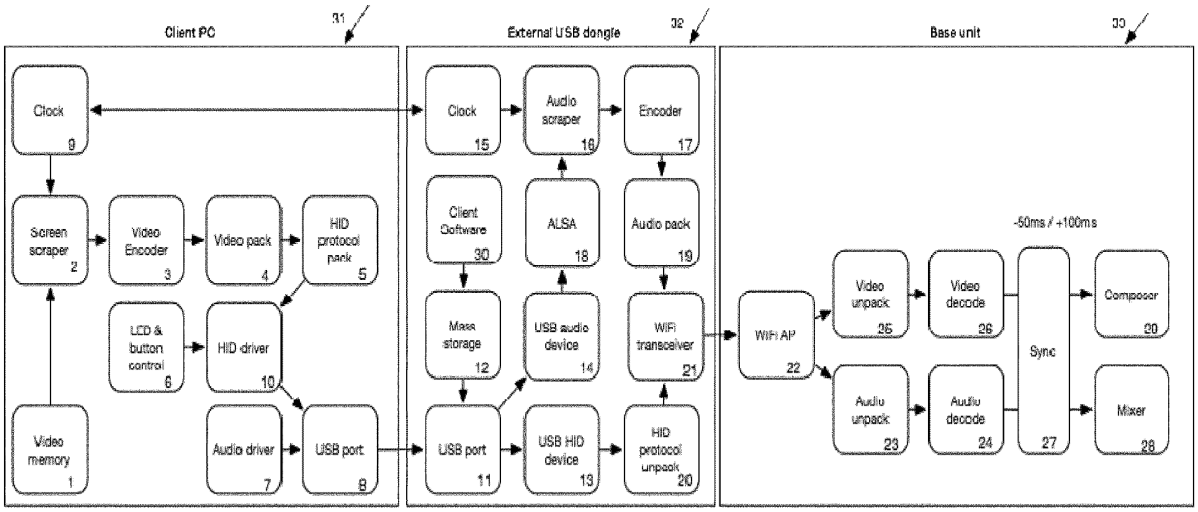

FIG. 11 of the '002 Patent

The Court agrees with Barco that no algorithm is required. The best evidence from the specification for this term's meaning relates to Figure 11, which is "a schematic representation of a communications system." '002 Patent at 15:3–6. In Figure 11 (above), an external USB dongle (32) is connected to a client PC (31). Generic drivers on the processing device make audio

available at a port (8), which is captured at the interface between the PC and the dongle. In that case, no algorithm is required, because the interface *is the result* of what the generic drivers do. *See id.* at 31:62–63 (explaining "audio data is captured at this interface 8-11"). In other words, it is the logical pathway for audio data formed by the generic drivers.

The claim language itself supports this conclusion. For one, the disputed language isn't in the typical position for a means-plus-function limitation. And reading the term naturally in the context of the surrounding claim language, a skilled artisan would tend to think the "means for audio communication" is simply a communication path for audio. The generic drivers "set up" a communication path for the audio between the peripheral device and processing device, *see* '002 Patent at 33:52–54, just as Figure 11 shows. The claim's last limitation then "rout[es] audio data from the processing device to the wireless transceiver via the [physical] connector and [logical] means for audio communication," *id.* at 33:62–61, again suggesting the "means" is simply a communication path—or in the language of the specification, an "interface."

To uphold Yealink's challenge, the Court must first hold an algorithm is required, but Yealink doesn't show why that's necessary for an "interface." In fact, Yealink's brief doesn't address the issue directly, instead focusing on the phrase "generic drivers providing a communications protocol," which appears in the preamble. *See, e.g.*, Dkt. No. 74 at 12 (asserting the specification does not disclose an "algorithm, structure, materials, acts, or flowcharts, defining a 'generic communications protocol'"). Yealink is more direct in its proposed sur-reply, citing two cases as examples of where "courts have required algorithms for similar limitations, even if they do not specifically recite, 'computer' or 'microprocessor.'" Dkt. No. 80 at 1. But neither of the cases on which Yealink relies suggests an "interface" requires an algorithm. In *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302 (Fed. Cir. 2012), the parties agreed the "access means" at issue was "a means-plus-

function limitation performed by a processor." *Noah Sys.*, 675 F.3d at 1305. In *Am. Express Co. v. Signature Sys., LLC*, No. CBM2018-00035, 2018 WL 5784667 (P.T.A.B. Nov. 1, 2018), the "communications means for communicating over a computer network" was part of a "reward server computer." *Am. Express Co.*, 2018 WL 5784667, *3–4. In contrast, the "interface" now at issue is the *result* of a method step rather than a structural limitation of an apparatus or system claim. Accordingly, the Court holds no algorithm is required and adopts Barco's construction (and Yealink's alternative construction) for structure of "an interface using a generic communications protocol."

B. "means for data communication" ('002 Patent, Claim 1)
"means for communication" ('676 Patent, Claim 1)

Barco's Construction	Yealink's Construction
Not indefinite. Alternatively: **Function:** Provide [data] communication between the peripheral device and the processing device **Structure:** an interface using a generic communications protocol	Indefinite. Alternatively: **Function:** Provide [data] communication between the peripheral device and the processing device **Structure:** an interface using a generic communications protocol

The parties' arguments concerning these terms are identical to those for the previous term. *See* Dkt. No. 71 at 15–17; Dkt. No. 74 at 18–19. For the same reasons, the Court holds these terms are not indefinite and adopts the structure of "an interface using a generic communications protocol."

