United States District Court,
E.D. Texas, Marshall Division.

POLYCOM, INC., and Polycom Israel, Ltd,
Plaintiffs.
v.
CODIAN LTD and Codian, Inc,
Defendants.

Civil Action No. 2:05-CV-520-DF

Oct. 19, 2007.

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CLAIM CONSTRUCTION ORDER

DAVID FOLSOM**, District Judge.**

Before the Court is the Opening Claim Construction Brief filed by Plaintiffs Polycom, Inc. and Polycom Israel, LTD. ("Polycom"). Dkt. No. 68. Also before the Court is the Responsive Claim Construction Brief filed by Defendants Codian LTD and Codian, Inc. ("Codian") as well as Plaintiffs' Reply Claim Construction Brief. Dkt. Nos. 70 and 76. The Court held a Claim Construction hearing on January 30, 2007. After considering the patents, arguments of counsel, and all other relevant pleadings and papers, the Court finds that the claims of the patents-in-suit should be construed as set forth herein.

I. BACKGROUND

Plaintiff brought suit alleging infringement of United States Patent No. 6,697,476 (the "'476 Patent"), United States Patent No. 6,760,749 (the "'749 Patent"), United States Patent No. 6,633,985 (the "'985 Patent"), United States Patent No. 6,744,460 (the "'460 Patent"), United States Patent No. 6,496,216 (the "'216

Patent"), United States Patent No. 6,757,005 (the "'005 Patent") which relate to videoconferencing. *See* Second Amended Complaint, Dkt. No. 37.

Defendants deny infringement and assert the affirmative defenses of invalidity, estoppel, and failure to provide marking and notice. Answer, Dkt. No. 42 at 6-7. Defendants counterclaim for declaratory judgments of non-infringement and invalidity as well as a request for costs and attorneys' fees. *Id*. at 9-15.

II. LEGAL PRINCIPLES OF CLAIM CONSTRUCTION

A determination of patent infringement involves two steps. First, the patent claims are construed, and, second, the claims are compared to the allegedly infringing device. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1455 (Fed.Cir.1998) (en banc).

The legal principles of claim construction were reexamined by the Federal Circuit in Phillips v. AWH Corp., 415 F.3d 1303 (Fed.Cir.2005) (en banc). Reversing a summary judgment of non-infringement, an en banc panel specifically identified the question before it as: "the extent to which [the court] should resort to and rely on a patent's specification in seeking to ascertain the proper scope of its claims." Id. at 1312. Addressing this question, the Federal Circuit specifically focused on the confusion that had amassed from its recent decisions on the weight afforded dictionaries and related extrinsic evidence as compared to intrinsic evidence. Ultimately, the court found that the specification, "informed, as needed, by the prosecution history," is the "best source for understanding a technical term." Id. at 1315 (quoting Multiform Dessicants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1478 (Fed.Cir.1998)). However, the court was mindful of its decision and quick to point out that *Phillips* is not the swan song of extrinsic evidence, stating:

[W]e recognized that there is no magic formula or catechism for conducting claim construction. Nor is the court barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence.

Phillips, 415 F.3d at 1324 (citations omitted). Consequently, this Court's reading of *Phillips* is that the Federal Circuit has returned to the state of the law prior to its decision in Texas Digital Sys. v. Telegenix, Inc., 308 F.3d 1193 (Fed.Cir.2002), allotting far greater deference to the intrinsic record than to extrinsic evidence. "[E]xtrinsic evidence cannot be used to vary the meaning of the claims as understood based on a reading of the intrinsic record." Phillips, 415 F.3d at 1319.

Additionally, the Federal Circuit in *Phillips* expressly reaffirmed the principles of claim construction as set forth in Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed.Cir.1995) (en banc), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576 (Fed.Cir.1996), and Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc., 381 F.3d 1111 (Fed.Cir.2004). Thus, the law of claim construction remains intact. Claim construction is a legal question for the courts. Markman, 52 F.3d at 979. The claims of a patent define that which "the patentee is entitled the right to exclude." Innova, 381 F.3d at 1115. The claims are "generally given their ordinary and customary meaning" as understood by "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." Vitronics, 90 F.3d at 1582; *Phillips,* 415 F.3d 1313. However, the Federal Circuit stressed the importance of recognizing that the 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."

Phillips, 415 F.3d at 1313.

Advancing the emphasis on the intrinsic evidence, the *Phillips* decision explains how each source, the claims, the specification as a whole, and the prosecution history, should be used by courts in determining how a skilled artisan would understand the disputed claim term. *See, generally, id*. at 1314-17. The court noted that the claims themselves can provide substantial guidance, particularly through claim differentiation. Using an example taken from the claim language at issue in *Phillips,* the Federal Circuit observed that "the claim in this case refers to 'steel baffles,' which strongly implies that the term 'baffles' does not inherently mean objects made of steel." *Id*. at 1314. Thus, the "context in which a term is used in the asserted claim can often illuminate the meaning of the same term in other claims." *Id*. Likewise, other claims of the asserted patent can be enlightening, for example, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id*. at 1315 (citing Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed.Cir.2004)).

Still, the claims "must be read in view of the specification, of which they are part." Markman, 52 F.3d at 978. In *Phillips,* the Federal Circuit reiterated the importance of the specification, noting that "the specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.' " Phillips, 415 F.3d at 1315 (quoting Vitronics, 90 F.3d at 1582). To emphasize this position, the court cited extensive case law, as well as "the statutory directive that the inventor provide a 'full' and 'exact' description of the claimed invention." *Id*. at 1316 (citing Merck & Co., Inc. v. Teva Pharms. USA, Inc., 347 F.3d 1367, 1371 (Fed.Cir.2003)); *see also* 35 U.S.C. s. 112, para. 1. Consistent with these principles, the court reaffirmed that an inventor's own lexicography and any express disavowal of claim scope is dispositive. *Id*. at 1316. Concluding this point, the court noted the consistency with this approach and the issuance of a patent from the Patent and Trademark Office and found that "[i]t is therefore entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims." *Id*. at 1317.

Additionally, the *Phillips* decision provides a terse explanation of the prosecution history's utility in construing claim terms. The court simply reaffirmed that "the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id*. (citing Vitronics, 90 F.3d at 1582-83). It is a significant source for evidencing how the patent office and the inventor understood the invention. *Id*.

Finally, the Federal Circuit curtailed the role of extrinsic evidence in construing claims. In pointing out the less reliable nature of extrinsic evidence, the court reasoned that such evidence (1) is by definition not part of the patent, (2) does not necessarily reflect the views or understanding of a person of ordinary skill in the relevant art, (3) is often produced specifically for litigation, (4) is far reaching to the extent that it may encompass several views, and (5) may distort the true meaning intended by the inventor. *See id*. at 1318. Consequently, the Federal Circuit expressly disclaimed the approach taken in *Texas Digital*. While noting the *Texas Digital* court's concern with regard to importing limitations from the written description, "one of the cardinal sins of patent law," the Federal Circuit found that "the methodology it adopted placed too much reliance on extrinsic sources such as dictionaries, treatises, and encyclopedias and too little on intrinsic sources, in particular the specification and prosecution history." *Id*. at 1320. Thus, the court renewed its emphasis on the specification's role in claim construction.

Many other principles of claim construction, though not addressed in *Phillips,* remain significant in guiding

this Court's charge in claim construction. The Court is mindful that there is a "heavy presumption" in favor of construing claim language as it would be plainly understood by one of ordinary skill in the art. Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed.Cir.1999); *cf. Altiris, Inc., v. Symantec Corp.,* 318 F.3d 1364, 1372 (Fed.Cir.2003) ("[S]imply because a phrase as a whole lacks a common meaning does not compel a court to abandon its quest for a common meaning and disregard the established meaning of the individual words.") The same terms in related patents are presumed to carry the same meaning. *See* Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1334 (Fed.Cir.2003) ("We presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.") "Consistent use" of a claim term throughout the specification and prosecution history provides "context" that may be highly probative of meaning and may counsel against "[b]roadening of the ordinary meaning of a term in the absence of support in the intrinsic record indicating that such a broad meaning was intended ...." Nystrom v. TREX Co., 424 F.3d 1136, 1143-46 (Fed.Cir.2005).

Claim construction is not meant to change the scope of the claims but only to clarify their meaning. Embrex, Inc. v. Serv. Eng'g Corp., 216 F.3d 1343, 1347 (Fed.Cir.2000) ("In claim construction the words of the claims are construed independent of the accused product, in light of the specification, the prosecution history, and the prior art.... The construction of claims is simply a way of elaborating the normally terse claim language[ ] in order to understand and explain, but not to change, the scope of the claims.") (citations and internal quotations omitted). Regarding claim scope, the transitional term "comprising," when used in claims, is inclusive or open-ended and "does not exclude additional, unrecited elements or method steps." CollegeNet, Inc. v. ApplyYourself, Inc., 418 F.3d 1225, 1235 (Fed.Cir.2005) (citations omitted). Claim constructions that would read out the preferred embodiment are rarely, if ever, correct. Vitronics, 90 F.3d at 1583-84.

The Court notes that a patent examiner's "Reasons for Allowance," where merely summarizing a claimed invention and not specifically noting that patentability is based on a particular feature, do not limit the scope of the claim. *See* Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1375 (Fed.Cir.2003). Similarly, an examiner's unilateral statements in a "Notice of Allowance" do not result in the alteration of claim scope. *See id.; see also* Salazar v. Procter & Gamble Co., 414 F.3d 1342, 1346-47 (Fed.Cir.2005). "[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable." Omega Eng'g, 334 F.3d at 1326. The Federal Circuit has "declined to apply the doctrine of prosecution disclaimer where the alleged disavowal of claim scope is ambiguous." Id. at 1324.

The doctrine of claim differentiation is often important in claim construction. Phillips, 415 F.3d at 1315 (citing Liebel-Flarsheim, 358 F.3d at 910). "Claim differentiation" refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim. Curtiss-Wright Flow Control Corp. v. Velan, Inc., 438 F.3d 1374, 1380 (Fed.Cir.2006). This is in part because "reading an additional limitation from a dependent claim into an independent claim would not only make that additional limitation superfluous, it might render the dependent claim invalid." *Id.; see also* SRI Int'l. v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1122 (Fed.Cir.1985) ("It is settled law that when a patent claim does not contain a certain limitation and another claim does, that limitation cannot be read into the former claim in determining either validity or infringement.") This doctrine is based in part on the presumption that each claim has a different scope. 35 U.S.C. s. 282; Curtiss-Wright, 438 F.3d at 1380. The difference in meaning and scope between claims is presumed to be significant to the extent that the absence of such difference in meaning and scope would make a claim superfluous. Free Motion Fitness, Inc. v. Cybex Int'l, 423 F.3d 1343, 1351 (Fed.Cir.2005). Although a validity analysis is not a regular component of

claim construction, if possible claims should be construed to preserve their validity. Phillips, 415 F.3d at 1327; *see also* Rhine v. Casio, Inc., 183 F.3d 1342, 1345 (Fed.Cir.1999).

Whether or not the preamble acts as a limitation is properly an issue of claim construction, and therefore a matter of law within the province of the court. Markman, 52 F.3d at 979; *see also* Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 115 Fed. Appx. 84, 87 (Fed.Cir.2004, unpublished) ("Determining whether a preamble constitutes a limitation is a matter of claim construction....") There is no presumption that the preamble either is or is not a claim limitation, and there is no litmus test to apply. *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.,* 868 F.2d at 1257. A preamble is a limitation where it gives "meaning to the claim." *Id.* As the Federal Circuit has noted, this "may merely state the problem rather than lead one to the answer." *Id.* To determine whether or not the preamble is a part of the claim, a review of the entire patent is necessary. *Id.* This is because a claim preamble has the import that the claim as a whole suggests for it. Bell Commc'ns Research v. Vitalink Commc'ns Corp., 55 F.3d 615, 620 (Fed.Cir.1995). General claim construction principles apply to the determination of whether or not a preamble is a limitation. *Id.* ("We construe claim preambles, like all other claim language, consistently with [claim construction] principles.")

As set forth in *Catalina Marketing International v. Coolsavings .com, Inc.,* the case law provides some guidelines for this determination. 289 F.3d 801, 808-09 (Fed.Cir.2002). The preamble may operate as a limitation where: a claim depends on a preamble phrase for an antecedent basis; the preamble is essential to understand limitations or terms in the claim; the preamble recites additional structure or steps underscored as important by the specification; or the patentee has clearly relied on the preamble during prosecution to distinguish the claimed invention from the prior art. *Id.* The preamble generally does not operate as a limitation where the preamble language merely extols benefits or features of the claimed invention or the preamble describes the purpose or use of an invention. *Id.* at 809. "[W]hen the limitations in the body of the claim rely upon and derive an antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention." Eaton Corp. v. Rockwell Int'l Corp., 323 F.3d 1332, 1339 (Fed.Cir.2003).

With these principles in mind, the Court turns to the patents-in-suit.

III. THE PATENTS-IN-SUIT

As set forth above, Polycom alleges that Codian infringes the '749 Patent, the '460 Patent, the '216 Patent, the '005 Patent, the '476 Patent, and the '985 Patent, though no claims were selected for the '985 Patent. Dkt. No. 51 at 2. In the Amended Scheduling Order of July 11, 2006, the Court had limited the patentee to no more than eighteen asserted claims. Dkt. No. 48 at 2.

The patent application for the '749 Patent was filed on May 10, 2000. Dkt. No. 37, ex. B at 2. The patent issued on July 6, 2004, listing Wayne Dunlap, Michael Hogan, Kristin Dunn, Oden J. McMillan, Rick VanderKam, Samantha Kha, and DahRenn Ba as the inventors. *Id* . The Abstract reads as follows:

A multimedia distribution device includes an embedded stream encoder and an embedded stream server for encoding and transmitting, through utilization of streaming technology, audio and video content originating from a videoconference site and received through a network interface, to network-connected terminals. In situations in which the videoconference includes the presentation of slides or other content, the device may include a file conversion engine for converting the presentation content received through a data interface into a standard graphic image format, for synchronous distribution with the audio and video content stream.

The multimedia content may be viewed in a multiple-window interface, wherein the audio and video content is presented by a streaming media player, and the presentation content is displayed in a separate window. Additionally, the interface may include an interactive text entry interface, through which the viewer may submit comments or questions to the conference presenters. In an operating architecture that includes a separate remote streaming server and a separate network server, a method of distributing content to a large number of viewers includes continuously transmitting the current and successive presentation images to the network server for caching, whereby the viewer web browser can request and locally cache the images prior to arrival of the associated audio and video content.

Plaintiff asserts Claim 32 of the '749 Patent. Dkt. No. 51 at 2. Disputed terms are set forth in bold face type and claims from which the asserted claim is dependent are provided as well.

29. A multimedia distribution device for transmitting audio, video and/or other data between a local site and remote sites via a digital electronic network, comprising:

a network interface for communicating with other devices on the network;

an audio and video interface for receiving audio and video data from a peripheral **videoconferencing device** at a local site;

a streaming encoder coupled to the audio and video interface for creating streaming audio and video data in streaming technology format from the received audio and video data;

a streaming server coupled to the network interface and the streaming encoder for transmitting streaming audio and video data in streaming technology format;

and a web server coupled to the network interface for receiving and transmitting image data and text data.

32. The multimedia distribution device of claim 29, further comprising:

a storage device coupled to the streaming server for storing data including at least one of streaming audio and video data, presentation data, text data or image data.

The application for the '460 Patent was filed on October 4, 2000. Dkt. No. 37, ex. D at 2.

The '460 Patent claimed priority to provisional application no. 60/157,510, filed on October 4, 1999. Id. The '460 Patent issued on June 1, 2004, listing Alain Nimri, Michael Kenoyer, and David Hein as inventors. Id. The Abstract reads as follows:

An automatic switching system and method for determining and effecting an optimal video display mode based on the interaction among participants in a conference or discussion is disclosed. The system includes a timer which continuously monitors the duration of signals received from each of a number of endpoints. The system further includes a signal switching processor which compares the signal durations to predefined parameters which define various display mode switching thresholds. The system reacts to the conversational interaction of endpoint participants by automatically switching the display mode of all endpoints between single-window, single speaker presentation mode, and multiple-window, multiple speaker discussion mode.

Plaintiff asserts Claims 1, 6, and 13 of the '460 Patent. Dkt. No. 51 at 2. Disputed terms are set forth in bold face type and claims from which the asserted claim is dependent are provided as well.

1. A switching system for automatically determining a display mode for a video display device comprising:

a timer, configured to monitor a duration of each of a plurality of signals, the signals being from a source at each of multiple endpoints;

and a switching processor coupled to the timer and to a video switching module, configured to determine an appropriate display mode from the available display modes, wherein available display modes are single-window display and multiple-window display, based upon **a comparison of the duration of each of the signals with at least one predefined parameter.**

2. A switching system for automatically determining a display mode for a video display device, wherein available display modes are single-window display and multiple-window display, comprising: a timer, configured to monitor a duration of each of a plurality of signals, the signals being from a source at each of multiple endpoints;

and a switching processor coupled to the timer and to a video switching module, configured to determine an appropriate display mode to the available display modes based upon **a comparison of the duration of each of the signals with at least one predefined parameter;**

whereupon a determination that the appropriate display mode is different than the current display mode the switching processor transmits to the video switching module a display mode command, the display mode command being chosen from a single-window display command to effect the single-window display and a multiple-window display command to effect the multiple-window display.

6. The system of claim 2, wherein the display device is coupled to a multi-point videoconferencing device or application.

11. A method for automatically determining a display mode for a display device comprising the steps of:

(a) receiving a signal from each of multiple endpoints;

(b) **monitoring a duration of the signal from each of the multiple endpoints;**

(c) **comparing the duration of the signal from each of the multiple endpoints with predefined parameters;** and

(d) determining an optimal display mode from the available display modes, wherein available display modes are single-window display and multiple-window display, based on step (c);

(e) whereupon the optimal display mode is different than a current display mode of the display device, transmitting a display mode command signal based on a determination in step (d), the display mode command signal effecting the display mode of the display device; and

wherein step (e) comprises a command signal to effect the multiple-window display upon the duration

from each of the multiple endpoints not exceeding a predefined parameter t_1.

13. The method of claim 11, **wherein step (e) comprises a command signal to effect** the multiple-window display upon the durations from at least two of the multiple endpoints exceeding a predefined parameter t_1.

The application for the '216 Patent was filed on September 14, 2001. Dkt. No. 37, ex. E at 2. The '216 Patent is a continuation of United States Patent No. 6,300,973 (the "973 Patent") filed on January 13, 2000. Id. The '216 Patent issued on December 17, 2002, listing Meir Feder, Moshe Elbaz, Noam Eshkoli, Aviv Eisenberg, and Ilan Yona as inventors. Id. The Abstract reads as follows:

A multipoint control unit (MCU) or other digital video-processing apparatus operates to manipulate compressed digital video from several compressed digital video sources. The apparatus has a plurality of video input modules and a plurality of video output module. Each of the video input modules receives a compressed video signal from one of the sources and generally decodes the data into a primary data stream and a secondary data stream. The video output module receives the primary and secondary data streams, from at least one of the input module for generally encoding to a compressed output stream for transmission.

Plaintiff asserts Claims 17, 21, 22, and 40 of the '216 Patent. Dkt. No. 51 at 2. Disputed terms are set forth in bold face type and claims from which the asserted claims are dependent are provided as well.

1. An apparatus for manipulating compressed digital video information to form manipulated compressed video information, the manipulated compressed video information being a manipulation of data from at least one of a plurality of compressed digital video sources, the apparatus comprising:

at least one **video input module** for receiving compressed video input data from at least one source of the plurality of compressed digital video sources, the at least one **video input module** comprising a **generalized decoder** operative to decode the compressed video input data, generate a primary video data stream, and process the compressed video input data and the primary video data stream to generate a secondary data stream;

and at least one **video output module** for receiving the primary video data stream and the secondary data stream from the at least one **video input module,** and being operative to encode the primary video data stream with references to the secondary data stream to form manipulated compressed video output data, whereby the use of the secondary data stream by the at least one **video output module** improves a speed of encoding and the manipulated compressed video output data's quality.

17. The apparatus of claim 1, wherein the secondary data stream is associated with the primary video data stream in that the secondary data stream includes **side information.**

21. An apparatus for manipulating compressed digital video forming manipulated compressed digital video, the manipulated compressed digital video being a manipulation of data from at least one of a plurality of compressed digital video sources and destinations, the apparatus comprising:

at least one **video input module,** each **video input module** of the at least one **video input module** being operative to receive a compressed video input signal that belongs to one of the compressed digital video sources depending on the required manipulation, to decode the compressed video input signal for generating a decoded video data stream and to transfer the decoded video data stream to a **common interface;**

at least one **video output module,** each **video output module** of the at least one **video output module** being operative to grab the decoded video data stream from the **common interface,** to encode the decoded video data stream into a compressed video output stream, and to transfer the compressed video output stream to at least one destination of the plurality of destinations;

and a **common interface** forming a temporary logical connection for routing the decoded video data stream from at least one input module to at least one output module;

wherein there is no permanent logical relation or connection between the at least one video input module and the at least one video output module, and the apparatus has a configuration in which the temporary logical connection depends on the current needs of a current manipulation, whereby use of the configuration improves resources allocation of the apparatus.

22. The apparatus of claim 21, wherein the manipulation of the compressed video input data includes at least one type of manipulations selected from a group consisting of: transcoding and compositing.

40. An apparatus for manipulating compressed digital video forming manipulated

compressed digital video, the manipulated compressed digital video being a manipulation of data from at least one of a plurality of compressed digital video sources and destinations, the apparatus comprising:

at least one **video input module,** each **video input module** of the at least one **video input module** being operative to receive a compressed video input signal that belongs to one of the compressed digital video sources depending on the required manipulation, to decode the compressed video input signal for generating a decoded video data stream and to transfer the decoded video data stream to a **common interface;**

at least one **video output module,** each **video output module** of the at least one **video output module** being operative to grab the decoded video data stream from the **common interface,** to encode the decoded video data stream into a compressed video output stream, and to transfer the compressed video output stream to at least one destination of the plurality of destinations;

and a **common interface** forming a non-dedicated connection for routing the decoded video data stream from at least one **video input module** to at least one **video output module;**

wherein there is no dedicated logical relation or connection between the at least one video input module, and the at least one video output module and the apparatus has a configuration in which the non-dedicated logical connection depends on the current needs of a current manipulation, whereby use of the configuration improves resources allocation of the apparatus.

The application for the '005 Patent was filed on September 14, 2001. Dkt. No. 37, ex. F at 2. The '005 Patent is a continuation-in-part of the '973 Patent. Id. The '005 Patent issued on June 29, 2004, listing, Moshe Elbaz, Noam Eshkoli, Ilan Yona, and Aviv Eisenberg as inventors. Id. The Abstract reads as follows:

An improved method and a system of utilizing the decoding/encoding video resources of a Video Processing Device (VPD) by offering a distributed architecture. A conventional VPD comprises a plurality of video ports, each video port is dedicated to a user and comprises at least one decoder and one encoder.

The distributed VPD comprises a plurality of input ports and a plurality of output ports. Each input port includes an input module. The input module is operative to receive a compressed video input stream, manipulate the compressed video stream into a primary stream and optionally generate a secondary data stream associated with the primary data stream. A variety of levels of service for a session can be offered. A client may select the number of ports that will be used by the session. For example, a single port may multicast its compressed output video stream to all the destinations within a session, or to all destinations within a plurality of ports. The multicasting may be such that there is anywhere from one port for each group of destinations using the same compressed video stream to one port for each user.

Plaintiff asserts Claims 2, 5, 7, 19, 34, 35, and 38 of the '005 Patent. Dkt. No. 51 at 2. Disputed terms are set forth in bold face type and claims from which the asserted claims are dependent are provided as well.

1. An apparatus for manipulating compressed digital video messages received from at least one compressed video source of a plurality of compressed video sources to form manipulated compressed video output and for sending the manipulated compressed video output to at least one of a plurality of compressed video destinations, the apparatus comprising:

a **common interface;**

at least one **video input port** being operative to grab a compressed video input signal from the at least one compressed video source, to decode the compressed video input signal for generating a video data stream, and to transfer the video data stream to the **common interface;**

and at least one **video output port** being operative to grab the video data stream from the **common interface,** to encode the video data stream forming a compressed video output stream, and to transfer the compressed video output stream to at least one destination of the plurality of compressed video destinations;

wherein no permanent logical relation or connection exists between the at least one **video input port** and the at least one **video output port,** and **the at least one video input port and the at least one video output port are arranged in a distributed configuration having a temporary logical connection based on current requirements of a current session;**

whereby use of the distributed configuration improves resource allocation of the apparatus.

2. The apparatus of claim 1 wherein the at least one **video output port** grabs the video data stream form the **common interface** based on a layout associated with a conference.

4. A method of offering a level of service to a video conference, the method comprising:

offering **levels of service** to a **conference moderator,** different levels of the **levels of service** requiring different amounts of **video resources;**

and assigning one or more **video resources** to the video conference based on a selected level of service.

5. The method of claim 4 wherein the offering is based on processing **a profile associated with the video conference.**

6. The method of claim 4 wherein the one or more **video resources** is selected from the group consisting of input port, output port, and **fat port.**

7. The method of claim 4 further comprising:

routing a compressed video input signal of an input endpoint to an input module;

processing the compressed video input signal using the input module;

routing decoded video data of a set of input modules to output modules;

processing the decoded video data to form a single compressed video output signal using one output module of the output modules;

and transferring the single compressed video output signal to a receiving endpoint.

19. The method of claim 6, wherein the assigning further comprises assigning one input port for each currently visible source thereby binding a resources allocation associated with a video processing device with layouts used by the video conference and not with how many participants are in the video conference.

34. The apparatus of claim 1, wherein each **video output module** composes more than one video data stream into one video data stream before being encoded and transferred to the at least one destination.

34. The method of claim 4 further comprising:

routing multiple compressed video input signals from a first set of endpoints to multiple input modules, each compressed video input signal being routed from one of the first set of endpoints to one of the multiple input modules;

the multiple compressed video input signals, the multiple input modules and the fist set of endpoints having a one to one correspondence;

processing the multiple compressed video input signals using the multiple input modules thereby forming decoded video data, each input module processing a different one of the multiple compressed input signals;

routing the decoded video data from the input modules to multiple output modules, each output module may have decoded video data from multiple input modules routed thereto;

processing the decoded video data to form compressed video output signals, each output module forming one compressed video output signal;

and transferring the compressed video output signals from the multiple output modules to ase cond set of endpoints, each video output module having the single compressed video output signal transferred to one or more endpoints of the second set of endpoints.

38. A processor-based video conference system comprising a medium storing instructions for causing the processor to:

offer **levels of service** to a **moderator of a video conference,** different levels of the **levels of service** requiring different amounts of **video resources;**

and assign one or more **video resources** selected from the group consisting of input port, output port and **fat port** to the video conference based on a selected level of service.

The application for the '476 Patent was filed on March 22, 2000. Dkt. No. 37, ex. A at 2. The '476 Patent claimed priority to provisional application no. 60/125,440, filed on Mar. 22, 1999. Id. The '476 Patent issued on February 24, 2004, listing William O'Malley and Arthur P. Leondires as inventors. Id. The Abstract reads as follows:

An audio conferencing system comprises an audio conference mixer that receives digitized audio signals and sums a plurality of the digitized audio signals containing speech to provide a summed conference signal. A transcoder receives and transcodes the summed conference signal to provide a transcoded summed signal that is streamed onto the Internet.

Plaintiff asserts Claims 11, 13, and 16 of the '476 Patent. Dkt. No. 51 at 2. Disputed terms are set forth in bold face type and claims from which the asserted claims are dependent are provided as well.

10. An audio conferencing platform, comprising:

means for receiving audio signals associated with conference participants, and for providing a digitized audio signal and a speech bit for each of said audio signals, wherein said **speech bit** indicates whether or not said associated **digitized** audio signal includes voice data from the associated conference participant;

an audio conference mixer adapted to receive said **digitized** audio signals and said **speech bits,** and sum a plurality of said **digitized** audio signals based upon the state of said **speech bits** to provide a summed conference signal, and provide a conference list indicative of the conference participants whose voice is included in said summed conference signal;

means for receiving said summed conference signal and said conference list, for providing said summed conference signal to each of said conference participants that are not on said conference list, and for each conference participant on the conference list removing the digitized audio signal associated with that conference participant from said summed conference signal and providing a resultant difference audio signal to the conference participant on said conference list;

and circuitry adapted to **transcode said summed conference signal to provide a transcoded summed signal that is streamed onto the Internet.**

11. The audio conferencing platform of claim 10, wherein said audio conference mixer comprises a first digital signal processor.

13. The audio conferencing platform of claim 10, wherein said means for receiving said summed conference signal and said conference list comprises a digital signal processor.

16. An audio conferencing platform that provides a summed conference signal over the Internet, said platform comprising:

input circuitry adapted to received audio signals associated with conference participants, and provide a **digitized** audio signal and a **speech bit** for each of said audio signals, wherein said **speech bit** indicates whether or not said associated **digitized** audio signal includes voice data from the associated conference participant;

a centralized audio conference mixer adapted to receive said **digitized** audio signals and said **speech bits,** and sum a plurality of said **digitized** audio signals based upon the state of said **speech bits** to provide a summed conference signal, and provide a conference list indicative of the conference participants whose voice is included in said summed conference signal;

an encoder that receives and **transcodes said summed conference signal to provide a transcoded summed signal that is streamed onto the Internet.**

IV. THE POLYCOM PATENTS

A. The '749 Patent

As noted above, the '749 Patent issued to Dunlap et al. Dkt. No. 37, ex. B at 2. The patent is entitled "Interactive Conference Content Distribution Device and Methods of Use Thereof." *Id*. The parties request that the Court construe five terms and phrases appearing in the '749 Patent. These terms are: (a) "videoconferencing device" / "a peripheral videoconferencing device at a local site;" (b) "streaming technology format;" (c) "a network interface for communicating with other devices on the network;" (d) "an audio and video interface for receiving audio and video data from a peripheral videoconferencing device at a local site;" and (e) "a streaming encoder coupled to the audio and video interface for creating streaming audio and video data in streaming technology format from the received audio and video data." The claims asserted in the patent is claim 32, though the terms arise out of claims 29 and 32. These claims are set forth above. The Court construes the contested language as follows:

1. "videoconferencing device" / "a peripheral videoconferencing device at a local site"

a. The Parties' Positions

Polycom proposes the term "videoconferencing device" means "a device that enables videoconferencing, and which may be capable of enabling multipoint videoconferencing." Joint Claim Construction Chart ("JCCC") filed 10/5/2006. Dkt. No. 66 at 3. Codian proposes the term "a videoconferencing device" means "a device having a camera and microphone designed to allow communication of audio and visual information to one or more remote sites." *Id*. Codian urges for the full construction of the term "a peripheral videoconferencing device at a local site" to mean "the video conferencing device is a peripheral to the multimedia distribution device" and therefore "the videoconferencing device is at the same local site as the multimedia distribution device." *Id*.

Codian contends that the videoconferencing device must be an endpoint of the videoconferencing requiring a microphone and a camera, while Polycom states that the videoconferencing device encompasses a device that can facilitate a multi-point videoconference. Polycom argues that videoconferencing is used in its plain and ordinary meaning and cites to a dictionary defining videoconferencing as "a two-way form of

communication that permits two or more people in different locations to engage in face-to-face audio and visual communication." Dkt. No. 68 at 17 (quoting R. Schaphorts, *Videoconferencing and Videotelephony, Technology and Standards,* at 184 (1996)). Polycom argues that a videoconferencing device "can be a device which is 'capable of enabling multipoint videoconferencing.' " *Id*. Polycom cites to the specification which states that "[i]n one mode of operation a videoconference may be effected through the use of multi-point videoconferencing devices." *Id*. (citing ' 749 Patent, 4:12-14). Polycom argues that Codian's construction unnecessarily narrows the term by requiring a camera and microphone, which would exclude multipoint videoconferencing devices. *Id*. at 17-18. Codian responds that its construction is based on the specification and on the features of the StreamStation product and notes that the videoconferencing devices plugged into the StreamStation include A/V devices. Dkt. No. 70 at 29-30. In its reply, Polycom relies on International Visual Corp. v. Crown Metal Manufacturing Co., 991 F.2d 768 (Fed.Cir.1993) for the proposition that patent claims are not to be construed or limited by the patentee's commercial embodiment.

Another matter is whether Codian's construction that videoconferencing devices "allow communication of audio and visual information to one or more sites" is overbroad. Polycom argues that Codian's construction is unnecessarily overbroad because it would include a television broadcast studio, while a videoconferencing device requires some type of "conference." Dkt. No. 68 at 18. Codian does not address this matter in its brief. Dkt. No. 70 at 29-30.

A major point of contention is the construction of the entire phrase "a peripheral videoconferencing device at a local site." Polycom argues that Codian's construction of "peripheral" changes it from an adjective to a noun. Dkt. No. 68 at 18. Polycom also asserts that there is no support to infer that "local site" requires that the videoconferencing device and the multimedia distribution device be at the same site. *Id*. Codian responds that the term "videoconferencing device" needs to be construed in the context of the phrase "a peripheral videoconferencing device at a local site" as a whole because the patent is directed to a narrow invention on a specific kind of device. Dkt. No. 70 at 29. An exemplary citation of the specification provided by Codian states: "The interfaces generally interconnect the bus 302 and a peripheral, such as a videoconferencing device." *Id*. ('749 Patent, 6:20-23). Codian notes that the StreamStation product has videoconferencing devices directly plugged into the StreamStation. *Id*. Codian also asserts that Polycom's own expert states that "peripheral" is commonly understood to refer to components directly connected to a PC. *Id*. at 30. Polycom replies that its expert's statement was taken out of context, and that the expert was really pointing out the inherent difference between using a "peripheral" as a noun and an adjective. Dkt. No. 76 at 6.

b. Construction

Generally, claim terms are not to be limited by the preferred embodiments. Phillips, 415 F.3d at 1323 (stating that the court repeatedly warns against construing claim terms according to the preferred embodiments"). The best source for understanding a technical term is the specification and its corresponding prosecution history. Id. at 1315.

As Polycom noted, the specification specifically provides an example that provides that a videoconferencing device may be a multipoint device. '749 Patent, 4:12-14. Claim constructions that would read out the preferred embodiment are rarely, if ever, correct. C.R. Bard v. U.S. Surgical Corp., 388 F.3d 858, 865 (Fed.Cir.2004) (citing Vitronics, 90 F.3d at 1583). In addition, though a camera is mentioned several times in the specification, there is no mention of a microphone nor does the specification require that the videoconferencing device require a camera and a microphone. Codian's brief does not provide citations to

any embodiments requiring the limitations; rather, Codian relies on the commercial embodiment of the patent. Dkt. No. 70 at 29-30. The Court does not find any reason to limit the claim terms to the commercial embodiment. Therefore, the Court does not limit the term to require a camera and a microphone, but the Court also does not deem it necessary to incorporate "multi-point" into the construction of "videoconferencing device."

The specification describes that the "videoconferencing devices 104 may intercommunicate." '749 Patent, 4:15. Polycom also introduced a dictionary definition of videoconferencing which describes a two-way communication and not merely passively receiving information at a remote site. During the claim construction hearing, Codian stated that it would be willing to amend the construction of "videoconferencing device" to be a "device having a camera and microphone designed to allow communication of audio and visual information to and from one or more remote sites." Claim Construction Hr'g Tr. 13:11-15, Jan. 30, 2007. The Court takes this to mean that Codian would agree that the videoconferencing devices allow for a "conference" providing for communication to and from the sites. The Court finds that the construction of a "videoconferencing device" should closely track the language of "videoconferencing" as it would be understood by one of ordinary skill in the art.

There are two main issues relating to the full term "a peripheral videoconferencing device at a local site." The first issue is whether it is appropriate to convert the use of "peripheral" from an adjective to a noun. *See* Hr'g Tr. 10:13-20. When used as a noun, "peripheral" may mean a device, such as a printer that is attached to a device. *Id*. at 10:18-20. When used as an adjective, "peripheral" may mean that it is separate. *Id*. at 14:20-21. Codian argues that "peripheral" must require a direct connection because Figure 1 of the '749 Patent shows a View Station with a line directly connecting to a Distribution Device. Id. at 12:22-13:1. However, the specification also allows for a connection on the LAN. '749 Patent, 4:22-27. As stated above, except in the case of an express teaching, the Court will not limit a claim to a specific embodiment. C.R. Bard, 388 F.3d at 865. Polycom's construction of a peripheral as an adjective, meaning that a device is "separate," would encompass Codian's narrower construction of peripheral to be a device, such as a printer, that is directly connected.

The second issue concerns whether a local site must be where the multimedia distribution device is located. The specification does not include the term "local site" outside the claims. At the claim construction hearing, Codian reasons that the videoconferencing device is a peripheral to a local device, the local device is at a local site, the videoconferencing device is peripheral to the multimedia distribution device, and therefore the videoconferencing device is at the same local site as the multimedia distribution device. Hr'g Tr. 11:20-25, 12:13-17. The term "local" is used in the specification as "local terminals" and "remote terminals." *See* '749 Patent, FIG. 1. The '749 Patent describes that a "[d]istribution device 100 is generally configured to distribute multimedia conference content to local terminals 110 over LAN 102 and to remote terminal 114 over network 116." ' 749 Patent, 4:9-11. The '749 Patent describes that the videoconferencing device and the distribution device have a "direct connection" and are also "both coupled to the LAN." '749, 4:23-27. Therefore, a "local" site can be construed to be anything located on the LAN.

The Court construes the term "videoconferencing device" to mean "a device that enables two or more people in two or more different locations to **engage** in face-to-face audio and visual communication." The Court construes "a peripheral videoconferencing device at a local site" to mean "a videoconferencing device that is located on the same LAN as the multimedia distribution device."

2. "streaming technology format"

a. The Parties' Positions

Polycom proposes this term to mean "[a] format in which audio and video data is transmitted one way to non-active remote viewers over a packet based network, like the Internet. A remote viewer can view the media without having to download entire media files to the viewer's computer before viewing." Dkt. No. 68 at 18. Codian proposes this term to mean "a format in which audio and video data transmitted one way over a packet-based network like the Internet can be displayed before the transmission of the data is complete." Dkt. No. 70 at 31.

Polycom agrees that its construction is similar to Codian's except that the audio/video data in Polycom's construction is transmitted to "non-active remote viewers." Dkt. No. 68 at 18. Polycom argues that the patent provides that "remote viewers" view the interchange occurring between "participants" at a conference presenter site, and thus the viewers are not actively participating because they do not contribute video and audio to the conference. *Id*. at 19. In a footnote, Polycom admits that although the viewers may not be "active" in the conference, the '749 patent teaches that participants may use an interactive text entry interface. Id. at 19 n. 2. However, Polycom states that the interactive text entry is "not the 'streaming technology format' in question." Id. Polycom provides RealPlayer from RealNetworks and Windows Media Player from Microsoft as examples from the specification that illuminate the meaning of "streaming technology format." Id. at 19 (citing '749 Patent, 5:45-48).

Codian responds that its construction is supported by the specification, which reads as follows:

Through utilization of streaming technology, multimedia content is transmitted in a continuous stream in compressed form over the Internet, buffered at the viewer's computer, and displayed to the viewer effectively simultaneous with its reception. A viewer can immediately view the media without having to download entire media files, which are usually large, before viewing.

Dkt. No. 70 at 30 (citing to '749 Patent, 6:28-34). Codian also agrees that the main point of contention is whether the "streaming" is received by a non-active remote viewer. *Id*. at 31-32. Codian notes that the "non-active" viewers are capable of "transmit[ting] comments or questions to the conference participants at the conference site." *Id*. at 31 (citing '749 Patent, 2:48-51.

Polycom replies that the remote streaming viewers are separate and distinct from the videoconference participants. Dkt. No. 76 at 6. Polycom argues that sending text messages is not active participation in the conference because the conference participants contribute live audio and video to the conference while the "viewers" only receive passive streaming. *Id*. at 6-7. Polycom also argues that adopting Codian's construction would broaden the scope of streaming to include "any real time packet network-based transmission of audiovisual data." *Id*. at 7.

b. Construction

Polycom only offers a single example in the specification as to why the recipients of information in a streaming technology format must be "non-active." Though a "patentee's choice of embodiments can shed light on the intended scope of the claim, ... a patent claim term is not limited merely because the embodiments in the specification all contain a particular feature." C.R. Bard, 388 F.3d at 865. Polycom does not explain why the example embodiment would preclude any participant, viewer, or user of a videoconferencing system to receive audio and visual data in a streaming technology format while actively

participating in the conference. Even more perplexing is the fact that Polycom cites to the section of the specification that states:

Additionally, the user interface [of the web browser on the remote streaming terminals] includes an interactive text entry interface, which provides to the [streaming] ***viewer*** the capability to transmit comments or questions to the ***conference participants*** at the conference site. The ***participants*** can review and reply to the comments or questions in real time.

Dkt. No. 76 at 7 (citing '749 2:47-52 (emphasis added by Polycom)). Polycom's arguments fail because not only are the viewers actively sending messages to the participants, but the participants are also replying to the messages in real time. As Codian noted in the claim construction hearing, the term "non-active would add an ambiguity into a term that has no particular ambiguity in it in the first place." Hr'g Tr. 30:21-23.

The context of Claim 29 itself does not require that the recipient of the streaming audio and visual data in a streaming technology format be a non-active viewer. *See* '749 Patent, 14:25-28. Ultimately, the issue is that the term is relating to a format, not the type of recipient. The ability of a recipient to participate in a conference after receiving a RealPlayer stream or "through the streaming technology format" is irrelevant to the actual **format** through which streaming data is sent.

Therefore, the Court construes "streaming technology format" to mean "a format in which audio and video data is transmitted one way over a packet-based network, like the Internet. The audio and visual data may be viewed without having to download entire media files. Examples of streaming technology formats include RealPlayer from RealNetworks or Windows Media player from Microsoft."

3. "a network interface device for communicating with other devices on the network" / "an audio and video interface for receiving audio and video data from a peripheral videoconferencing device at a local site"

The parties construe the terms in reference to each other in the JCCC, the claim construction briefs, and the claim construction hearings. Therefore, the Court will address the arguments for the claims in the same section.

a. The Parties' Positions

Polycom asserts that both terms are "easily understood, and it does not require any special construction." Dkt. No. 68 at 19-20. Codian proposes the term "a network interface for communicating with other devices on the network" to mean "circuitry (e.g., an Ethernet card) designed to receive and transmit data to and from a network and transfer the data for use by a local device." Codian proposes the term "an audio and video interface for receiving audio and video data" to mean "circuitry, separate from the network interface, designed to receive audio and video data by direct connection from a videoconferencing device, and transfer the data for use by the multimedia distribution device." Dkt. No. 70 at 28.

Regarding the "network interface," Polycom argues that Codian's proposed construction offers no clarity and adds unclaimed limitations. Dkt. No. 68 at 20. Polycom argues that claim 29 states that the interface is "for communicating with other devices on the network" and is not limited only to "transfer[ring] the data for use by a local device." *Id*. Codian does not address this argument in its response.

Regarding the "audio and video interface" ("A/V interface"), Polycom argues that the claim does not require

that the audio and video interface to "consist solely of 'circuitry'," does not require it to be "separate" from the network interface, and does not require that the A/V interface "be connected directly to the videoconferencing device." *Id.* at 20. Regarding both interfaces, Codian replies that the interfaces must be circuitry because the "examples and generalizations provided in the specification [all] ... describe circuitry." Dkt. No. 70 at 29 (citing '749 Patent, 6:4-12 and 6:13-23). Polycom argues that the claim "simply says that the audio/video interface must receive data from a peripheral videoconferencing device. That says nothing about them being directly connected together in any way." Hr'g Tr. 18:2-5. Polycom submits that the only example of a direct connection is Figure 1, and the only reason there would be a direct connection is if the videoconferencing device was a "peripheral," as used as a noun, rather than being "peripheral," as used as an adjective. Hr'g Tr. 21:21-22:10.

The main point of contention regarding both terms relates to whether the "audio interface" must be "separate from the network interface." Polycom relies on NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282, 1310 (Fed.Cir.2005) and interprets the case to stand for the proposition that "before you can take two terms in a patent and require that they must necessarily be different and can't be satisfied by the same thing, then there must be some kind of textual hook in the claim language or in the language of the specification that absolutely requires that these interfaces must always be separate." Hr'g Tr. 16:17-24. Codian argues that Claim 32 requires two separate interfaces because the claim has two separate elements, one for each interface, while Claim 1 only has a network interface to perform both functions. Dkt. No. 70 at 28. Codian asserts that *NTP* is not relevant because the issue in *NTP* "was whether two components could be connected within the same housing." Hr'g Tr. 20:22-21:1. Codian relies instead on Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 93 F.3d 1572, 1579 (Fed.Cir.1996) for the proposition that "if two terms described a single element, one would expect the claims to consistently refer to this element with one or the other of the two terms, but not both." Dkt. No. 70 at 28. Codian asserts that the network and A/V interface do different things in different ways, as shown by the StreamStation product literature, and this demonstrates that they are different interfaces. *Id.*

b. Construction

As the Court has explained above, "a patentee's choice of embodiments can shed light on the intended scope of the claim, but a patent claim term is not limited merely because the embodiments in the specification all contain a particular feature. C.R. Bard, 388 F.3d at 865. Codian cites to several examples of the specification where the network interface and A/V interface all describe circuitry. However, neither the examples in the specification nor the claim language require that the interfaces consist solely of circuitry. In fact, an online computing dictionary defines an "interface" as:

A boundary across which two independent systems meet and act on or communicate with each other. In computer technology, there are several types of interfaces.

-> user interface-the keyboard, mouse, menus of a computer system. The user interface allows the user to communicate with the operating system. Also see GUI.

-> Software interface-the language and codes that the applications use to communicate with each other and with the hardware.

-> hardware interface-the wires, plugs and sockets that hardware devices use to communicate with each other.

WEBOPEDIA, http://www.webopedia.com/TERM/i/interface.html (last visited Aug. 13, 2007). One of ordinary skill in the art would not limit an interface to only hardware "circuitry" without further limiting language.

Codian does not address the limitation that the network interface "transfer the data for use by a local device" and also did not provide any examples in the specification. The Court does not find any such limitations in the specification, and thus does not construe that the network interface only transfers data for use by a local device.

Regarding whether a network interface and A/V interface must be separate, Codian argues that *Ethicon* stands for the proposition that a single element would be referred to by one term and not two. Hr'g Tr. 21:2-8. In *Ethicon,* the claim recited "a restraining structure separate from said *pusher bar* for blocking said barrier assemblage to maintain said resilient projecting member out of the path of the *pusher assembly* during staple firing." Ethicon, 93 F.3d at 1579. The defendant, U.S. Surgical, urged that "pusher assembly" was a synonym for "pusher bars," while the plaintiff, Ethicon, construed "pusher assembly" to encompass the pusher bars as well as the cam bar retainer element. *Id*. The Federal Circuit held that if "the terms 'pusher assembly' and 'pusher bar' described a single element, one would expect the claim to consistently refer to this element as either a 'pusher bar' or a 'pusher assembly,' but not both, especially not within the same clause." *Id*. However, the Federal Circuit held that a pusher assembly encompassed "both the pusher bars and the cam bar retainer ." *Id*. at 1581. Here, Codian concedes that in some claims, such as claim 1, the network interface may encompass the functionality of the A/V interface. *See* Hr'g Tr. 18:11-19 (stating that claim 1 combined the network and A/V functions into a single interface of the network interface). The Abstract of the Specification also cites similar language stating that the multimedia distribution device transmits "audio and video content originating from a videoconference site and received through a network interface." The network interface is not a synonym for an A/V interface, rather the network interface may encompass the A/V interface. Therefore, like the pusher assembly, the network interface may, but need not, encompass the functionality of the A/V interface. The interfaces may be separate, either in different hardware circuitry or software code, but may also be embodied in the same element of the multimedia distribution device.

Polycom argues that *NTP* is relevant for the proposition that there must be a textual "hook" in the claim language that requires that the interfaces must always be separate. In *NTP,* claim 1 of the patent required that the "RF receiver ... transfer[ ] the originated information to the at least one of the plurality of destination processors." NTP, 418 F.3d at 1310. RIM had urged the district court to require that the RF receiver be distinct and separable from the destination processor. Id. at 1309. According to RIM, the fact that information was transferred from the RF receiver to the destination processor implied that they were separately housed. Id. at 1310. The Federal Circuit disagreed and held that even though information would be "transferred" between two entities, it does not require physical separation of those entities. *Id*. Here, Codian's argument that the two interfaces are separate because the claim separates out the functionality is not similarly persuasive. Like *NTP,* if the interfaces were hardware, the interfaces need not necessarily be housed in different circuitry or components. If the interfaces were software, there is no requirement in the specification or the claims that would require the network and A/V functionality to be in different software components.

Therefore, the Court construes "a network interface for communicating with other devices on the network" to mean "a medium for the multimedia distribution device to communicate with other devices on the

network." The Court construes "an audio and video interface for receiving audio and video data" to mean "a medium for receiving or sending audio and video data. The audio and video interface may be encompassed by the network interface. Or the network interface may be separate from the audio and video interface ."

4. "streaming encoder coupled to the audio and video interface for creating streaming audio and video data in streaming technology format from the received audio and video data"

a. The Parties' Positions

Polycom states that this term, "like the previous two, does not require any additional construction beyond that already offered for 'streaming technology format.' " Dkt. No. 68 at 20. Codian proposes this term to mean "an encoder is a device that takes data in a plain format and converts it into a specialized format. The encoder of claim 32 must be connected directly to the audio/video interface, must receive the audio and video data directly from the audio/video interface without further processing, and must process the audio and video data received from the audio/video interface to place the data in a streaming technology format." Dkt. No. 70 at 29.

Polycom argues that Codian's construction contains unwarranted limitations. Polycom asserts that Codian "improperly attempts to equate the broad term 'coupled to' with 'connected directly to,' in conflict with well established legal authority. Dkt. No. 68 at 21 (citing Johnson Worldwide Assocs. v. Zebco Corp., 175 F.3d 985, 992 (Fed.Cir.1999)).

Codian responds that the product identified by Polycom that embodies the ' 749 Patent and the specification shows that the stream encoder is "directly connected to the audio/video interface." Codian addresses Figure 1 depicting a "line connecting the videoconferencing device 104 and the distribution device 100 is separate from, and appears to go around, the line representative of the network in the drawing." Dkt. No. 70 at 31. Polycom replies the term does not require construction. Dkt. No. 76 at 8.

b. Construction

Generally, the Patent Office determines the scope of claims upon giving claims their broadest reasonable construction. Phillips, 415 F.3d at 1316. Codian hopes that the Court will infer that the stream encoder is directly connected to the audio and video interface device because the multimedia conference content is transmitted from the local videoconferencing device 104 to the distribution device 100 through a direct connection. Dkt. No. 70 at 30-31. However, the specification states that "FIG.3 depicts components of distribution device 100 interconnected for communication by at least one bus 302." '749 Patent, 5:66-67. The specification describes that the distribution device comprises an A/V interface as well as a stream encoder, and the figure depicts these components on a bus in Figure 3. In Figure 3, which actually shows the components of the claim, there is not a separate line directly connecting the stream encoder to the A/V interface. '749 Patent, Figure 3. In addition, even if the stream encoder were connected to the A/V interface, a position not supported by Figure 3, Codian provides no reason why the claim should be limited by the embodiments disclosed in the specification. *See Phillips,* 415 F .3d 1320.

Codian provides significant limitations to the processing of the A/V data. Dkt. No. 70 at 30. However, Codian does not provide an argument or examples as to the multiple limitations listed for the claim term. Without any specific limiting language or evidence from the specification, the Court does not find any reason to require such a limiting construction.

Therefore, the Court construes the term "a streaming encoder coupled to the audio and video interface for creating streaming audio and video data in streaming technology format from the received audio and video data" to mean "a streaming encoder is connected to the audio/video interface, either through a physical connection or a connection allowing communication. The encoder receives audio and video data from the audio and video interface and encodes the audio and video data into a streaming technology format."

B. The '460 Patent

As noted above, the '460 Patent issued to Nimri et al. Dkt. No. 37, ex. D at 2. The patent is entitled "Video Display Mode Automatic Switching System and Method." *Id*. The parties request that the Court construe four terms and phrases appearing in the '749 Patent. These terms are: (a) "a comparison of the duration of each of the signals with at least one predefined parameter;" (b) "monitoring a duration of the signal from each of the multiple endpoints;" (c) "comparing the duration of the signal from each of the multiple endpoints with predefined parameters;" (d) "wherein step (e) comprises a command signal to effect the multiple-window display upon the duration from each of the multiple endpoints not exceeding a predefined parameter t_1." The claims asserted in the patent are claims 1, 6, and 13, and the terms arise out of those claims. The asserted claims are set forth above. The Court construes the contested language as follows:

1. "a comparison of the duration of each of the signals with at least one predefined parameter"

a. The Parties' Positions

Polycom proposes that this term "would be understood by one of ordinary skill in the art to have a plain and ordinary meaning and no special construction is needed." JCCC at 4. Codian proposes this term means "the switching processor makes its determination based on a comparison of the duration of the signals monitored by the timer against a predefined length of time." Dkt. No. 70 at 33. Codian further defines "duration" to mean "how long the switching system has been receiving the signal." *Id*.

Polycom argues that "Codian improperly construes the clause in a way that limits comparison to a ***single specific*** parameter-'length of time.' " Dkt. No. 68 at 21 (emphasis in original). Polycom states that the specification provides a "non-limiting example" that uses a specific length of time as the predefined parameter. Polycom submits that there are other examples in the specification that are "more general in nature." For example, the specification describes:

In operation, the timer 402 transmits signal duration data to the switching processor 404. The switching system 400 is functional in more than one manner. In one embodiment, the transmission of duration data from the timer 402 to the switching processor 404 occurs continuously whereby the switching processor 404 compares the ongoing duration of each audio signal with **predefined parameters.** In another embodiment, the transmission of duration data may occur when certain **predefined parameters,** or thresholds, are equaled or exceeded. In both embodiments, the switching processor 404 utilizes the signal duration data, in comparison with the **predefined parameters,** to determine an optimal video display mode based on the current interaction occurring among the participants at endpoints 200, 202, 204, and 206 (FIG.2).

'460 Patent, 4:64-5:11 (emphasis added).

Polycom submits that "parameter" should be given the full scope of its plain and ordinary meaning of "an operating value, constant, or coefficient that can be either a dependent or independent variable." Dkt. No. 68 at 22 (citing THE ILLUSTRATED DICTIONARY OF ELECTRONICS 515 (8th Ed.2001)). Polycom

concludes that Codian improperly restricts the claim scope. *Id*. at 22.

Codian responds that "duration" is used according to its ordinary meaning and is referred to in the specification as the length of the audio signal. Dkt. No. 70 at 33. Codian cites to the specification which states "the discussion display mode is considered optimal when at least one speaker at more than one endpoint is speaking for a duration exceeding the cough delay." *Id*. (citing '460 Patent, 2:39-42). Codian argues that the examples provided in the specification discuss parameters as lengths of time. *Id*. (citing '460 Patent, 7:23-28). Codian submits that "[u]nless Polycom is suggesting that a 'duration' could mean something other than a measurement in units of time, it would not make sense to compare a duration to anything other than a time parameter." *Id*. at 33-34. Codian further asserts that if Polycom is asserting that "duration" is not a measurement of time, then that would contravene the ordinary meaning of "duration." *Id*. at 34.

Polycom replies that its use of the term "duration" indicates "that the inventors intended to distinguish between the generic term 'parameter' and the more specific term 'duration." Dkt. No. 76 at 8. Polycom submits that the specification explicitly states after its discussion of predefined parameters as lengths of time, that the "preceding examples of predefined parameters are not intended to limit the practice of the invention, but are presented for exemplary purposes to describe the present technology." '460 Patent, 7:41-43.

b. Construction

Claim terms are given their general ordinary meaning. Phillips, 415 F.3d at 1312. In addressing Codian's construction of duration, the Court would agree that a duration is a "length of time." Claim terms are supposed to be read in the context of the claim as well as the context of the entire patent, including the specification. Id. at 1313. Codian argues that "duration" refers to the "length of the audio signal;" yet, in its proposed construction, Codian defines "duration" to mean "how long the switching system has been receiving the signal." Dkt. No. 70 at 33. Codian does not provide any examples in the specification that explicitly indicate that duration is measured from the time the switching system starts receiving the signal or why the claims should be limited in such fashion. Thus the Court does not limit duration to "how long the switching system has been receiving the signal." Rather, the Court construes a "duration" to be its common meaning of a "length of time." *See id*.

Codian also limits the "predefined parameter" to a "predefined length of time." One of the "cardinal sins" of patent law is reading a limitation from the written description into the claims. Phillips, 415 F.3d at 1320. Though one of the examples provided in the specification is a predefined parameter as a length of time, Codian does not provide any reasons as to why the example provided in the specification limits the claim. In particular, the specification explicitly states that the examples "are not intended to limit the practice of the invention." '460 Patent, 7:41-43. The general use of predefined parameter throughout the specification outside the one non-limiting example provides further evidence that "predefined parameter" is not limited to a "predefined length of time."

Therefore, the Court construes the term "a comparison of the duration of each of the signals with at least one predefined parameter" to mean "a comparison of the length of time of each of the signals with one or more predefined parameters. A predefined parameter may, but need not be, a length of time."

2. "monitoring a duration of the signal from each of the multiple endpoints"

a. The Parties' Positions

Polycom proposes that this "term would be understood by one of ordinary skill in the art to have a plain and ordinary meaning and no special construction is needed." JCCC at 4. Codian proposes this term to mean "the device must time how long it has been receiving the audio signal received from each of multiple endpoints." Dkt. No. 70 at 33.

Polycom argues that Codian "attempts to impose the requirement that some unspecified 'device' time how long 'it has been receiving' an audio signal from each of multiple endpoints." Dkt. No. 68 at 22. Polycom relies on Dennison Manufacturing Co. v. Ben Clements & Songs, Inc., 467 F.Supp. 391, 405 (S.D.N.Y.1979) for the proposition that a method is patentable in and of itself and does not require a structure be disclosed in a method claim. Dkt. No. 68 at 22.

Codian responds that there is no disagreement to the construction except that the "structure that offends Polycom is the general term a 'device.' Clearly, something accomplishes the 'monitoring.' " Dkt. No. 70 at 34. Polycom does not address this term in its reply.

b. Construction

Codian offers that its proposed construction uses the general term "device" rather than requiring a specific structure. Dkt. No. 70 at 34. Claims are given their ordinary customary meaning, and terms are understood in the context of the claim and the specification. *See* Phillips, 415 F.3d at 1312-13. Though Codian argues that "device" is a general term, Codian does not explain why it is required to construe the claim. Polycom is correct in asserting that the claim is a method claim and the claim language does not require any particular structure. In addition, Claim 13 in which the term appears is not a means-plus-function claim. Therefore, the Court will not import a structural requirement into the method claim. *See* Epcon Gas Sys. Inc. v. Bauer Compressors, Inc., 279 F.3d 1022, 1031 (Fed.Cir.2002) (finding that the "method of claim 2 does not mention structure by which the 'venting' is to be performed. Thus, ... the district court improperly imported language from the specification into the claim.").

Therefore, the Court does not adopt Codian's limitations and agrees with Polycom in finding that this term does not need construction and would be understood by one of ordinary skill in the art to have a plain meaning.

3. "comparing the duration of the signal from each of the multiple endpoints with predefined parameters"

a. The Parties' Positions

Polycom proposes that this "term would be understood by one of ordinary skill in the art to have a plain and ordinary meaning and no special construction is needed." JCCC at 4. Codian proposes this term to mean "the device must compare the duration of each of the signals received from the endpoints against a predefined length of time." Dkt. no. 70 at 34.

Polycom argues that Codian attempts to "improperly restrict 'parameter' to a single specific parameter, i.e., a 'length of time.' " Dkt. No. 68 at 23. Polycom submits that the claim language explicitly recites "plural 'parameters' " while Codian's definition is restricted to only a single parameter. Dkt. No. 68 at 23. Polycom reiterates its argument that Codian is improperly restricting the method claim to a vague unspecified

"device." Dkt. No. 68 at 23.

Codian responds that Polycom misstates Codian's position. Codian argues that the only example of multiple parameters in the '460 Patent is the one described "with three parameters being t_0 set to 0 seconds; t_1 set to 2 seconds; and t_2 set to 15 seconds." Dkt. No. 70 at 35. Codian asserts that its proposed construction, "while construing the term 'parameter' to be an interval of time, does not preclude multiple parameters." *Id*. In reply, Polycom reiterates the argument that the term "parameter" is not limited to a "duration." Dkt. No. 76 at 8.

b. Construction

The Court has already determined above that "duration" is a length of time. The Court does not find that Codian has provided any further evidence why "predefined parameters" in this term would have to be a "predefined length of time." Codian asserts that its construction allows multiple parameters, though each is a predefined length of time. Codian cites to the "only example of the multiple parameters in the '460 Patent." Dkt. No. 70 at 35. The Federal Circuit has "expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." Phillips, 415 F.3d at 1323. Therefore, although the only example provided in the specification for multiple parameters involved lengths of time, Codian does not provide a clear disavowal that the general term parameter is limited to a length of time.

In addition, the Court has already determined that limiting the method claim to the "device" was unwarranted. In addition, the general term "device" is vague and may even confuse the jury.

Other than the use of the word "device" and replacing "predefined parameter" with "predefined length of time," Codian's definition substantially tracks the language of the term. Therefore, in light of the prior determination on the issue of "parameter" and "device," the Court agrees with Polycom that the term does not need a special construction.

4. "wherein step (e) comprises a command signal to effect the multiple-window display upon the duration from each of the multiple endpoints not exceeding a predefined parameter t_1"

"wherein step (e) comprises a command signal to effect the multiple-window display upon the durations from at least two of the multiple endpoints exceeding a predefined parameter t_1"

Polycom proposes that both terms "would be understood by one of ordinary skill in the art to have a plain and ordinary meaning and no special construction is needed." JCCC at 4-5. Codian proposes "wherein step (e) comprises a command signal to effect the multiple-window display upon the duration from each of the multiple endpoints not exceeding a predefined parameter t_1" to mean "the command of step (e) implements a multiple-window display if the duration of each of the signals from each of the endpoints is less than a predefined amount of time." Dkt. No. 70 at 35. Codian proposes "wherein step (e) comprises a command signal to effect the multiple-window display upon the durations from at least two of the multiple endpoints exceeding a predefined parameter t_1" to mean "the command of step (e) implements a multiple-window display if the duration of the signals from at least two of the endpoints is more than a predefined amount of time." *Id*.

Polycom argues that Codian's definitions provide "word substitutions that do not improve clarity yet subtly

shift the meaning and scope of the claims." Dkt. No. 68 at 23. For example, Polycom contests Codian's substitution of the term " 'implements' for the word 'effect' even though the term 'implement' is never used in the '460 patent with respect to the command signal and offers no improvement over the term 'effect' for the jury's comprehension." Id. at 23. Polycom further argues that the Codian's construction limits the claims to "a single specific parameter, i.e., a 'length of time," when the claim refers to the more general term 'parameter.' " Id.

Codian responds that Claim 13 depends from Claim 11, and the limitations of Claim 13 are "satisfied only if a multiple window display is turned on when the signal duration of every endpoint is less than t_1 *and* the multiple window display is turned on if the signal duration of at least two endpoints is greater than t_1 ." Dkt. No. 70 at 36 (emphasis in original). Codian further argues that the term should be construed by the Court because the terms contain technical jargon and are drafted in a confusing way. *Id*. at 36.

Polycom replies that Codian's proposed definition does not clarify any of the terms. Dkt. No. 76 at 9. Polycom reiterates that substituting "implement" for "effect" does not make the term any more jury-friendly. *Id*.

b. Construction

Both "wherein" clauses relate to the "command signal" of step (e). Therefore, the Court will address the limitations together. Under Codian's construction, the combined limitations provided that a "multiple window display will not be turned on ... if one endpoint is greater than or equal to t_1, or multiple endpoints to t_1." Dkt. No. 70 at 36. Polycom argues that Codian is unnecessarily restricting "parameter" to be a length of time. This claim term, unlike the previous terms containing the word "predefined parameter," has the additional limitation "t_1." A claim term must be read "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." Phillips, 415 F.3d at 1313. A threshold constant, such as "t_1," typically does not have any ordinary meaning or even a dictionary definition, as the threshold is merely represented by a symbolic representation of a quantity. Thus, one skilled in the art can only understand the meaning of the threshold symbol by the definition provided in the specification. The threshold constant t_1 is defined as a "cough delay." '460 Patent, 5:66-67, 6:40-41, 7:29. The specification teaches:

discussion display mode 100 is considered optimal when any of the following conditions are present: ... (2) no participants at any of the endpoints are speaking for a duration exceeding a "cough delay" defined by a parameter t_1; and (3) at least one participant at more than one endpoint is speaking for a duration exceeding the parameter t_1.

'460 Patent, 5:59-67. The specification further provides:

the purpose of the cough delay is to squelch the switching operating in situations where such an operation would be unnecessary and distracting to conference participants. It provides for momentary interruptions of the distinct speaker which often occur in real-life discussions and videoconferences, such as when a speaker coughs or verbally reacts to another speaker's statement, without enacting a display mode switch. Therefore, if speakers comment or react to statements with an utterance of their own, the display mode will not change unless their comment exceeds the predefined parameter t_1.

'460 Patent, 7:30-33.

Federal Circuit has stated that context can be used to explain a claim term, providing an example where the term "steel baffles" strongly implies that the term "baffles" does not inherently mean objects made of steel. Phillips, 415 F.3d at 1314. Here, t_1 is a threshold value of a length of time. Outside the context of the specification, the term t_1 has no meaning to one of ordinary skill in the art. Thus, from the context of the claim and the specification, a "predefined parameter t_1" is a threshold value of a predefined length of time. The Court notes that, like steel baffles, a parameter is not inherently a predefined length of time, a construction already explained above. However, "steel baffles" in the context of the claim are undoubtedly "baffles made of steel," just as a "predefined parameter t_1" is a "parameter that is a predefined length of time." If the inventor had intended the term to be a more general predefined parameter, as in the above terms, the inventor certainly knew how to do so.

The limitations of asserted Claim 13 combine those of the independent Claim 11 as well as that of Claim 13. The limitations of the two "wherein" clauses are required to be viewed in the conjunctive.

Therefore, the Court construes the terms "wherein step (e) comprises a command signal to effect the multiple-window display upon the duration from each of the multiple endpoints not exceeding a predefined parameter t_1" and "wherein step (e) comprises a command signal to effect the multiple-window display upon the durations from at least two of the multiple endpoints exceeding a predefined parameter t_1" together to mean "wherein step (e) comprises a command signal to effect the multiple-window display upon (1) the duration from each of the multiple endpoints not exceeding a predefined length of time t_1 **and** (2) the duration from two or more of the multiple endpoints exceeding the same predefined length of time t_1."

C. The '216 and '005 Patents

As noted above, the '216 Patent issued to Feder et al. Dkt. No. 37, ex. E at 2. The '216 Patent is entitled "Method and System for Multimedia Communication Control." Id. The '005 Patent issued to Elbaz et al. Dkt. No. 37, ex. F at 2. The '005 Patent is entitled "Method and System for Multimedia Video Processing." Id. The '216 Patent is a continuation of the '973 Patent and the '005 Patent is a continuation-in-part of the '973 Patent. *See* Dkt. No. 37, ex. E and F.

The parties request that the Court construe thirteen terms and phrases appearing in the '216 and '005 Patents. These terms are: (a) "video input model" / "video output module;" (b) "video input port" / "video output port;" (c) "side information;" (d) "generalized decoder;" (e) "common interface;" (f) "wherein there is no [permanent/dedicated] logical relation or connection between the at least one video input module and the at least one video output module, and the apparatus has a configuration in which the [temporary/non-dedicated] logical connection depends on the current needs of a current manipulation;" (g) "the at least one video input port and the at least one video output port are arranged in a distributed configuration having a temporary logical connection based on current requirements of a current session;" (h) "whereby use of the [distributed] configuration improves resource allocation of the apparatus"; (i) "levels of service;" (j) "conference moderator" / "moderator of a video conference;" (k) "video resources;" (l) "a profile associated with the video conference;" and (m) "fat port." The claims asserted in the '216 Patent are claims 17, 21, 22, and 40, and the terms arise out of claims 1, 17, 21, 22, 40. The claims asserted in the '005 Patent are claims 2, 5, 7, 19, 34, 35, and 38, and the terms arise out of claims 1, 2, 4, 5, 6, 7, 19, 34, 35, and 38. These claims are set forth above. The Court construes the contested language as follows:

1. "generalized decoder"

a. The Parties' Positions

Polycom proposes this term to mean "[a] decoder that outputs video data in one or more of the following domains: spatial domain, DCT domain, or some variation thereof." JCCC at 5. Codian proposes this term to mean "[a] decoder that is generalized to operate in various ways and on various kinds of data. A generalized decoder is codec independent and can generate a data stream in any of the following domains: spatial domain, DCT domain, or some variation thereof." Id. However, at the claim construction hearing, Codian agreed to delete the first sentence. Hr'g Tr. 36:22-37:4. This is reflected in Codian's brief which proposes the construction of "generalized decoder" to mean "a generalized decoder is codec independent and can generate a data stream in any of the following domains: spatial domain, DCT domain, or some variation thereof." Dkt. No. 70 at 7.

Polycom argues that Codian attempts to require the generalized decoder to be capable of operating in all domains. Dkt. No. 68 at 28. Polycom asserts Codian's reading is improper because the patent describes "two *alternative* embodiments of the generalized decoder in Figures 2 and 3, one of which operates in the spatial domain, and the other in the DCT domain-but neither being required to operate in ***both.***" Dkt. No. 68 at 29 (*citing* '216 Patent, 6:56-57, 7:13-14) (emphasis in original). Polycom submits that the patent allows the generalized decoder to operate in any of the domains because the specification states:

The generalized decoder 130 then generates two streams: a primary data stream and a secondary data stream. The primary data stream can be either frames represented in the image (spatial) domain, frames represented in the DCT domain, or some variation of these, e.g., error frames.

'216 Patent, 4:13-18.

Polycom asserts that the use of the "either ... or" provides for a broader interpretation than Codian's construction. Dkt. No. 68 at 29.

Codian responds that Polycom's construction reads the word "generalized" out of the element. Dkt. No. 70 at 7. Codian cites to the specification which states:

Generalized decoder 130 takes the video stream ... and based on the frame memory 135 content, converts it into "generalized decoded" frames (according to the domain chosen for transcoding). The generalized decoder 130 then generates two streams ...

'216 Patent, 4:9-14.

Codian concludes that whichever domain is "chosen," the generalized decoder must be capable of generating frames in that domain. Dkt. No. 70 at 7. Codian further submits that because the "generalized encoder ... receives the primary video data from one or more input modules and encodes the primary video data into combined compressed video output data." *Id*. at 8 (citing '216 Patent, 2:50-53). Codian concludes that because the endpoints are not limited to encoding on the same codec, the generalized decoder "must be codec independent." *Id*.

Polycom argues that the term "chosen" in the section of the specification cited by Codian "refers to what the

system designer chooses to implement, and does not require that the decoder be able to decode selectively in ***all three*** domains." Dkt. No.76 at 11 (emphasis in original). Polycom restates the argument that the examples provided depict two alternative embodiments of generalized decoders that operate in one domain or another, but not both. *Id*. Polycom further argues that the fact that the specification "does not limit the invention to the situation where all endpoints are encoding in the same domain" does not provide a valid bases to require the generalized decoder ***must have*** some sort of inherent flexibility. *Id*.

b. Construction

Ordinarily, claims are not limited to the preferred embodiments disclosed in the specification. Phillips, 415 F.3d at 1323. However, claims should not be construed to exclude a preferred embodiment. SanDisk Corp. v. Memorex Prods., Inc., 415 F.3d 1278, 1285 (Fed.Cir.2005) (*quoting* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed.Cir.1996)). Polycom cites to the specification describing Figures 2 and 3. *See* Dkt. no. 68 at 29 (citing '216 Patent, 6:56-57, 7:13-14). In those figures, the "exemplary embodiment of a generalized decoder 130" specifically has a "spatial decoder 230" in Figure 2 or a "DCT decoder 330" in Figure 3. '216 Patent, 6:67, 7:18. Figure 2 describes the spatial decoder, and further discusses that the DCT decoder "optionally" performs the inverse of the discrete cosine transfer function. ' 216 Patent, 7:1-3. Figure 3 describes the DCT decoder but does not mention a spatial decoder. From the context of the specification, it is evident that the word "generalized" does not mean that the decoder must generally decode into all domains, but rather that the generalized decoder may be set to decode into one or more domains. If a generalized decoder were required to decode in **all** spatial domains, it would read out the embodiments described in Figures 2 and 3.

Codian also reasons that the generalized decoder is codec independent because it receives video streams from multiple input modules and endpoints are not limited to encoding in the same codec. Dkt. No. 70 at 8. Codian requires that the generalized decoder must be capable of encoding and decoding for any codec. While this may be possible, there is nothing in the specification that requires that the generalized decoder is codec independent. The specification states that "[a]ll of this elaborate processing, e.g., transcoding and continuous presence processing, must be done under the constraint that the input streams are already compressed by a known compression method, usually based on a standard like ITU's H.261 or H.263." '216 Patent, 1:52-56. Therefore, while a generalized decoder may be capable of encoding in multiple codecs, these codecs must be known by the generalized decoder, making the generalized decoder, if anything, codec dependent.

Therefore, the Court construes the term "generalized decoder" to mean "a decoder that outputs video data in one or more of the following domains: spatial domain, DCT domain, or some variation thereof."

2. "side information"

a. The Parties' Positions

Polycom proposes this term to mean "[i]nformation that is associated with the primary video data stream and which may include one or more of motion vectors, quantizer identifications, coded/uncoded decisions, filter/non-filter decisions, frame type, resolution, and other information that would be useful for encoding a video signal." JCCC at 5. Codian proposes this term to mean "information derived from the primary data stream and the video input data and which may contain motion vectors, quantizer identifications, coded/uncoded decisions, filter/non-filter decisions, frame type, resolution, and other information that would be useful to the encoding of a video signal." Dkt. No. 70 at 8.

Polycom cites to the specification, which states:

The secondary data stream contains "control" or "side information" associated with the primary stream and may contain motion vectors, quantizer identifications, coded/uncoded decisions, filter/non-filter decisions frame type, resolution, and other information that would be useful to the encoding of a video signal.

'216 Patent, 4:18-23.

Polycom states that its proposed construction only differs by substituting "may include one or more" in leiu of "may contain." Dkt. No. 68 at 28. Polycom argues that Codian "improperly attempts to limit the definition of 'side information' by requiring the information to be 'derived from the primary data stream and the video input data.' " *Id*. Polycom submits that the specification does not use the term "derived from," and Claim 1 only states that the generalized decoder merely processes the video input data and primary video data stream to generate a secondary data stream.

Codian responds that its construction keeps the "may contain" language that Polycom substituted with "may include one or more." Dkt. No. 70 at 8. Regarding how side information is produced, Codian submits that Claim 17, which depends from Claim 1, adds a limitation that "the secondary data stream is associated with the primary video data stream in that the secondary data stream includes side information." *Id*. Codian states that its construction tracks the language of this claim limitation. *Id*.

Polycom replies that Codian provides no support for the term "derived from." Dkt. No. 76 at 10. Polycom notes that the language in the specification uses the words "associated with." *Id*.

b. Construction

Both parties' construction substantially track the same language from the ' 216 Patent at column 4, lines 18-23. Codian replaces "associated with" with "derived from." Polycom replaces "may include one or more" with "may contain." Neither party provides any specific intrinsic or extrinsic evidence why either substitution is valid or why it would make the claim term clearer to a jury. Neither substitution will be made by the Court.

Therefore, the term "side information" is construed to mean "information that is associated with the primary stream and may contain motion vectors, quantizer identifications, coded/uncoded decisions, filter/non-filter decisions frame type, resolution, and other information that would be useful to the encoding of a video signal."

3. "video [input/output] module"; "video [input/output] port

The terms "video input module," "video output module," "video input port," and "video output port," are related and will be discussed in a single section. The terms "video input port" and "video output port" appear in the '005 Patent, but not the'216 Patent, though the '005 Patent is a continuation-in-part of the '216 Patent and relates the modules to the ports.

a. The Parties' Positions

Polycom proposes the term "video input module" to mean "[a] module for receiving and decoding a

compressed video input signal." JCCC at 5. Polycom proposes the term "video output module" to mean "[a] module for receiving one or more decoded video input signals, compositing those signals if necessary and encoding them for transfer to at least one destination." Id. at 6. Polycom proposes that both the "video input module" and "video output module" are "assignable as needed to associate, individually, or collectively, with different video and/or output modules." Id. at 5-6. Codian proposes the term "video [input/output] module" to mean "the circuitry and software on the [input/output] side of the device." Dkt. No. 70 at 9..

Polycom proposes the term "video input port" to mean "[a] video resource assignable as needed to a conference, for receiving and decoding a compressed video input signal." JCCC at 8. Polycom proposes the term "video output port" to mean "[a] video resource assignable as needed to a conference, for receiving one or more decoded video input signals, compositing those signals if necessary and encoding them for transfer to at least one destination." *Id*. Codian proposes the term "video input port" to mean "the circuitry and software on the input side of the device. A video input port can contain one or more video input modules (as defined in connection with the '216 patent)." Dkt. No. 70 at 9. Codian proposes the term "video output port" to mean "the circuitry and software on the output side of the device. A video output port can contain one or more video output modules (as defined in connection with the '216 patent)." Id.

With regard to the modules, Polycom argues that the "receiving" and "decoding" attributes are taken directly from the language of Claims 1, 22 and 40 as well as the specification. Dkt. No. 68 at 24 (citing '216 Patent, Summary, 2:40-44). Likewise, Polycom states that the first sentence of the "video output module" construction tracks the language of the specification, which states that the video output module "includes a ... generalized encoder.... The generalized encoder, in communication with the rate control unit, receives the primary video data from one or more input modules and encodes the primary video data into combined compressed video output data" and also the video input module "receives multiple video input streams from the common interface 950 for compilation." *Id*. (citing '216 Patent, 2:47-53, 10:65-67).

With regard to the modules being "assignable as needed," Polycom argues that the modules have a flexible architecture and the specification provides that the modules "may be logically assigned as needed." *Id*. at 24-25 (citing ' 216 Patent, 11:6-7). Polycom states that the '216 Patent does not use the language of "circuitry" and "software" to describe the modules as in Codian's construction. Id. at 25. Polycom asserts that a "module" is a "functional or logical unit." Id.

With regard to the input/output ports, Polycom argues that its construction flow from the language of the '005 patent which describes the ports as video resources, when it states:

The video resources include the amount or number of input ports and output ports that will be assigned to the conference.... The number of video resources that can be allocated to a conference can be varied from one input port and one output port for the entire conference, up to one input port and one output port for each participant.

'005 Patent, 12:46-57.

Polycom also cites to the '005 Summary, which states that "[e]ach input port includes an input module. The input module is operative to receive a compressed video input stream, [and] manipulate the compressed video stream into a primary stream." Dkt. No. 68 at 26. Polycom states this language is reflected in Claims 1, 22 and 40. *Id*. Polycom states that the functions attributed to the "video output port" are the same for the "video output module" because the '005 Patent teaches that the "output port performs the same functionality

as the output module." Id. at 26-27 (citing '005 Patent, 12:1-2). The '005 Patent further teaches that the ports are assignable as needed and may be dynamically altered during the conference from one participant to another, to a group of participants, or all participants in the conference. Id. at 27 (citing '005 Patent 11:52-57, 12:54-57, 2:64-3:2, 12:8-10).

Codian responds that the video input/output ports are made up of one or more video input/output modules. Dkt. No. 70 at 9. Codian cites to the specification which states that "[e]ach input port comprises an input module." *Id*. (citing '005 Patent, 2:58-59). Codian also cites to the specification which states:

The configuration where the video input module 105 and the video output module 110 may be logically assigned as needed as a separate input port or output port respectively is referred as "Distributed Port" configuration. A video input module 105, is referred as an input port 105 and a video output module 110, is referred as an output port 110.

'005 Patent, 11:45-50.

Codian argues that Figure 1 of the '005 and '216 Patent are identical, and reference 105 "contains everything relating to the input of data ... and 100 contains everything relating to the output data." Dkt. No. 70 at 10. Codian states that Polycom's construction "selectively imports some, but not all, limitations from the specification." *Id*. Codian argues that Polycom's construction "eliminates from the input module the receipt of 'input.' " *Id*.

Polycom replies that the video input/output port are not used in the '216 Patent, and while "in one such context video input/output modules and ports may be the same, the patents focus on different attributes for ports than for modules." Dkt. No. 76 at 9. Polycom states that its construction contemplates receipt of input by using the phrase "receiving and decoding" and "a compressed video input signal." *Id*.

b. Construction

The crux of the argument appears to be whether a module may be a port and vice versa. Hr'g Tr. at 61:25-62:1. Despite arguing that the terms are different, Polycom frequently refers to a "port" and "module" interchangeably in the arguments and Polycom's proposed constructions of "port" and "module" only contain subtle differences. Polycom argues that a module is a "functional or logical unit" and also that modules "may be part of 'the same logical unit.' " Dkt. No. 68 at 25. Similarly, the specification also refers to the ports as logical units. '005 Patent, 12:5-6. Polycom has admitted that the functionality of a port and module are similar. Dkt. No. 68 at 26. In fact, in a later term, Polycom seeks to construe "distributed configuration" to mean "a configuration in which video input **ports** and video output **ports** may be arranged as needed, based upon current session requirements." As support, Polycom refers to the language of claim 1 "(the **modules** are 'arranged in a distributed configuration," when in fact, the language of claim 1 states that the **ports** are arranged in a distributed configuration. Moreover, and ensuring that Polycom did not merely make a mistake, the brief further cites to the specification stating that "The configuration where the video input **module** 105 and the video output **module** 110 may be logically assigned as needed as a separate input **port** or output **port** respectively is referred [to] as 'Distributed Port' configuration." Dkt. No. 68 at 32 (citing '005 Patent, 11:45-58). Polycom further argues that the "receiving and decoding" are "defining features of the video input port, yet the Summary that Polycom cites to states that the "receiving and decoding" is a feature of the input module and the "input port includes an input module." *Id*. at 26 (citing '005 Patent, Summary). The specification of the '005 Patent also states that output port performs the same functionality as

the output module. '005 Patent, 12:1-2. Therefore, the modules and ports differ only by the fact that a port may be comprised of one or more modules.

A long standing rule of claim construction prohibits importing limitations from the embodiments into the claims. *See* Phillips, 415 F.3d at 1320. Therefore, though many of the limitations described in Polycom's construction may be found in the specification, no reason is provided as to why those limitations are imported into the claims. In addition, many of the limitations in Polycom's construction are already listed as limitations in the surrounding claim language and do not need to be imported into the definition of the term. These include the transcoding and compositing, as described in Claim 22 of the '216 Patent, or assigning the modules/ports as needed, as described in exemplary Claim 21 of the '216 Patent and Claim 1 of the ' 005 Patent. As described in the dependent claims of the '005 and '216 Patents as well as in the summary of the invention of the '005 Patent, the input and output port/module generally manipulate the video stream into the data forms necessary.

Therefore, the Court construes "video input port/module" to mean "a logical unit for receiving and manipulating a video input signal. A video input port can contain one or more video input modules." The Court construes "video output port/module" to mean "a logical unit for receiving and manipulating a decoded video input signal into a video output signal for transmission. A video output port can contain one or more video output modules."

4. "common interface"

a. The Parties' Positions

Polycom proposes that this term "would be understood by one of ordinary skill in the art to have a plain and ordinary meaning and no special construction is needed. JCCC at 6. Codian proposes this term to mean "circuitry that connects all of the video input modules and video output modules." Dkt. No. 70 at 10.

Polycom cites to both specifications which state that the common interface "facilitates the transfer of video information between multiple video input modules 105 and multiple video output modules 110." Dkt. No. 68 at 29 (citing '216 Patent, 3:46-48; '005 Patent, 4:12-15). Polycom provides examples of a "common interface" and states that the examples are "sufficiently specific" for one skilled in the art to understand the term. *Id*. Polycom takes issue with Codian's improper limitations, particularly in describing that the common interface is "circuitry" which "connects" "all" of the video and input/output modules. *Id*. Polycom counters that the common interface is not limited to circuitry, rather it "facilitates" the transfer of video between "multiple" video input/output modules. *Id*. at 30.

Codian cites to the same example provided by Polycom, which states that the common interface "may include any of a variety of interfaces, such as shared memory, ATM bus, TDM bus, switching and direct connection." Dkt. No. 70 at 10 (citing '005 Patent, 4:6-8; '216 Patent, 40-42). Codian then states that each of the "enumerated methods is a form of circuitry." *Id*. Though Codian agrees that it is improper to limit the claim to specific embodiments, Codian argues that its proposed construction "allows for other types of circuitry, and not just those itemized in the specification." *Id*. at 10-11. Codian argues that when there are multiple video modules, the specification states that they are all connected to the common interface. *Id*. at 11. Codian cites to a response to an office action in the '216 Patent where the inventor states in the remarks:

By using common interface 150 there is a freedom as to which of the multiple input modules 105 can be assigned to one of the multiple output modules 110, because a common interface is common to all

components (all input modules 105 and output modules 110) attached to it, as is the nature of any "common" interface (such as common interface 150).

Id., Ex. A at 9.

Polycom replies that the section of the specification cited by Codian merely states that the common interface facilitates transfer between multiple video input and output modules "attached to it" and does not show that "all video input modules are connected to all video output modules via one common interface." Dkt. No. 76 at 12. Polycom submits that the common interface is not limited to only circuitry because Figure 1 of the patents discloses "block diagrams" and "modules" which are "implemented on 'microprocessors like digital signal processors (DSP's)' which, of course, run software." *Id*. at 12 (citing '216 Patent, 11:11-17; '005 Patent, 14:1-5).

b. Construction

The crux of the argument between the parties is the use of the word "common." Polycom uses "common" to mean that when multiple input/output modules connect to it, they all use the same interface to communicate. Codian proposes "common" to mean that there is only one interface that all of the modules must connect to and that they have a common means of connection, which is hardware based or "circuitry." Hr'g Tr. 51:23-52:16.

Both parties cite to Figure 1, which is common to both patents, and state that the common interface facilitates the transfer of video information between multiple video input and output modules through a variety of interfaces, such as shared memory, ATM bus, etc. '216 Patent, 3:40-48; '005 Patent, 4:6-15. Figure 9 of the patents describes a "Slim Port" configuration where a video input module 105 receives a video input stream which is then sent to a common interface 950 where it is picked up by a video output module for processing. *See* '216 Patent, 10:61-65; '005 Patent, 11:27-35. Thus, all the data from the video input module is transferred through the common interface to the video output modules. However, Figure 8 of the patents describes a "fat port" configuration where each endpoint has a single dedicated video output module 110 and a plurality of dedicated video input modules 105, and in such a configuration "having all of the video input modules and the video output module on the same logical unit permits a dedicated data pipe 850 that resides within the logical unit to facilitate increased throughput." '005 Patent, 11:17-24; '216 Patent, 10:49-57. This particular embodiment doesn't require the "common interface" to facilitate transfer between the video input modules and the video output module. Therefore, Polycom's interpretation of "common interface" is correct in that "all" modules do not necessarily have to connect to the common interface.

With regard to the words "connect" and "facilitates," the specification and the claims use the term "facilitates." '216 Patent, 3:46; '005 Patent, 4:12-13. Claim 21 also describes the common interface "forming a temporary logical connection for routing the decoded video data stream from at least one input module to at least one output module. '216, 14:9-11. The context in which a term is used in the asserted claim can be highly instructive. Phillips, 415 F.3d at 1314 The specification uses the broader term "facilitates" and the claim uses the phrase "logical connection." Thus, a common interface is capable of facilitating, and there is no reason to import the specific limitations of the claim language into the definition of a particular term within that claim.

With regard to "circuitry," the Court has already construed video input/output modules to be logical units. The "common interface," which connects the video input/output modules is similarly not required to be

circuitry.

Therefore, the Court construes the term "common interface" to mean "an interface that facilitates the transfer of video information between one or more input modules and one or more output modules that are attached to it."

5. "wherein there is no permanent logical relation or connection between the at least one video input module and the at least one video output module, and the apparatus has a configuration in which the temporary logical connection depends on the current needs of a current manipulation"

"wherein there is no dedicated logical relation or connection between the at least one video input module, and the at least one video output module and the apparatus has a configuration in which the non-dedicated logical connection depends on the current needs of a current manipulation"

"the at least one video input port and the at least one video output port are arranged in a distributed configuration having a temporary logical connection based on current requirements of a current session"

Polycom chose to construe the subphrase of the [first/second] term "the apparatus has a configuration in which the [temporary/non-dedicated] logical connection depends on the current needs of a current manipulation" to mean "[t]he apparatus has a configuration in which the [temporary/non-dedicated] logical connection between the video input modules and video output modules depends on the needs of the conference such that the modules can perform manipulations of video data as needed. Manipulations of data include, for example, compositing, transcoding, and compression." JCCC at 6-7. Polycom proposes the subphrase of the third term "distributed configuration" to mean "[a] configuration in which video input ports and video output ports may be arranged as needed, based upon current session requirements." JCCC at 8. Codian proposes all three terms to mean that "the connection between the video input modules and the video output modules may be reconfigured during the course of a single videoconference such that the number of modules used during the videoconference is determined by the amount of processing required and is not determined by the number of endpoints connected to the video processing device." Dkt. No. 70 at 12.

Regarding the first two terms, Polycom argues that the subphrase " 'wherein there is no permanent [or dedicated] logical relation or connection between the at least one video input module and the at least one video output module' is clear on its face and requires no construction." Dkt. No. 68 at 30. Polycom contests Codian's limitation "that the connection between video input and output modules be reconfigurable 'during the course of a single videoconference.' " *Id*. Polycom cites to the specification which states:

Each input port 105 may be assigned to a participant. The assignment can be for the whole duration of the conference or it can be dynamically changed during the conference from one participant to the other. Each output port 110 may be assigned to a participant or group of participants or to all the participants in the conference. The logical connection of certain input ports and certain output ports to the same conference is temporary for said conference, in another conference the same input port may be connected to other output ports.

'005, 11:51-60.

Polycom further submits that Codian's requirement that the number of modules is determined by the amount of processing and not the number of endpoints is not supported by the specification, which states that video resource allocation to a conference can be varied from "one input port and one output port for each participant [i.e., endpoint]." Dkt. No. 68 at 31. Polycom argues that only the subphrase "the apparatus has a configuration in which the temporary [non-dedicated] logical connection depends on the current needs of a current manipulation" need be interpreted, and it should be construed to mean that the temporary or non-dedicated connections between the input/output modules are made "as needed." *Id*. at 31 (citing '216 Patent, 11:2-7). Polycom suggests adding the phrase "manipulations of data include, for example, compositing, transcoding, and compression" because they are illustrative examples from the specification and taken directly from Claim 22 of the '216 Patent.

Regarding the third term, Polycom seeks only to construe "distributed configuration" and argues that its construction "flows directly from the other language of claim 1 ... as well as the patent text" which describe that the modules are arranged "as need" and "based on current requirements of a current session ." Id. at 32 (citing '005 Patent, 14:55-58, 11:45-48). Polycom further cites to the specification which states that each input port may be assigned for the whole duration of the conference. *Id*. Polycom asserts that Codian's construction is "unsupported by the claim language, which is absolutely silent about reconfiguring without regard to 'the number of endpoints connected to the ... device.' " *Id*. Polycom further asserts that Codian's construction excludes the '005 embodiments which assign " 'one input port and one output port for each participant [i.e., endpoint].' " *Id*. (citing '005 Patent, 12:54-57).

Codian responds that the parties appear to agree that the terms "permanent" and "temporary" have the same meaning as "dedicated" and "non-dedicated," respectively. Dkt. No. 70 at 12. Codian also notes that the difference between the parties' proposed constructions regarding the '216 claim elements revolves around ***the timing of when*** the configuration between the video input ports and video output ports can be configured and/or re-configured." *Id*. at 13 (emphasis in original). Codian argues that the specification does not limit the timing of a configuration, and Codian submits that a configuration may take place at any time, even during a video conference. *Id*. Codian also states that the specification provides that "for a video stream of an end user that is never viewed by other end users, there is no need to use a video input module resource." '216 Patent, 11:8-10. Codian concludes that the number of modules does not have to be the same as the number of participants. Dkt. No. 70 at 13. Codian states that Polycom's argument that the use of ports is based on "current session requirements/needs of the conference" agrees with Codian's argument that the use of ports is based on "the amount of processing required" and not something else. *Id*. at 14.

Polycom replies that it has offered different definitions for the first two terms and does not agree that "permanent" is the same as "dedicated." Dkt. No. 76 at 13. Polycom further states that Codian's construction "allows that 'the number of modules used during the videoconference need not be the same as the number of participants' but that is certainly how its proposed definition is phrased." *Id*. Polycom notes that Codian's construction "makes it a requirement that the number of modules is ***never*** determined by the number of endpoints." *Id*. Polycom further asserts that Codian limits the claims by requiring a connection to be reconfigured at any time. *Id*. Regarding the third term, Polycom replies that Codian does not address the language "distributed configuration."

b. Construction

Regarding the first two terms, Codian argues that the terms can be construed together because the words "permanent" and "dedicated" are synonymous. Polycom asserts that it provided two "different definitions

which distinguish between the separate limitations." Dkt. No. 76 at 13. A doctrine of claim construction states that "[i]n the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings." CAE Screenplates, Inc. v. Heinrich Fiedler GmBH & Co. KG, 224 F.3d 1308, 1317 (Fed.Cir.2000). One of ordinary skill in the art is deemed to read a claim term not only in the context of the claim itself, but also in the context of the specification. Phillips, 415 F.3d at 1313. The Federal Circuit has provided frequent examples where "[d]ifferent terms or phrases in separate claims may be construed to cover the same subject matter where the written description and prosecution history indicate that such a reading of the terms or phrases is proper." Nystrom v. Trex Co., 424 F.3d 1136, 1143 (Fed.Cir.2005) (stating that a "board" must be limited to wood cut from a log even though a different claim had a "wood decking board"); *see also* Innova/Pure Water, Inc. v. Safari Water Filtration Sys., 381 F.3d 1111, 1120 (Fed.Cir.2004) (finding that the context of the claims did not show that "connected" and "associated" should be "differentiated into the definitions proposed by Safari, and we must conclude that this is simply a case where the patentee used different words to express similar concepts, even though it may be confusing drafting practice"); Pickholtz v. Rainbow Techs., 284 F.3d 1365, 1373 (finding "computer" to be synonymous with "computer system" because the patent provided no indication that the two terms mean different things). The only difference between Polycom's constructions of the first two terms is the use of the word "permanent" in place of "dedicated" and "temporary" in place of "non-dedicated" in the appropriate locations. Neither party provides any evidence or argument as to why the terms should not be synonymous. Polycom argues that "permanent" is not synonymous with "dedicated" but does not provide any explanation as to a distinction between their meanings. Other than its use in the claim language, the word "permanent" does not appear anywhere in the specification. In discussing the construction of the first two terms, Polycom refers to the two terms interchangeably, stating that the patent "describes that the **temporary** logical or **non-dedicated** connection between video input and output modules are made 'as needed.' " Dkt. No. 68 at 31 (emphasis added). The context of the terms in the specifications of the '216 and '005 Patent also infer that the patentee considered the terms to be synonymous. In light of the evidence in the specification the Court will construe the first two claim terms together.

Codian would also encourage that the third term, found in the '005 Patent, to be construed together with the first two terms found in the '216 Patent. Polycom insists that the third term of the '005 Patent should not be construed with the first two terms of the '216 Patent. Yet, the example Polycom provided for the first two terms of the '216 Patent are citations to the '005 Patent, specifically column 11, lines 52-60, and Polycom even states that the "more elaborative description in the '005 patent bears directly on how the '216 claims should be interpreted." Dkt. No. 68 at 31. During the discussion of the third term, Polycom cites to the exact same section of the specification in providing illustrative examples of the "distributed configuration" of the third term. *Id*. at 33. Polycom refers to the '005 Patent in discussing the assignment of modules "as needed." Dkt. No. 68 at 32. The Court determines that the third term may be construed with the first and second terms.

An issue in construing the third term with the first two terms is the use of the word "distributed configuration." The specification of the '005 clearly provides multiple types of configurations and specifically refers to a "Distributed Port" configuration as a "configuration where the video input module 105 and the video output module 110 may be logically assigned as needed as a separate input port or output port respectively." '005 Patent, 11:45-47; 12:5-8. Therefore, the terms "configuration" and "distributed configuration" are not synonymous, and that aspect of the third term is construed separately.

Regarding the three terms, the parties have two primary points of contention. The first issue is whether the connection between the input/output modules may be reconfigured during the course of a single

videoconference. The second issue is whether the number of modules used during the videoconference is solely determined by the amount of processing required and not by the number of endpoints connected the video processing device.

Regarding the first issue, Polycom cites to a portion of the '005 Patent specification which states that "[e]ach input port 105 may be assigned to a participant ... for the whole duration of the conference." Dkt. No. 68 at 30 (citing '005 Patent, 11:52-60). First, ignoring Polycom's omission, the full quote states that "[e]ach input port 105 may be assigned to a participant. The assignment can be for the whole duration of the conference **or it can be dynamically changed during the conference from one participant to the other."** Second, the actual focus is not on the assignment between the input/output ports to the participants, but rather the claim language focuses on the temporary logical connection between the input ports and the output ports. The specification states that the logical connection is temporary for the conference, but does not state whether such a connection must be established prior to the videoconference. Codian argues that the specification does not impose a limitation that the configuration take place at a specific time. Dkt. No. 70 at 13. On the other hand, Polycom characterizes Codian's construction as a limitation requiring the apparatus to be capable of reconfiguring at any time. While the specification is silent in regard to the timing of the logical connection, the context of the specification allows a person having ordinary skill in the art to infer that the apparatus is capable of reconfiguring the logical connection at any time during the videoconference. As cited above, the specification provides that an assignment of input ports to a participant may be "dynamically changed during the conference." '005 Patent, 11:53-55. Therefore, if the input ports may be dynamically changed, then the logical connection between the input/output ports must be dynamically configurable as well.

Regarding the second issue, Codian asserts that the number of modules is determined by the amount of processing required and not the number of endpoints by arguing that the number of modules need not be the same as the number of participants. Dkt. No. 70 at 13. While the number of endpoints may not determine the number of modules, the number of endpoints may be a factor in the amount of processing. Therefore, the amount of processing required as a factor encompasses the number of participants.

Therefore, the Court construes the three terms to mean "the connection between the video input modules and the video output modules is temporary. The apparatus has a configuration in which the temporary logical connection between the video input modules and the video output modules depends on the amount of processing required to perform manipulations of video data. The configuration may be logically assigned as needed, and the configuration may be dynamically reconfigured during the course of a videoconference. A type of configuration is a distributed configuration where the video input module and the video output module may be logically assigned as need as a separate input port or output port respectively."

6. "whereby use of the configuration improves resources allocation of the apparatus" / "whereby use of the distributed configuration improves resource allocation of the apparatus" / "video resources"

a. The Parties' Positions

Polycom proposes the first whereby clause to mean "whereby use of the configuration of the apparatus improves its resource utilization." JCCC at 7. Polycom proposes that the subphrase of the second "whereby" clause, "improves resource allocation of the apparatus," to mean "[i]mproves resource utilization of the apparatus." *Id*. at 8. Polycom does not construe "video resources" because it states that the term "would be understood by one of ordinary skill in the art to have a plain and ordinary meaning and no special construction is needed." *Id*. at 9. Codian proposes the "whereby" clauses to mean "the use of the

[distributed] configuration allows more ports to be available on the videoconferencing device." Dkt. No. 70 at 14. Codian proposes the phrase "video resources" to mean "the available ports in a video conference." *Id*.

Polycom argues that its construction replaces "resource allocation" with "resource utilization." Dkt. No. 68 at 34. Polycom states that the language tracks the specification, which states that "the video input module 105 and the video output module 110 may be logically assigned as needed. In this manner, resources may be better utilized." *Id*. (citing '216 Patent, 11:2-10; ' 005 Patent, 11:36-44, 12:8-10). Polycom argues that Codian's construction is flawed because it purports to require "that more ports be 'made available' when these clauses do not even refer to 'ports.' " *Id*. Furthermore, Polycom argues that the '216 Patent does not mention ports and neither of the patents mention "videoconferencing device," and introducing these terms is likely to cause confusion. Id.

Codian responds that the both patents "disclose only one 'resource' that is affected by the alleged invention of the patents: the number of ports available to a videoconference." Dkt. No. 70 at 14 (citing '005 Patent, 12:36-40). Codian argues that the specification describes "Input Resources" that follow from "Output Resources," which are the more general term for output ports. *Id*. (citing '005 Patent, 12:30-35). Codian further cites to the specification which states: "The number of video resources that can be allocated to a conference can be varied from one input port and one output port for the entire conference, up to one input port and one output port for each participant." '005 Patent, 12:54-57.

Polycom replies that "Codian fails to fully explain why 'resources' used in these claims is necessarily the same as 'video resources' used in other claims, when the terms are different." Dkt. No. 76 at 14. Polycom argues that the patents do not limit "resources" to the number of ports available to a video conference. *Id*. at 14. Polycom also argues that Codian is importing the limitation of an example of a video resource into the claims. *Id*. at 15-16.

b. Construction

Codian's construction requires that "improved resource allocation" allows for "more ports to be available on the video conferencing device." Polycom correctly noted that "ports" is a term used only in the '005 Patent and not in the '216 Patent. The '216 Patent also describes video resources, as shown by the citation provided by Polycom. In the '216 Patent, resource allocation relates to modules and not ports. There is no reason in the specification to limit the video resources to only ports. The '005 Patent describes that the "present invention relates to an improved method and a system of utilizing the decoding/encoding video resources of a VPD." '005 Patent, 2:51-53. The specification also does not limit video resources to only input/output ports or modules.

Codian attempts to define "improved resource allocation" as allowing "more ports to be available." However, there is nothing in the specification that requires this meaning. In fact, the specification describes that resources are better utilized when a video input module resource is not allocated for a video stream of an end user that is never viewed by other end users. '216 Patent, 11:7-10. Therefore, in the context of the '216 Patent, less modules may be allocated to provide improved allocations. In the context of the '005 Patent, the allocation of video resources is related to the "Level of Service." '005 Patent, 12:41-45. Different levels of service may provide varying layouts of input and output ports, and the chosen level of service allows the moderator to influence the resource allocation. '005 Patent, 13:1-25. However, the specification does not state the resource allocation is improved by offering more ports; rather, ports are only allocated as needed depending on the level of service required.

The only difference between the two "whereby" clauses is the use of "distributed configuration" versus "configuration." This difference was already explained above and applies here as well. The term "whereby use of the [distributed] configuration improves resources allocation of the apparatus" to mean "whereby use of the [distributed] configuration of the apparatus improves resources utilization of the apparatus." Video resources or resources is a term that has a plain and ordinary meaning and requires no further construction.

7. "fat port"

a. The Parties' Positions

Polycom proposes this term to mean "[a] single logical unit comprising one video output module and multiple video input modules, collectively assignable as a unit." JCCC at 8-9. In the JCCC, Codian originally proposed this term to mean "[a] port, with at least two input modules and only one output module, all of which are dedicated to a single endpoint." *Id*. In light of Polycom's brief, Codian altered its construction to "a port with at least two input modules and one output module, for which all of the input modules are dedicated solely to the output module." Dkt. No. 70 at 15.

Polycom argues that its construction focuses "on the fact that a fat port is a 'single logical unit' of various modules which can be 'collectively assignable as a unit,' " while Codian's construction requires that the "various modules of a fat port all be 'dedicated to a single endpoint.' " Dkt. No. 68 at 37. Polycom submits that while the '005 Patent allows for a fat port to apply all its functionality for a single endpoint, in other "fat port" embodiments, a single output module of the fat port can serve multiple endpoints. Id. at 37-38 (citing '005 Patent, 11:1-6; 13:40-56).

Codian states that a "fat port" is not known in the art and its revised construction mirrors the specification which provides "the sole support of any construction of this term." Dkt. No. 70 at 15. The cited portion of the specification states:

FIG. 8 illustrates an exemplary embodiment of the present invention operating within an MCU wherein each endpoint has a single dedicated video output module 110 and a plurality of dedicated video input modules 105. In this so called "fat port" embodiment, a single logical unit applies all of its functionality for a single endpoint.

'005 Patent, 11:1-6.

Codian argues that Polycom's construction "adds the limitation that the fat port be 'collectively assignable as a unit.' " Dkt. No. 70 at 16.

Polycom replies that Codian's construction is not supported by the specification. Dkt. No. 76 at 17. Polycom argues that its own construction that the port is "collectively assignable as a unit" is found in the specification which describes that a fat port is assignable to a single endpoint or to a plurality of endpoints. *Id*. (citing '005, 11:1-6, 13:40-56).

b. Construction

Because the term "fat port" is not a term typically found in the art, the context of the specification and claims is particularly enlightening as to the construction of the term. Both parties' constructions propose that

the "fat port" is a port having only one output module and "multiple" or "at least two" input modules. The '005 Patent provides that a fat port has a "single dedicated video output module and a plurality of dedicated video input modules." '005 Patent, 11:2-4. The parties have already agreed that the term "plurality" means "two or more." JCCC at 1. Therefore, both parties would agree that a "fat port" has "one output module and two or more input modules."

Codian's construction adds the limitation that "all of the input modules are dedicated solely to the output module." Dkt. No. 70 at 15. In a single fat port, it was established above that there is only one output module for the multiple input modules. Polycom's construction adds the limitation that the modules are "collectively assignable as a unit." The specification describes that in the "fat port" embodiment, a "single logical unit applies all of its functionality for a single endpoint." '005 Patent, 11:4-6. The specification also states that the fat port "processes the input streams from those endpoints and transfers the compressed output signals to the appropriate end points." '005 Patent, 13:50-53. The fat port can thus apply to multiple endpoints. However, these output signals must be processed through the same output module in the fat port.

The Court construes "fat port" to mean "a port with two or more input modules all dedicated to one output module, wherein all the functionality of the port is applied to one or more endpoints."

8. "levels of service"

a. The Parties' Positions

Polycom proposes that this term "would be understood by one of ordinary skill in the art to have a plain and ordinary meaning and no special construction is needed." JCCC at 9. Codian proposes this term to mean "configurations of bit rates, resolutions, compression standards, and types of layouts available to a given videoconference." Dkt. No. 70 at 16.

Polycom argues that Codian's proposal "appears to be a description of a 'profile' of a conference, not levels of service." Dkt No. 68 at 35. Polycom cites to the specification, which describes "levels of service" as "a new method for allocating video resources to a conference with a known number of participants according to the conference profile." '005, 12:41-45. Polycom argues that, even if a "profile" were related to the definition of "levels of service," Codian's construction is still unduly limiting. Dkt. No. 68 at 35.

Codian argues that a "profile" is a number of videoconference parameters that have been predefined as a set, while "levels of service" are videoconference parameters that may be individually adjusted by a conference moderator. Dkt. No. 70 at 16-17. Codian states that "levels of service" and "profiles" have a "clear definitional connection." *Id*.

Polycom argues that the passage that Codian quotes "provides illuminating examples of levels of service that are sufficiently detailed and concrete that one of ordinary skill in the art would understand the meaning of the term without further construction."

b. Construction

The passage that Codian quoted states:

Another aspect of the present invention is a new method for allocating video resources to a conference with a known number of participants according to the conference profile defined by the conference moderator.

This method is called "Level of Service."

The video resources include the amount or number of input ports and output ports that will be assigned to the conference.

The profile of a conference may include parameters such as, but not limited to, bit rate, resolution, compression standards, types of layouts, and the amount or number of different layouts in the conference.

The number of video resources that can be allocated to a conference can be varied from one input port and one output port for the entire conference, up to one input port and one output port for each participant.

'005 Patent, 12:41-58. An example level of service is described by the specification as:

Level 1 offers a 2x2 layout and uses four input ports and a single output port for the entire conference. The host routs the compressed video from each participant of the selected 4 active participants to the appropriate input port, which is selected from the four input ports, and multicasts the compressed video output from the output port to all participants. All participants see the same layout, and each active participant sees herself or himself and the other three participants.

'005 Patent, 13:1-9.

Codian describes "levels of service" as a predefined set of established parameters. However, the "level of service" described is actually a predefined allocation of video resources. The moderator may provide a profile of the conference, and based on this profile the MCU may offer several levels of service of which one level is selected by the moderator. *See* '005 Patent, 12:58-64. Therefore, a "profile" is a number of videoconference parameters that have may be individually adjusted by a conference moderator. A "level of service" is the pre-defined allocation of video resources generated from the profile defined by the moderator. As the specification states, when the moderator selects the level of service, "that selection gives the moderator influence on the resource allocation for the conference." '005 Patent, 13:21-23.

Therefore, the Court construes the term "levels of service" to mean "The allocation of video resources according to parameters of a profile associated with the video conference, where the parameters are defined by a conference moderator."

9. "a profile associated with the video conference"

a. The Parties' Positions

Polycom proposes that this term "would be understood by one of ordinary skill in the art to have a plain and ordinary meaning and no special construction is needed." JCCC at 9. Codian proposes this term to mean "a predefined set of videoconference parameters. The videoconference is configured according to all of the predefined parameters in the selected set." Dkt. No. 70 at 19.

Polycom argues that the specification states that a profile of a conference may include, but is not limited, the parameters listed. Dkt. No. 68 at 37. Polycom also argues that the patent does not require that the videoconference be configured according to "all" of the predefined parameters in the "selected set." *Id*.

Codian argues that its definition incorporates features of a "profile" described in the specification at two

primary locations. Dkt. No. 70 at 19. The two statements in the specification are: (1) "The profile of a conference may include parameters such as, but not limited to, bit rate, resolution, compression standards, types of layouts, and the amount or number of different layouts in the conference" '005 Patent, 12:50-53; and (2) "the MCU processes the profile of the conference and may offer several levels of service." '005 Patent, 12:58-63.

Polycom replies that Codian's definition is not consistent with either section of the specification. Dkt. No. 76 at 16. Regarding the first cited section, Polycom submits that the language is non-limiting while Codian's definition is limiting. Regarding the second cited section, Polycom argues that the language does not explain why Codian's construction mandates that the profile include limitations like "predefined set," "all of the predefined parameters," and "selected set." *Id*.

b. Construction

As Polycom noted, the specification provides non-limiting examples of parameters that may be included in a "profile" of a videoconference. As illustrated above in the construction of "levels of service," a profile may be defined by a moderator and the MCU may offer a selection of service levels after processing the profile. However, the specification does not require that all of the parameters are used in determining the levels of service.

Therefore, the Court construes the term "a profile associated with the video conference" to mean "a set of videoconference parameters that may be defined by a moderator. Parameters of the profile of the videoconference may be used to allocate video resources of a videoconference."

10. "conference moderator" / "moderator of a conference"

a. The Parties' Positions

The parties agree that the two terms should have identical constructions. Dkt. No. 68 at 35. Polycom proposes this term to mean "[o]ne who can select a level of service for a videoconference ." JCCC at 9. Codian proposes this term to mean "a person who determines what levels of service will be used in a given videoconference." Dkt. No. 70 at 17.

Polycom argues that Codian's construction is incorrect because the determination of the levels of service is made by the MCU, not the conference moderator. Dkt. No. 68 at 36. On the other hand, Polycom asserts that the conference moderator may select from various levels of service which are offered. *Id*. at 35.

Codian responds that the distinction between the Parties' constructions is that "Polycom asserts that the conference moderator need not be a person, and that the MCU may sometimes make the determination regarding the 'level of service' of a videoconference." Dkt. No. 70 at 18. Codian argues that Polycom mischaracterizes the specification which really says that "the determination regarding levels of service is made by the 'conference moderator.' " *Id*.

Polycom replies that the specification is clear that the moderator "selects" the level of service, but Codian's construction uses the "improper verb 'determines' in its construction." Dkt. No. 76 at 15. Polycom also argues that Codian uses the plural "levels" rather than the singular "level" because the moderator need only select "a" level of service. *Id* .

b. Construction

The confusion arising between the parties is a result of the statement in the specification which describes that the "moderator then selects the appropriate level of service and that selection gives the moderator influence on the resource allocation for the conference." '005 Patent, 13:20-23. However, the moderator only indirectly "influences" the level of service because he "determines" the profile that the MCU uses to offer the levels of service. *See* '005 Patent, 62-63. Thereafter the moderator chooses from the levels of service offered. *Id*. However, the moderator does not actually determine the allocation of those offered levels, rather the different levels are configured by the MCU.

Therefore, the Court construes the term "conference moderator" to mean "a person that selects a level of service for the videoconference from several levels of service offered."

D. The '476 Patent

As noted above, the '476 Patent issued to O'Malley et al. Dkt. No. 37, ex. A at 2. The patent is entitled "Audio Conference Platform System And Method For Broadcasting A Real-Time Audio Conference Over The Internet." *Id*. The parties request that the Court construe six phrases appearing in the '476 Patent. These terms are: (a) "means for receiving audio signals associated with conference participants, and providing a digitized audio signal and a speech bit for each of said audio signals;"(b) "means for receiving said summed conference signal and said conference list, for providing said summed conference signal to each of said conference participants that are not on said conference list, and for each conference participant on the conference list removing the digitized audio signal associated with that conference participant from said summed conference signal and providing a resultant difference audio signal to the conference participant on said conference list;" (c) "digitize [d];" (d) "speech bit;" (e) "transcode(s) said summed conference signal to provide a transcoded summed signal that is streamed onto the Internet;" and (f) "streamed onto the internet." The claims asserted in the patent are claims 1, 6, and 13, and the terms arise out of those claims. These claims are set forth above. The Court construes the contested language as follows:

Means-Plus Function Terms

A patentee may set out the elements of a claim in a so-called means-plus-function format. 35 U.S.C. s. 112, para. 6. The patentee may recite in the claim a "means for" achieving a certain function. In exchange for this convenience in claim drafting, the patentee must disclose a corresponding structure in the specification. O.I. Corp. v. Tekmar Co., 115 F.3d 1576, 1583 (Fed.Cir.1997). If the patentee fails to provide corresponding structure sufficient to enable a person of ordinary skill in the art to make and use the invention, then the claim is invalid. *See* 35 U.S.C. s. 112, para. 1. If the patentee provides sufficient corresponding structure, then the claim scope encompasses that structure "and its equivalents." Id. at s. 112, para. 6; *see also* Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc., 412 F.3d 1291, 1298 (Fed.Cir.2005). A corresponding structure need not enable the claimed invention, rather it need only "include all structure that actually performs the recited function." Default Proof Credit Card Sys., 412 F.3d at 1298. A structure disclosed is only a "corresponding structure" if the "specification or prosecution history clearly links or associates that structure to the function recited in the claim." Med. Instrumentation & Diagnostics Corp. v. Elekta, 344 F.3d 1205, 1210 (Fed.Cir.2003). Accused devices employing the same or equivalent structure will be found to literally infringe the claim. WMS Gaming, Inc. v. Int'l Game Technology, 184 F.3d 1339, 1350 (Fed.Cir.1999) (noting that "to establish literal infringement of a means-plus-function claim, the patentee must establish that the accused device employs structure identical or equivalent to the structure disclosed in the patent and that the accused device performs the identical function specified in the claim"). The parties

agree that the first two terms are governed by 35 U.S.C. s. 112, para. 6.

1. "means for receiving audio signals associated with conference participants, and providing a digitized audio signal and a speech bit for each of said audio signals" / "digital" and digitize

a. The Parties' Positions

Polycom proposes that the function for this term is "receiving audio signals associated with conference participants, and providing a digitized audio signal and a speech bit for each of said audio signals." JCCC at 9. Polycom proposes that the corresponding structure is "network interface cards 38-40 and digital signal processors 60-65; Col. 3:38-40; Col. 3:65-4:2; Col. 5:33-35)." *Id*. at 9-10. Codian proposes that the function for this term is "(1) receiving audio signals associated with conference participants; and (2) providing a digitized audio signal for each of the participants and (3) providing a speech bit for each of the audio signals." Dkt. No. 70 at 20. Codian provides a separate structure for each of the functions which will be explained in its arguments below.

Polycom argues that Codian's construction deviates from the claim language by "inappropriately introducing a requirement that the means must provide a digitized signal for each of the conference participants, rather than for each of the audio signals." Dkt. No. 68 at 38. Polycom argues that Codian's recitation of corresponding structure is "jumbled" and adds irrelevant details and their corresponding structure which define structures in ways unrelated to the recited functions. *Id*. at 39. Polycom relies on Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc., 145 F.3d 1303, 1308 (Fed.Cir.1998) which stated that "additional structural aspects are not what the statute contemplates as structure corresponding to the recited function."

Codian argues that its construction is based soundly in the intrinsic record. Dkt. No. 70 at 20. With regard to the first function, Codian states that the specification discusses the receipt of audio signals via a plurality of network interface cards ("NICs"). *Id*. Codian submits that the NICs place the sample into a memory device outputting the audio data on a data bus, preferably a TDM bus. *Id*. Codian also cites that an audio conferencing platform includes a plurality of processor boards that receive and transmit data to the NICs over the TDM bus. *Id*. at 20-21. Codian concludes that the structure must be "a NIC that receives the data via a TDM bus connected to a plurality of processor boards, and places the data received into a memory device." *Id*. at 21. Codian relies on *Default Proof Credit Card Sys*., for the proposition that "the structure corresponding to the claimed function must be firmly grounded in the specification ." *Id*. at 21 (citing Default Proof Credit Card Sys., 412 F.3d at 1293).

Regarding the second function, Codian first defines "digital" to mean "a data format in which data is represented by a series of ones and zeroes. The data is broken up into basic logical units called 'bits.' " Dkt. No. 70 at 20, 21. Codian further states that to " 'digitize' data is to place the data in a digital format." *Id*. Codian submits that the corresponding structure is found in the specification relating to Figure 3. Codian proposes the corresponding structures for the second function are:

A processor board which includes a plurality of digital signal processors ("DSPs") (Texas Instruments TMS320C6201) connected to the TDM bus through a TDM bus interface and an associated TDM dual-port RAM. The DSPs operate based on executable instructions downloaded over a PCI bus from a controller/CPU (200 MHz Intel Pentium, AMD processor or similar processors). The DSPs are programmed to implement a time-slot allocation table to interface with the dual-port RAM, a decoder to decompress the 8-bit (mu)-law or A-law signals into 16 bit words and circuitry to calculate an automatic gain correction

factor for each port.

JCCC at 10. (citations omitted).

Regarding the third function, Codian states that "[h]aving received the digital audio signals from the NICs via the TDM bus, the audio processor performs the function of providing a speech bit for each of the audio signals." Dkt. No. 70 at 22 (citing '476 Patent, 4:67-5:8). Codian proposes that the processing structure, "which is downloaded from the CPU to the audio processor, associated with the claimed function of providing a speech bit" is in column 5, lines 26-45. Codian proposes that the disclosed structures that performs the third function are:

A processor board which includes a plurality of digital signal processors ("DSPs") (Texas Instruments TMS320C6201) connected to the TDM bus through a TDM bus interface and an associated TDM dual-port RAM. The DSPs operate based on executable instructions downloaded over a PCI bus from a controller/CPU (200 MHz Intel Pentium, AMD processor or similar processors). The DSPs are programmed to implement a time-slot allocation table to interface with the dual-port RAM, a decoder to decompress the 8-bit (mu)-law or A-law signals into 16 bit words and a comparator to compare the average magnitude or each signal with a predetermined magnitude value representative of speech. The DSPs must also be programmed to set a speech bit based upon the result of the comparison.

JCCC. at 10-11.

Polycom replies that Codian rewrites the language of the functions in a narrowing manner and includes structure beyond that necessary to perform the recited functions. Dkt. No. 76 at 17.

b. Construction

The means-plus-function term contains the term "digitized," and the parties contend that this term requires construction. Regarding the term "digital" and "digitize," Polycom "contends that these terms should be construed, if at all, in the context of the '476 patent, where the term 'digitize' is found in the claims. There is no need for a general definition outside the context of that patent." JCCC at 15; *see also* Dkt. No. 68 at 40. Codian proposes that the "digital" means "a data format in which data is represented by a series of ones and zeros. The data is broken up into basic logical units called 'bits'." Dkt. No. 70 at 20. Codian proposes that to "digitize" means "to place the data in digital format." *Id*. Although Codian admits that "digital" is commonly understood in the art, Codian insists that the term is construed for the benefit of the lay jury. *Id*. at 21. Polycom does not contest Codian's definitions in its briefs or arguments and only insists that the definition apply for this patent. Therefore, for the benefit of the lay jury, the Court will adopt Codian's construction of "digital" and "digitize" as it is commonly understood in the art.

Regarding the means-plus-function term, Polycom takes the function directly from the claim language. The primary difference between the parties' proposed functions is that Codian replaces the second function "providing a digitized audio signal and a speech bit for each of said audio signals" with two separate functions "(2) providing a digitized audio signal for each of the participants and (3) providing a speech bit for each of the audio signals." Dkt. No. 70 at 20. The ordinary and grammatical understanding of the original second function would require the "providing a digitized audio signal" to be "for each of said audio signals." Codian does not provide an argument for why they should be "for each of the participants" other than by citing to the specification relating to Figure 3 without explanation. However, the cited section does

not require that "providing the digitized audio signal" is for each "conference participant." Therefore, Codian's second function is not adopted. Otherwise, Codian's three functions would match Polycom's construction which is taken straight from the claim language. The Court adopts Polycom's construction of the function.

Having determined the function, the parties both cite to the same sections of the specification for a corresponding structure. For "receiving audio signals associated with conference participants," Polycom limits the structure to "NICS 38-40" while Codian expands the structure to include "NICs configured to receive data in 8-bit (mu)-law or A-law format, a memory device and a TDM bus based on the H.110 telephony standard." The specification provides that the data received by NICs is "generally an 8-bit (mu)-law or A-law sample." '476 Patent, 3:43-44. Codian's construction requires a "memory device and a TDM bus based on the H.110 telephony standard." A corresponding structure need not enable the claimed invention, but need only be linked to the recited function. *See* Default Proof Credit Card Sys., 412 F.3d at 1298. The Federal Circuit provided an elucidating example, stating that "[a]n electrical outlet enables a toaster to work, but the outlet is not for that reason considered part of the toaster. The corresponding structure to a function set forth in a means-plus-function limitation must actually perform the recited function, not merely enable the pertinent structure to operate as intended." Asyst Techs., Inc. v. Empak, Inc., 268 F.3d 1364, 1371 (Fed.Cir.2001). Here, for example, the TDM bus is needed to transmit the signals, but, like the electrical outlet, it does not actually perform the recited function of "receiving audio signals." Codian's other structures are similarly not related to the specific function of "receiving the audio signals" but only tangentially related. The only structure that performs the recited function is the NIC.

Regarding the second function, "providing a digitized audio signal and a speech bit for each of said audio signals," both parties can agree that the digital signal processors (DSPs) perform the recited function. *See* JCCC at 9-10. However, Codian's proposed construction cites to all the additional language in the specification, including the specific brand of DSP and the bus and the specific programming on the DSP. However, one of ordinary skill in the art would understand the structure to be the digital signal processors 60-65 described in the '476 Patent at column 3, lines 65-67. *See* Minton v. NASD, 197 F.Supp.2d 699, 702 (E.D.Tex.2001) (stating that "only the minimum, critical structures may be so imported into the claim. It does not narrow the claim to only those structures defined in the specification"). The relevant section of the specification states:

DSP2 61 and DSP4 63 may be configured as audio processors 92, 94, respectively.... Each audio processor 92, 94 is capable of supporting a certain number of user ports (i.e., conference participants).... Each audio processor 92, 94 receives compressed audio data 102 from the conference participants over the TDM bus."

'476 Patent, 4:42-43, 4:53-54, 57-59.

The specification further states FIG. 5 depicts:

processing steps 500 performed by each audio processor on the digitized audio signals received over the TDM bus 52 from the NICs 38-40 (FIG.2). The executable program instructions associated with these processing steps 500 are typically downloaded to the audio processors 92, 94 (FIG.4) by the controller/CPU 48 (FIG.2).

'476 Patent, 4:66-5:5.

The processing steps 500 perform the function of the means-plus-function term. For example, the specification provides that "Step 510 outputs all the speech bits ... onto the TDM bus ." '476 Patent, 5:33-35. Therefore, the corresponding structures are the digital signal processors, specifically those functioning as audio processors 92, 94, and the executable program instructions associated with the processing steps. Many of Codian's other recited structures, as explained above, are superfluous to the stated function.

Therefore, the Court construes the function of the term to be "receiving audio signals associated with conference participants, and providing a digitized audio signal and a speech bit for each of said audio signals" and the corresponding structure to be "NICs 38-40 and digital signal processors 60-65 programmed as audio processors 92, 94 and the executable program instructions associated with the processing steps 500 in FIG. 5, and equivalents."

2. "means for receiving said summed conference signal and said conference list, for providing said summed conference signal to each of said conference participants that are not on said conference list, and for each conference participant on the conference list removing the digitized audio signal associated with that conference participant from said summed conference signal and providing a resultant difference audio signal to the conference participant on said conference list"

a. The Parties' Positions

Polycom proposes that the function is "receiving said summed conference signal and said conference list, for providing said summed conference signal to each of said conference participants that are not on said conference list, and for each conference participant on the conference list removing the digitized audio signal associated with that conference participant from said summed conference signal and providing a resultant difference audio signal to the conference participant on said conference list." JCCC at 11. Polycom's proposed structures are "network interface cards 38-40 and digital signal processors 60-65." *Id*. Codian proposes that the function is "(1) receiving the summed conference signal from the audio conference mixer; (2) receiving the conference list from the audio conference mixer; (3) providing the summed conference signal to each participant not on the conference list; (4) for each participant on the conference list removing the audio signal associated with that participant; and (5) providing a signal comprised of the signals associated with the remaining participants on the conference list to the participant in question." *Id*. Codian provides a separate structure for each of the functions which will be explained in its arguments below.

Polycom argues that Codian's construction "attempts to make subtle word substitutions which potentially alter the claim scope and fail to improve over the plain language of the claim itself." Dkt. No. 68 at 39-40. Polycom states that its list of corresponding structures, unlike Codian's, is explicitly linked to the recited function. *Id*. at 40.

Codian responds that "[c]onstruction inevitably involves using words that are not in the claim, but that are equivalent to those in the claim, as understood by one of ordinary skill in the art." Dkt. No. 70 at 23. Regarding the first function, Codian states that the corresponding structure is a "processor board which includes a plurality of digital signal processors ("DSPs") (Texas Instruments TMS320C6201) connected to the TDM bus through a TDM bus interface and an associated TDM dual-port RAM." *Id*. at 23-24 (citing '476 Patent, 3:49-60, 3:62-4:29, 4:53-65, 5:2-5, 5:9-25, 6:52-57, and 6:60-65).

Regarding the second function, Codian notes that the '476 Patent "does not describe a 'conference list.' " Dkt. No. 70 at 24. Codian further submits that "[n]o structure is disclosed that performs the function of

receiving the conference list from the audio mixer," rendering the claim invalid as indefinite. *Id*.

Regarding the third through fifth functions, Codian proposes that the corresponding structures are audio processors "implemented on DSPs programmed in accordance with executable program instructions downloaded to the CPU during system initialization." *Id*. (citing '476 Patent, 6:57-7:13).

Polycom replies that Codian's structures go beyond that necessary to perform the recited function and "fails to identify where in the specification the structure so recited is clearly linked or associated with the function." Dkt. No. 76 at 17. Polycom cites to Intel Corp. v. Via Technologies, Inc., 319 F.3d 1357, 1366 (Fed.Cir.2003) for the proposition that to "establish indefiniteness, Codian must prove, ***by clear and convincing evidence,*** that one of ordinary skill in the art could not understand what structure corresponds to the 'means for receiving said summed conference signal and said conference list' element." Dkt. No. 76 at 18. Polycom submits that "one of ordinary skill in the art would understand that the 'conference list' is a list that indicates 'the conference participants whose voice is included in said summed conference signal.' " *Id*. (citing '476 Patent, 9:22-24). Polycom argues that this function is performed by "either the speech bits or the conference bits described in the specification" or, if DTMF tone detection is used, then speech bits combined with DTMF bits are combined to create conference bits. *Id*. (citing '476 Patent, 9:22-24, 6:16-37). Polycom concludes that the specification describes that "summed conference signal and the conference bits may be received by the same structure (the audio processors or DSPs)," which Codian admits in its brief to be the "structure that receives the summed conference signal." *Id*. at 18-19 (citing 6:57-7:4).

b. Construction

Polycom's construction of the function copies the claim term, while Codian's construction largely tracks the language of the term except for slight differences in the first, second, and fifth function. In the first and second function, Codian adds that the "receiving" of the summed conference signal and conference list are from "the audio conference mixer." The actual claim language does not state the origin of the summed conference signal and conference list. The doctrine of refusing to incorporate limitations from embodiments into claim terms still holds even for functions of claims written in a means-plus-function format. *See* Wenger Mfg., Inc. v. Coating Mach. Sys., Inc., 239 F.3d 1225, 1233 (Fed.Cir.2001) (stating that under s. 112, P 6, "a court may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function"); Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc., 183 F.3d 1347, 1357 (Fed.Cir.1999) (stating it is improper to import a "limitation from the written description into the claim because the claim language is clear on its face"). Codian's construction improperly imports a structural limitation, the "audio conference mixer," into the function of "receiving said summed conference signal and said conference list." The function of "receiving said summed conferences signal and said conference list" is clear on its face and does not require the added limitation of the "audio conference mixer."

Codian's fifth function "providing a signal comprised of the signals associated with the remaining participants on the conference list to the participant in question" does not add additional limitations. Rather, Codian's construction replaces the words "providing a resultant difference audio signal," a term that is not defined in the specification, with language that would be more easily understood by a lay jury. Therefore, Codian's construction of the fifth function is adopted by the Court, while Polycom's constructions for the first four functions are adopted.

Having determined the claim term's function, "[t]he next step is to determine the corresponding structure

described in the specification and equivalents thereof." *Medtronic,* 248 F.3d at 1311. Regarding the first function of "receiving the summed conference signal," both parties would agree that the digital signal processors are the corresponding structures. *See* JCCC at 12; Dkt. No. 68 at 40; Dkt. No. 70 at 23-24. Codian's construction, like that of the previous "means" term, contains tangentially related structures. As previously explained, only the critical structures to perform the function are imported into the claim. Here, the specification states that the "controller/CPU may download executable program instructions for the DSP3 62 to function as an audio conference mixer 90, while the DSP2 61 and the DSP4 63 may be configured as audio processors 92, 94, respectively" perform the function of "receiving the summed conference signal." '476 Patent, 4:40-43.

Regarding the second function of "receiving the conference list," Codian argues that the claim is indefinite for lacking a corresponding structure. Dkt. No. 70 at 24. Polycom argues that audio processors or DSPs are the structures that receive the summed conference signals and are the same structures that receive the conference bits. Dkt. No. 76 at 18. First, as noted by Polycom, the claim language itself defines that a "conference list" is "indicative of the conference participants whose voice is included in said summed conference signal." '476, 9:22-24. Polycom further states that this function is performed by the speech bits and possibly the DTMF bits in conjunction with the speech bits to create conference bits corresponding to the conference list. Dkt. No. 76 at 18. The language relating to FIG. 8 describes that the steps 800 are "performed by each audio processor" and the "executable program instructions associated with these processing steps 800 are typically downloaded to each audio processor." '476 Patent, 58-64. The specification further states that "Step 804 reads the conference bit associated with the port, and step 806 tests the bit to determine if audio from the port was used to create the summed conference signal." Therefore, if the audio processors perform the steps 800, and Step 804 reads or "receives" the conference bit indicative of the conference list, then the corresponding structure of "receiving the conference list" is the audio processor. The audio processors may be the audio processors 92, 94 as previously derived from DSPs, with the executable program instructions associated with processing steps 800 in FIG. 8.

Regarding functions three through five, Codian states that the corresponding structures are the audio processors, "implemented on DSPs programmed in accordance with executable program instructions downloaded to the CPU during system initialization." Dkt. No. 70 at 24. Each of the functions, three through five, correspond to steps in the flowchart of FIG. 8. The third function "providing the summed conference signal to each participant not on the conference list," corresponds to step 806, which "determines that the audio from the port was not used to create the summed conference signal," and steps 810 through 814, which outputs the summed signal to the conference participant via the NIC. '476 Patent, 7:7-14. The fourth function "for each participant on the conference list removing the audio signal associated with that participant" corresponds to, if the test in 806 determined that audio from the port was used to create the summed conference signal, "step 808 removes the gain (e.g., AGC and gain/TLP) compensated audio signal associated with the port from the summed audio signal. This step removes the speaker's own voice from the conference audio." '476 Patent, 7:6-7. The fifth function "providing a signal comprised of the signals associated with the remaining participants on the conference list to the participant in question" also relates to steps 810 and 814 which, as shown in FIG. 8, flow from either step 806 or 808. '476 Patent, 7:6-14. As stated above, all of these steps 800 are performed by the audio processor.

Therefore, the Court construes the means-plus-function term to have the functions: "(1) receiving the summed conference signal; (2) receiving the conference list; (3) providing the summed conference signal to each of the conference participants that are not on the conference list; (4) for each conference participant on the conference list removing the digitized audio signal associated with that conference participant from the

summed conference signal; and (5) providing a signal comprised fo the signals associated with the remaining participants on the conference list to the participant in question."

The corresponding structures for the first function is "the digital signal processors 60-65 and equivalents." The corresponding structures for the second through fifth functions are "the digital signal processors 60-65, in particular, those configured as audio processors 92, 94 with the executable program instructions associated with the processing steps 800 of FIG. 8 downloaded to the audio processors, and equivalents."

3. "speech bit"

a. The Parties' Positions

Polycom proposes this term to mean "digital data that indicates whether or not an audio signal includes voice data from a particular conference participant." JCCC at 14. Codian proposes this term to mean "a single unit of binary code that must answer the yes/no question of whether the associated audio signal includes voice data from the participant." Dkt. No. 70 at 25.

Polycom argues that "speech bit" is explicitly defined in claim 10 as a "speech bit for each of said audio signals ... wherein said speech bit indicates whether or not said associated digitized audio signal includes voice data from the associated conference participant." Dkt. No. 68 at 40 (citing '476 Patent, 9:14-17). Polycom claims that the patentee "intended to be his or her own lexicographer." *Id*. Polycom asserts that Codian's construction limits the construction based on its definition of "bit." *Id*. at 41. Polycom submits that the '476 Patent does not focus on compressing data into the smallest possible size, but rather with tracking the conferees who are actively speaking. Id. Polycom concludes that the size of the data is irrelevant to that function.

Codian responds that a "bit" is commonly used in the electrical engineering and computer science arts to mean a binary decision. Dkt. No. 70 at 25. Codian states that the specification "confirms its ordinary meaning that the bit is in one of two states: 'set' or 'cleared', i.e., 'on' or 'off', '[i]f average magnitude for the port exceeds the predetermined magnitude value representative of speech, a speech bit associated with the port is set. Otherwise, the associated speech bit is cleared.' " *Id*. (citing '476 Patent, 5:31-33). Codian states that Polycom wants to construe a speech bit according to its claimed function; however, the dispute is not the function but what accomplishes the function. *Id*. at 25-26.

Polycom replies that a "speech bit" is a specialized term, similar to a "conference list" or "conference bits." Dkt. No. 76 at 19. Polycom asserts that its definition requires that a speech bit constitute "digital data." *Id*.

b. Construction

Polycom asserts that "speech bit" is a specialized term and that the patentee intended to be his own lexicographer. Dkt. No. 68 at 40. Codian asserts that the term "bit" has an ordinary meaning of "on" or "off." The Federal Circuit has stated that the "heavy presumption" in favor of the ordinary meaning of claim language may be overcome: "(1) where the patentee has chosen to be his own lexicographer, or (2) where a claim term deprives the claim of clarity such that there is 'no means by which the scope of the claim may be ascertained from the language used.' " Bell Atl. Network Servs. v. Covad Commc'ns Group, Inc., 262 F.3d 1258, 1268 (Fed.Cir.2001). The intrinsic evidence must be examined to determine whether an unconventional meaning has been provided to "clearly set forth" or "clearly reedefine" a claim term so as to put one reasonably skilled in the art on notice that the patentee intended to redefine the claim. *Id*. The

specification must exhibit an "express intent to impart a novel meaning;" however, the guidance need not be in "explicit definitional format" but may be "by implication." *Id*.

Here, Polycom states that the "speech bit" is explicitly defined by the claim language which states "wherein said speech bit indicates whether or not said associated digitized audio signal includes voice data from the associated conference participant." '476 Patent, 9:15-17. Codian states that there is no contention regarding the function of the speech bit, but rather "what accomplishes this function." Dkt. No. 70 at 26. In fact, Codian's construction also states that the speech bit determines "whether the associated audio signal includes voice data from the participant ." Therefore, the crux of the argument is whether "speech bit" is a "single unit of binary code that must answer the yes/no question" as proffered by Codian or "digital data" as submitted by Polycom. In determining whether the patentee intended to act as his own lexicographer, the Court examines the intrinsic evidence to determine whether an unconventional meaning was applied to put those skilled in the art on notice. The specification consistently uses the term "bit" as a binary digit, as it is known in the art. For example, "step 604 decompresses each of the 8-bit signals to a 16-bit word." '476 Patent, 5:22-23. Moreover, the example from the specification provided by Codian shows that a speech bit is "set" and "cleared." '476 Patent, 5:32-33. The evidence indicates that the term "bit" is used in the conventional manner, and a "speech bit" would not be used any differently. If the patentee had wanted to use the broader term "speech variable" or "speech digital data" for "speech bit" then he certainly could have done so as the function of the "speech bit" itself "indicates whether or not said associated digitized audio signal includes voice **data."** ' 476 Patent, 9:15-17 (emphasis added). The Court determines that the patentee did not intend to act as his own lexicographer. Instead it is clear that a "speech bit" is simply a "bit" that determines "speech," which both parties agree to be determining "whether or not an audio signal includes voice data from a particular conference participant." This is a "yes" or "no" question, and, as used in the claim language, only requires a binary digit to store this data.

Therefore, the Court construes the term "speech bit" to mean a "a single binary unit that indicates whether the associated audio signal includes voice data from the participant."

4. "transcode(s) said summed conference signal to provide a transcoded summed signal that is streamed onto the Internet"

a. The Parties' Positions

Polycom proposes this term to mean "[c]onvert the summed conference signal to a format suitable for streaming onto the Internet." JCCC at 14. Codian proposes this term to mean "circuitry that receives a compressed summed conference signal and converts the signal into a different compressed or coded form that is suitable to be streamed onto the Internet and which streams the signal onto the Internet." Dkt. No. 70 at 26.

Polycom states that the patentee acted as his own lexicographer in describing the term "transcoding" to broadly include "either encoding or transcoding the summed conference signal into a format suitable for streaming onto the Internet." Dkt. No. 68 at 41. Polycom states that the specification equates "transcoding" with "encoding" in a discussion that states "FIG. 9 is a flow chart illustration of processing steps 900 performed by the transcoder 95 (also referred to as an encoder)." *Id*. (citing '756 Patent, 7:24-26). Polycom criticizes Codian's construction for importing unnecessary limitations, such as requiring that the summed conference signal be compressed. Dkt. No. 68 at 41. Polycom further argues that the specification does not require Codian's limitation that "the circuitry adapted to transcode said summed conference signal" must "actually stream the resulting transcoded summed signal onto the Internet." *Id*. at 42. Polycom submits that

Claim 10 only requires that the "circuitry 'provide' a signal that is eventually streamed onto the Internet." *Id*.

Codian responds that Polycom "admits that Codian's [sic] proposes the ordinary construction of the term 'transcode.' " Dkt. No. 70 at 26. Codian argues that Polycom "does not offer evidence from the intrinsic record that rises to the high level necessary to substantially broaden the scope of this term." *Id*. at 27.

Polycom does not address this term in its reply.

b. Construction

The primary difference between the parties' constructions is that Codian adds the limitation that the circuitry receives a "compressed" summed conference signal and converts the signal into a "compressed" form. First, the word "compressed" is not a term found in the claim language. The specification describes that audio signals that are summed to create the conference sum signal are originally compressed. '476 Patent, 5:21-26; 5:44-45. However, embodiments of the specification are not typically imported into meanings of the claims. Phillips, 415 F.3d at 1320. The functionality contemplated by claim language is to convert the summed conference signal to a summed signal that is streamed onto the Internet.

Polycom argues that the circuitry need not "actually stream the resulting transcoded summed signal" and need only "provide" the signal that is eventually streamed. Dkt. No. 68 at 41-42. The specification describes that the "transcoder 95 (FIG.4) performs the task of streaming audio conferences onto the Internet (and intranets) in real-time." '476 Patent, 7:47-50. Therefore, the "circuitry" in claim 10 may be the transcoder. As Polycom itself admits, the transcoder is sometimes referred to as the "encoder." Dkt. No. 68 at 41 (*citing* '476 Patent, 7:24-26). Therefore, the "encoder" of claim 16 has the same functionality as the circuitry in claim 10. Both the transcoder or encoder circuitry would be capable of "streaming audio conferences onto the Internet." However, although the circuitry may be capable of streaming audio conferences onto the Internet, the plain reading of the claim limitation states that the circuitry need only "provide" the signal that is streamed onto the Internet, and does not require that the circuitry actually stream the signal onto the Internet.

Therefore, the term "transcode(s) said summed conference signal to provide a transcoded summed signal that is streamed onto the Internet" to mean "convert the summed conference signal to a format suitable for streaming onto the Internet."

5. "streamed onto the Internet"

a. The Parties' Positions

Polycom proposes this term to mean "[t]ransmitted one way to non-active remote listeners over the Internet. Streaming may be enabled using common streaming media players such as, for example, RealPlayer from RealNetworks." JCCC at 14. Codian proposes this term to mean "streaming an audio signal onto the Internet requires that the signal be encoded in a format that is designed to be transmitted one way over the Internet and which will allow the receiver to begin playback of the signal as the signal is being transmitted and without waiting for an entire file to be transmitted ." Dkt. No. 70 at 27.

Polycom argues that its construction of this term is similar to "streaming technology format" from the '749 Patent. Dkt. No. 68 at 42. Polycom states that the recipients of the streamed signal are non-active remote listeners who are distinct from the conference participants. *Id*.

Codian responds that its construction is identical with respect to the "streaming technology format" of the '749 Patent. Dkt. No. 70 at 27. Codian states that there is no requirement that the streaming is received by a non-active participants in the videoconference. *Id*. Codian submits that "the notion of a non-active participant is not one that would have been understood by an ordinary art worker." *Id*.

Polycom does not address this term in reply.

b. Construction

The parties refer back to their prior briefing relating to "streaming technology format." Similarly, the Court also references its above construction regarding "streaming technology format." Polycom's distinction between conference participants and non-active remote listeners failed in the '749 Patent and fails here as well. For example, the specification states:

It is contemplated that the method of streaming a real-time audio conference to **conference participants** via the Internet may be performed a number of different ways.... In addition, the server may also receive requests/data over the Internet/intranet such as a question from a participant, which can be routed to the other conference participants either by the server in the form of text over the Internet/intranet, a synthesized voice or the **actual voice.**

'476 Patent, 7:54-65 (emphasis added).

This section of the specification is completely contrary to Polycom's notion of a "non-active remote listener." The '476 Patent not only contemplates that the "conference participants" may receive the streaming real-time audio, but also that in other embodiments, conference participants may respond in the form of text or their "actual voice."

Therefore, the Court adopts Codian's construction and construes the term "streamed onto the Internet" to mean "streaming an audio signal onto the Internet requires that the signal be encoded in a format that is designed to be transmitted one way over the Internet and which will allow the receiver to begin playback of the signal as the signal is being transmitted and without waiting for an entire file to be transmitted."

V. CONCLUSION

Accordingly, the Court hereby **ORDERS** the disputed claim terms construed consistent herewith.

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