C. "the at least one peripheral device" ('103 Patent, Claims 1, 16)

Barco's Construction	Yealink's Construction
Plain and ordinary meaning, no construction is necessary	Indefinite

This is an antecedent-basis dispute. Claim 1's last limitation recites a visual indicator "configured in a way such that the user action by actuating the physical actuator indicates to the user whether or not the arbitrary media content is being sent from *the at least one peripheral device* to the communications network." '103 Patent at 32:31–35 (emphasis added). But the claim does not otherwise mention "at least one peripheral device." Yealink says it is equally likely the disputed phrase refers to the "computer peripheral device" in the preamble as to any of the six peripheral devices shown in Figure 1a. Dkt. No. 74 at 21–22. Barco explains the problem comes from a mistake during prosecution. Dkt. No. 71 at 18–19. Regardless, because "a" means "one or more," Barco says the preamble effectively recites "one or more computer peripheral devices," "which is consistent with recitation of the disputed phrase later in the claim." *Id.* at 19.

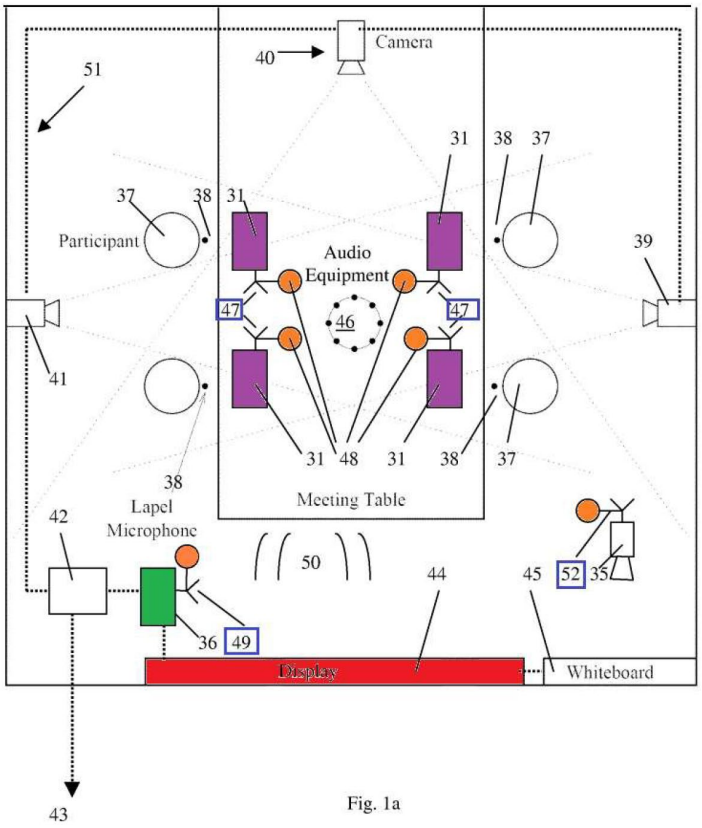

FIG. 1a of the '103 Patent annotated by Yealink. Dkt. No. 74 at 21.

Yealink's annotation of Figure 1a (above) best explains its position. That figure shows a meeting room with a meeting table, four meeting participants (37), a display node (36, green) connected to a display (44, red), and a camera (52). Each of the participants has a laptop (31, purple) connected to a wireless local area network (50). Each of the laptops has a connection unit (47) that provides access to the network. The display node and camera also have connection units (49, 52). *See generally* '103 Patent at 15:40–16:42. In Yealink's view, "the at least one peripheral device" could refer to any of the six disclosed connection units (47, 49, 52).

The claim language, however, supports Barco's position. The claim is directed to a "computer peripheral device" that has a base with a "physical actuator" and "visual indicator" that is activated by user action to the physical actuator. The visual indicator "indicates to the user whether or not . . . content is being sent . . . to the communications network." '103 Patent at 32:31–35. It makes no sense that the indicator would indicate to the user whether *other* peripheral devices are sending content to the communications network. *See* '103 Patent at 31:5–6 ("The visual indicator is for allowing user feedback from the connection unit of the status of any activity."). Nor does Yealink cite anything in the specification that supports another possibility.[2] Accordingly, the Court construes the disputed phrase as "the computer peripheral device" of the preamble.

[2] Yealink says the specification shows each possibility is likely, but only cites portions of the specification showing each device *in a system* can send data to the base node. Dkt. No. 74 at 22. The claim only concerns a computer peripheral device, not a system. Thus, the question is whether the specification discloses a peripheral device that indicates whether a *different* peripheral device is transmitting to the network. It doesn't.

V. CONCLUSION

Disputed Term	The Court's Construction
"means for audio communication" ('002 Patent, Claim 1)	Governed by 35 U.S.C. § 112 ¶ 6 **Function:** Provide audio communication between the peripheral device and the processing device **Structure:** "an interface using a generic communications protocol"
"means for data communication" ('002 Patent, Claim 1)	Governed by 35 U.S.C. § 112 ¶ 6 **Function:** Provide data communication between the peripheral device and the processing device **Structure:** "an interface using a generic communications protocol"
"means for communication" ('676 Patent, Claim 1)	Governed by 35 U.S.C. § 112 ¶ 6 **Function:** Provide communication between the peripheral device and the processing device **Structure:** "an interface using a generic communications protocol"
"the at least one peripheral device" ('103 Patent, Claims 1, 16)	"the computer peripheral device"

The Court **ORDERS** each party not to refer, directly or indirectly, to its own or any other party's claim-construction positions in the presence of the jury. Likewise, the Court **ORDERS** the parties to refrain from mentioning any part of this opinion, other than the actual positions adopted by the Court, in the presence of the jury. Neither party may take a position before the jury that

contradicts the Court's reasoning in this opinion. Any reference to claim construction proceedings is limited to informing the jury of the positions adopted by the Court.

SIGNED this 24th day of March, 2025.

ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE