

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZOHO CORPORATION and
ZOHO CORPORATION PVT., LTD.
Petitioners,

v.

MEETRIX IP, LLC,
Patent Owner.

Case IPR2023-00371
U.S. Patent No. 8,339,997

PETITIONERS' REPLY TO PATENT OWNER RESPONSE

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1006	U.S. Patent No. 7,180,997 (“Knappe”)
1007	U.S. Patent No. 6,690,654 (“Elliott”)
1008	U.S. Patent No. 7,089,285 (“Drell”)
1009	U.S. Patent No. 6,701,437 (“Hoke”)
1010	Guichard <i>et al.</i> , “MPLS and VPN Architectures, A practical guide to understanding, designing and deploying MPLS and MPLS-enabled VPNs,” Cisco Press, 2001 (“VPN Textbook”)
1011	Declaration of Ingrid Hsieh-Yee, Ph.D., under 37 C.F.R. § 1.68
1012	U.S. Patent No. 3,060,265
1013	U.S. Patent No. 4,139,731
1014	U.S. Patent No. 3,601,530
1015	U.S. Patent No. 4,796,293
1016	A Primer on the T.120 Series Standard
1017	T.120 Standard (1996)
1018	U.S. Patent No. 6,237,025
1019	U.S. Patent No. 6,782,413

Ex.	Description
1020	U.S. Patent No. 6,980,526
1021	Caputo, “Cisco Packetized Voice & Data Integration,” McGraw-Hill, 2000
1022	de Moraes <i>et al.</i> , “The Internet Multicast from ITS: How it was Done and Implications for the Future,” IEEE Communications Magazine, January 1995
1023	U.S. Patent Publication No. 2004/0261116 A1
1024	U.S. Patent No. 6,850,496
1025	U.S. Patent No. 6,553,515
1026	U.S. Patent No. 6,633,848
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1029	RFC 791
1030	RFC 1112
1031	RFC 2401
1032	RFC 2406
1033	H.323 Standard
1034	U.S. Patent No. 7,281,058 (“Shepherd”)
1035	U.S. Provisional Patent Application No. 60/453,307
1036	U.S. Patent No. 7,664,056
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I. INTRODUCTION

The Patent Owner Response (“POR”) fails to rebut the Petition or the Board’s preliminary findings that the challenged claims are unpatentable. Instead, the POR provides unsupported and conclusory attorney argument that largely fails to follow the legally appropriate approach to rebut the obviousness evidence presented in the Petition. The attorney arguments in the POR attempt to rebut obviousness by challenging prior art references individually instead of the presented combination, mischaracterizing the teachings of the prior art, and lacks support from or citations to the record. Not even Patent Owner’s purported technical expert, Mr. Dye, one of the inventors and the founder and former CEO of Meetrix (the Patent Owner), signed on to support these baseless attorney arguments; from his 26-paragraph declaration only a single paragraph, paragraph 25, is cited twice to support Patent Owner’s non-obviousness arguments.

As a preliminary matter, Petitioners address two irrelevant disputes raised in the POR that lack any substance.

First, in the POR, Patent Owner disagrees with the level of ordinary skill in the art proposed in the Petition, requiring three years of experience relating to conferencing systems in packet-based networks, “because it is too specialized.” POR at 10-11. Instead, the Patent Owner proposes that a person of ordinary skill in the art (“POSITA”) would have **no** relevant experience in the field of the alleged

invention but rather generically in “computer systems development.” *Id.* The ’997 patent specifically notes that the invention “relates to computer system architectures, and **more particularly to audio and video telecommunications for collaboration over hybrid networks.**” Ex_1001 at 1:24-26. Not only is Patent Owner’s proposal clearly wrong but this alleged dispute is actually irrelevant since none of the arguments in the POR rest on this alleged difference of the proper experience a POSITA must have. Having a few years of work experience in the actual field of the invention is not “too specialized” a requirement for a POSITA but under either definition the result is the same: the challenged claims are unpatentable.

Second, in the POR, Patent Owner disagrees with Petitioners’ assertion that, for purposes of this Petition, “no claim term requires express construction for the Board to evaluate the patentability of the claims.” POR at 12. The POR then proceeds to list 13 claim terms with corresponding constructions adopted by a District Court in a litigation with another party. *Id.* However, only one of the listed terms actually appears in the claims of the ’997 patent. Moreover, not surprisingly, the subsequent Patent Owner arguments do not rely on any of these claim constructions. Thus, this disagreement is also irrelevant. The application of the prior art references in the Petition to the actual claim language of the challenged claims does not require any of these constructions nor is it at odds with

them. Under the plain and ordinary meaning of the claim terms, the challenged claims are unpatentable.

II. RESPONSE TO PATENT OWNER ARGUMENTS

In response to the Petitioners' grounds of rejection and the Board's institution decision, the POR largely presents unsupported attorney argument with few citations to the record and virtually no support from the inventor declaration. But it is well established that "[a]rgument in the brief does not take the place of evidence in the record." *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965). Further, the attorney argument challenging the obviousness rejections is largely based on improperly "attacking references individually where the rejection is based upon the teachings of a combination of references." *In re Merck & Co., Inc.*, 800 F. 2d 1091, 1097 (Fed. Cir. 1986). Thus, the Patent Owner's arguments fail to overcome the Board's findings that claims 1-10 are unpatentable.

A. The USPTO Has Not Determined that VPN Textbook (Ex_1010) Is not Invalidating Prior Art

The POR asserts that because the applicant cited three Cisco Systems, Inc. publications during prosecution, somehow Ex_1010, a book published by "Cisco Press" cannot be the basis to invalidate the claims; Patent Owner alleges that Petitioner used the VPN Textbook in the Petition "like a catalog of electronic components, to recreate the invention." POR at 14. First, the POR provides no legal basis for the proposition that just because a prior art reference was disclosed

during prosecution from a given publisher, all references from that publisher have somehow been considered and can no longer be used as invalidating prior art. This is clearly wrong. *See e.g., Hum Industrial Technology, Inc. v. Amsted Rail Company, Inc.*, IPR2023-00539, Paper no. 10 at 48-53 (PTAB 2023) (declining to exercise discretion under §325(d) even where the primary references were “cited on the patents’ corresponding Information Disclosure Sheets.”)

Second, this argument is improperly premised on the alleged use of the VPN Texbook as a “catalog of components” to recreate the alleged invention. It is not. Contrary to Patent Owner’s allegations, “the principal references” do disclose the implementation of a virtual private network as the type of network used in a video conferencing system. *See e.g.,* Ex_1006 at 4:58-61 and Ex_1007 at 4:30-31, 6:55-57. The VPN Texbook is used in combination with these references in each of the two grounds to show that the alleged invention is no more than “a combination of familiar elements according to known methods ... [that] does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (2007). As the Board noted, the VPN Texbook establishes that the “star” topology relied upon in the ’997 Patent for the claimed virtual private network was “the most common” known method. ID at 14. Thus, contrary to Patent Owner’s assertion, the VPN Textbook is appropriately relied upon in the Petition’s Grounds in combination with other references to establish obviousness of the challenged claims.

B. Ground 1: Knappe, Elliot, VPN Texbook, and de Moraes Render Obvious Claims 1 and 3-7

With respect to Ground 1, in the POR, Patent Owner raises arguments only with respect to elements of claims 1 and 7. Accordingly, in this Reply, Petitioners address the arguments as to these two claims.

1. Claim 1

a. Limitation 1.1

The POR improperly attacks the Knappe and de Moraes references individually, not in combination. *See In re Merck*, 800 F.2d at 1097. It argues that in Knappe “[a]ny message (if any) is sent unicast as each participant has different identification, therefore one single message cannot be transmitted to multiple participants and each participant receives a different message.” POR at 17. It then argues that de Moraes fails to disclose “several key features, including the nature of any message and its contents.” *Id.*

However, as the Board noted, the Petition relies on Knappe for its disclosure of a multi-party conferencing system “capable of sending messages to each of a plurality of multicast appliances, e.g., communication devices 16, over the Internet with call manager 30 identifying participants based on the called number or other suitable criteria.” *Id.* at 20; Pet. at 37-38; Ex_1003 ¶136. De Moraes teaches to a POSITA that the communication devices 16 of Knappe, like the “MBONE routers,” could use the well-known IP multicast addressing techniques taught by

the RFC 1112 standard. *Id.* This is no more than familiar elements using known methods to yield predictable results. *See KSR*, 550 U.S. at 401.

Further, contrary to Patent Owner’s argument, Element 1.1 does not require “several key features, including the nature of any message and its contents” nor does it require all the elements from the specification quoted by the Patent Owner in the POR. POR at 17-18. Instead, Element 1.1 only requires that “the first message comprises a group address which identifies a plurality of participants.” As the Petition shows, a POSITA familiar with relevant standards, such as RFC 1112 (Ex_1030) would understand that a multicast message according to RFC 1112 as taught by de Moraes includes an “IP host group address” that identifies a host group of recipients of the multicast message. Petition at 38. Thus, the combination of Knappe and de Moraes teach to a POSITA all the limitations of Element 1.1.

b. Limitation 1.2

The POR incorrectly argues, without support, that since Knappe and de Moraes do not “teach or disclose ‘sending a first message’ to each of a plurality of multicast appliances,” presumably relying on the Limitation 1.1 argument, they do not teach the receiving Limitation 1.2. Because Patent Owner’s argument regarding Limitation 1.1 fails, this argument fails too. In fact, it is clear that de Moraes teaches “multicast appliances” (e.g., endpoints) receiving multicast

messages, including for example, the “60 listeners” that signed on to the Communications Society conference described in de Moraes. Ex_1022 at 9.

c. Limitation 1.3

Patent Owner’s argument regarding this limitation fails as a matter of law. Petitioners’ argument regarding this limitation relies on Knappe in combination with Elliott and the VPN Textbook yet Patent Owner’s argument alleges that “neither Kanppe nor de Moraes ... disclose VPN internet routers between multicast appliances.” POR at 19. In fact, Elliott teaches that the multi-party conferencing system of Knappe can use a network that is ““either a public or a carrier supported virtual private network (VPN) ... which uses IP or IP-tunneling”” (using well known VPN implementations as described in the VPN Textbook). Pet. at 41. With respect to obviousness, “the test is whether the references, taken as a whole, would have suggested [Patent Owner’s] invention to one of ordinary skill.” *See In re Merck* at 1097. But the argument for this limitation in the POR does not even address Elliot or the VPN Textbook at all. Accordingly, it fails as a matter of law.

d. Limitation 1.5a

With reference to this limitation, the Patent Owner appears to be making a claim construction argument arguing that the “gateway” disclosed in Knappe is not a “gateway server” as claimed. POR at 20. However, Patent Owner’s claim construction argument is replete with legal flaws. The alleged definition of the

claimed “gateway server” is not based on either claim language, the specification, or the prosecution history. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). Instead, the entire argument is solely supported by one conclusory paragraph in the inventor declaration. But the inventor’s testimony on claim construction “is entitled to no deference.” *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 983 (Fed. Cir. 1995).

In fact, the alleged definition of “gateway server” advanced in the POR is not met by the embodiments described in the ’997 Patent. A claim interpretation that excludes a preferred embodiment from the scope of the claim “is rarely, if ever, correct.” *Duncan Parking Technologies v. Ips Group, Inc.*, 914 F.3d 1347, 1364 (Fed. Cir. 2019) (citing *Vitronics Corporation v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996)). For example, the Patent Owner alleges that “a gateway server operates on a server-class computer and ... not only manages communications between diverse networks but also hosts applications, provides security features, and offers services such as caching, load balancing, or authentication.” POR at 21. However, the ’997 specification makes no reference to any “server-class computer”, nor does it describe any of these additional alleged requirements of a gateway server; no mention of “caching” or “load balancing” for example.

To the contrary, the specification refers to the elements that communicate with telephone participants simply as “gateway.” *See e.g.*, Ex_1001 at 2:49-52 (“Gateways 411 are used to transcode the H.323 network information onto the PSTN 433. Standard telephone handsets 413 or wireless phones 412 are connected to the PSTN telephony system.”); *id.* at 7:59-60 (“PSTN gateways 411 form the bridge between the Internet and the public switched telephone network 433”). Further, the claims themselves refer to the term “gateway” and “gateway server” as the same. *See* claim 2 (referring back to the “gateway server” of claim 1 as “the gateway”); *see also*, claims 7, and 15. Thus, in the context of the ’997 Patent, the terms “gateway” and “gateway server” are used interchangeably and do not have any special meaning. Under its plain and ordinary meaning, the gateway of Knappe, which also is the bridge between the network 14 and the PSTN 22, teaches the claimed gateway server to a POSITA. *See* Pet. at 44; Ex_1006 at 4:18-28.

Further, contrary to the Patent Owner’s argument, “PSTN telephone calls” in Knappe are not first sent to the call manager instead of the gateway. POR at 22. Instead, Knappe describes that “call initiation requests” for telephones 18 are sent to the call manager 30 through the gateway 20. Ex_1006 at 5:9-12. “The standard analog telephones 18 communicate standard telephony signals through PSTN 22 to the gateway 20. At the gateway 20, the signals are converted to IP packets in the

VoIP format.” *Id.* at 4:19-22. “The call manager 30 is responsive to service requests from the communication devices 16, including the standard telephones 18 **through the gateway 20.**” *Id.* at 4:48-50 (emphasis added). Thus, Patent Owner’s argument misrepresents the operation of the Knappe system as is wrong.

Thus, Patent Owner’s arguments fail to rebut the Petition or the Board’s findings as to Limitation 1.5a.

e. Limitation 1.5b

With reference to this limitation, the POR once again provides attorney argument that mischaracterizes the prior art references, and which is not supported by any citations to the record. Further, in attempting to distinguish Elliot, the Patent Owner argues that “the session ID of Elliott is different for each participant and specific to one-to-one session between the call centre and one of the participants, the conference ID is consistent for a multicast video conferencing between multiple users.” POR at 22. However, Limitation 1.5b actually requires “providing conference ID information,” it does not require the “conference ID information” to be “not specific to one-to-one sessions” or to be the same for all participants as the Patent Owner argues. As the Board found, the “session ID” provided by the participants in Elliott, which is used to “log the client into the session with the session ID” for a given conference, teaches the claimed “conference ID information” to a POSITA; the Elliot session ID must provide

identifying information to log the participant to the correct conference. *See* Pet. at 45.

Further, contrary to Patent Owner’s allegations and to the extent it may be relevant, the session ID in Elliott is not different for each participant. For example, Elliott explains that “[t]he client tells the agent this Session ID and the agent then logs into that same Session.” Ex_1007 at 8:31-33. Multiple agents may log into the same session with a client using the same Session ID. *Id.* at 9:60-10:4. Thus, the client and the agent or agents (participants) use the same Session ID to log into a particular video conference session. Further, the Elliott system contemplates the possibility that “one or more clients are logged into a session.” *Id.* at 9:25-26 and 10:5-7. These multiple clients also use the same session ID to log into the same session. Thus, Elliott teaches various ways in which the same session ID is shared among multiple participants of a video conference.

Accordingly, Patent Owner’s arguments as to Limitation 1.5b also fail.

f. Limitation 1.5c

With respect to this limitation, Patent Owner relies exclusively on its failed claim construction arguments regarding Limitation 1.5a. Thus, for the same reasons Petitioners provides with respect to Limitation 1.5a, Patent Owner’s argument fails as to Limitation 1.5c.

g. Limitation 1.5d

Patent Owner once again attempts to make an improper claim construction argument to distinguish the claimed “authenticating” from the verification of participants using phone numbers or caller IDs described in Knappe. Curiously, while omitted from the POR, the claim construction order referenced in the POR (Ex_2002) construes “authenticating” as “verifying the authenticity of.” Ex_2002 at 32. Also of note is that in that litigation, Patent Owner alleged that “no construction” was necessary for this term. *Id.* at 15. Yet now it attempts to distinguish the prior art with an unsupported, claim-construction-based attorney argument.

In any case, Patent Owner’s distinction of the user verification process in Knappe also fails. As Patent Owner now alleges, “[t]he authentication process checks the provided credentials against stored records to confirm the identity.” POR at 25. To the extent that such functionality is what Element 1.5d requires, that is precisely what Knappe discloses with respect to the elements relied upon in the Petition. In Knappe, “conference parameters 62 for each conference call include an identification of participants 64” which are authenticated “at the beginning of a conference call based on their caller ID, phone number, or other suitable identifier.” *See* Pet. at 48. For example, the conference parameters “include an identification of participants 64 and the priority assigned to each participant.” Ex_1006 at 6:45-47. In one embodiment, “each participant may be

prioritized with respect to the others, such that each participant in the conference call has a different priority from all other participants.” *Id.* at 8:62-65. “[T]he conference bridge may store priorities associated with individuals.” *Id.* at 9:1-2. “The priorities may be established automatically using phone numbers, employee numbers, IP addresses, ...”. *Id.* at 9:3-5. Thus, the Knappe system checks each participant’s caller ID, phone number, etc., against conference parameters records with priorities associated with individuals that are stored in the conference bridge to confirm the identity of the participant and assign the appropriate priority to each individual. Thus, Patent Owner’s argument as to Element 1.5d also fails to rebut the finding that Knappe teaches this element.

h. Limitation 1.6

As a preliminary matter, Patent Owner’s argument regarding this limitation fails as a matter of law because it presumes it had already previously “set forth above” that “neither Knappe nor Elliott teach a gateway server.” However, the failed gateway/gateway server argument raised in the POR only addresses Knappe, not Elliott. POR at 19-22. As noted in the Petition, “Elliott also teaches a gateway (e.g., ITG 32).” Pet. at 50. Further, Petitioners’ argument regarding Limitation 1.6 relies on the combined teachings of Knappe and Elliott, each in combination with de Moraes. Pet. at 49. Thus, by failing to address the combination of references

relied upon in the Petition as to Limitation 1.6, this argument too fails as a matter of law. *See In re Merck*, 800 F.2d at 1097.

In addition, the Patent Owner again improperly attacks the combination of references individually. *Id.* Patent owner argues that because the participant workstations of de Moraes used “audio coding hardware plus software for compression” this made de Moraes’ teachings inconsistent with the PSTN network or PSTN telephones.” POR at 24. This argument misses the point. Knappe teaches that PSTN participants join conference calls “through the gateway” and the gateway “provides conversion between analog and/or digital formats” and then converts the signals into IP packets to communicate through network 14. *See Ex_1006* at 4:18-28. Thus, a POSITA would understand that the hardware/software discussed by de Moraes would be part of the gateway of Knappe for PSTN telephone participants. A POSITA would understand that the gateway of Knappe is operable to use the multicast addressing (RFC 1112) as taught by de Moraes, using multicast group information to enable the telephone participant to participate in the multi-participant video conference. *See Pet.* at 49-51. Thus, de Moraes neither teaches away nor does the combination of de Moraes and Knappe fail to disclose relevant information with respect to Limitation 1.6.

Accordingly, for these reasons, Patent Owner’s arguments regarding Limitation 1.6 also fail.

In sum, as the Board found and as shown in the Petition, claim 1 is obvious over the combination of Knappe, Elliott, the VPN Textbook, and de Moraes and Patent Owner's arguments in the POR do not show otherwise.

2. Claim 7

a. Limitation 7.2

With respect to this limitation, the POR again presents a flawed argument that fails to address the relevant combination of references and is substantively wrong. *See In re Merck* at 1097. First, as discussed above with respect to Limitation 1.6, the combination of Knappe and de Moraes teaches the inclusion of PSTN telephone participants in a multicast conference network via a gateway. By addressing the de Moraes reference in isolation, Patent Owner's argument fails. Second, as explained with reference to Limitation 7.1, Knappe teaches that the IP addressing with respect to the telephone participants takes place at the gateway. *Pet.* at 55. Further, de Moraes teaches that the IP addressing at the gateway can be according to the multicasting standard, RFC 1112, which "include configuring an IP multicast packet with a group address." *Id.* at 55-56. Thus, the combination of references relied upon in the Petition teaches Limitation 7.2 to a POSITA. *Id.* Patent Owner's flawed arguments regarding the disclosures of de Moraes in isolation are irrelevant.

Therefore, as determined by the Board as shown in the Petition, claim 7 is rendered obvious by the combination of Knappe, Elliott, the VPN Textbook, and de Moraes.

C. Ground 2: Knappe, Elliot, VPN Texbook, de Moraes, and Shepherd Render Obvious Claims 2 and 8-10

With respect to Ground 2, in the POR, Patent Owner raises arguments only with respect to limitations of claim 2. Accordingly, in this Reply, Petitioners address these arguments.

1. Claim 2

a. Limitation 2.5

With respect to this limitation, Patent Owner once again fails to address the proper combination of references relied upon in the Petition. *See In re Merck*, 800 F.2d at 1097. The Patent Owner fails to discuss the teachings of Knappe relevant to Limitation 2.5 and instead essentially argues that neither Shepherd nor de Moraes addresses the handling of data from a PSTN network. POR at 25-27. But the Petition relies on Knappe for its disclosure of the claimed gateway “transforming the digital voice into IP packets.” *See Pet.* at 62 and 55. Thus, Knappe teaches how to deal with the fact that conferencing data can originate from a PSTN telephone through the use of a gateway that transforms the telephone data to IP network packets. The teachings of de Moraes, regarding the use of multicast IP addressing for video conferences, and Shepard, regarding delivering IP

multicast messages such as those disclosed by de Moraes over a unicast network, would have been considered by a POSITA in order to “reduce costs borne by the content provider to deliver content to destination devices” according to Knappe. Pet. at 34. As the specification of the ’997 patent acknowledges, “determin[ing] whether to unicast or multicast the audio or video streams ... [based] on the capability of the underlying network and the topology of the multipoint conference” was “known by one skilled in the art.” Ex_1001 at 2:38-42.

Even if Shepard itself does not deal with videoconferencing and even if neither Shepard nor de Moraes consider the fact that the source of the data is a PSTN telephone, Patent Owner’s argument does not provide a rebuttal to the actual combination presented in the Petition because those references in combination with Knappe, which Patent Owner ignored, do disclose Limitations 2.3-2.7 of claim 2. The fact remains that, from the perspective of a POSITA, “delivering Knappe’s video conferencing content [as multicast packets] over unicast networks would require only combining known methods to achieve the predictable and beneficial cost savings.” ID at 34.

b. Limitation 2.6

Patent Owner’s argument regarding this element is essentially the same as that of Limitation 2.5, alleging that Shepard does not disclose use of VPN for PSTN networks and telephones. This piece-meal analysis improperly fails to

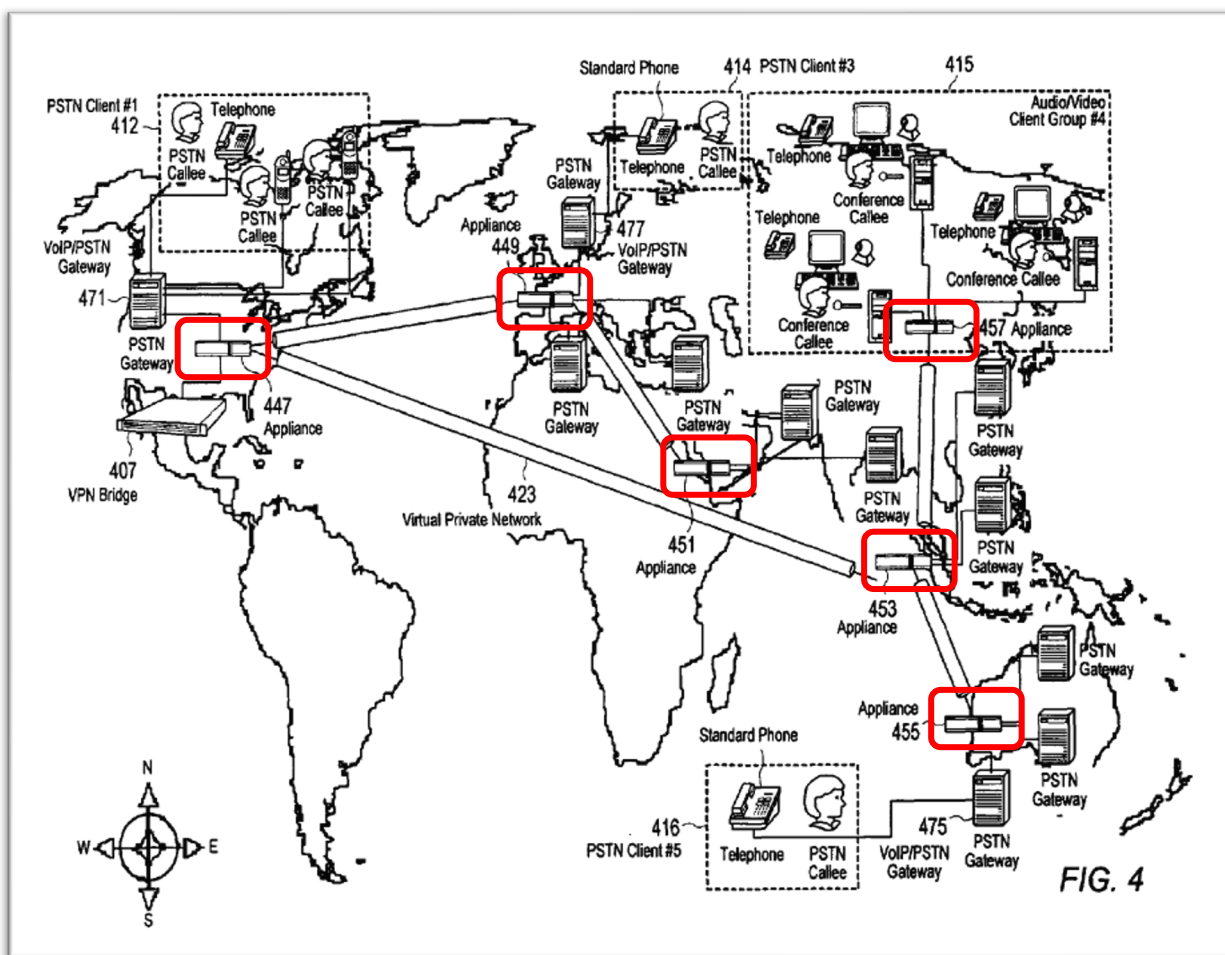
address the disclosure of the actual combination or references relied upon in the Petition. *See In re Merck* at 1097. As noted above, Knappe provides the PSTN telephone participant disclosure, which, like in the '997 patent and as required by claim 2, does so through the gateway. *See Pet.* at 62 and 55. Limitation 2.6 is not specific to PSTN telephones but rather to the IP packets generated at the gateway and how those IP packets are transmitted via the Internet, the other side of the gateway. Once converted to IP packets, the digitized PSTN telephone voice can be transmitted like any other IP packet; in this case according to Shepard's disclosures of using VPN networks to carry conventional unicast IP packets across the Internet between one or more IP-networked multicast appliances. *See Pet.* at 65. Patent Owner's allegations regarding PSTN networks, telephones, and conferencing are all irrelevant because once the voice data is packetized into IP packets, the transmission of IP packets themselves is agnostic as to the contents of the packets; the IP protocol, the multicast protocol (e.g., RFC1112), and VPN networks are all conventional techniques that would have been known to a POSITA, regardless of whether they are used for carrying conferencing data and/or PSTN telephone data.

c. Limitation 2.7

With respect to this limitation, Patent Owner once again fails to address the teachings of the combined references, alleging that de Moraes "fails to encompass the PTSN network" (because Knappe does) and that "Sheperd is not directed to

videoconferencing or even conferencing” (because Knappe, Elliott, and de Moraes do) and “fails to address the intricate process of handling data from PSTN telephones (because Knappe does). Again, this piece-meal analysis is improper and misses the actual teaching of the combined references. *See In re Merck*, 800 F.2d at 1097.

In addition, Patent Owner argues that neither de Moraes nor Sheperd teach the determination of multicast data from unicast data being performed by “communication devices at the user end.” POR at 29. But this is not what the claim requires. The claim language requires “one or more of the appliances” performing this step. In the context of the ’997 patent, appliances are not limited to “communication devices at the user end.” For example, as shown in Figure 4, Appliances 455, 451, 457, 453, 449 and 447 are routers between VPN tunnels and gateways, bridges, and other devices that then connect to end user devices:



See Ex_1001 at FIG. 4 (red markings added to highlight appliances). The appliances then provide the multicast data to the participants' communication devices, either directly (e.g., Appliance 457) or via gateways (e.g., Appliance 455) and bridges (e.g., Appliance 447). Thus, there is simply no requirement in claim 2 to show the claimed method being performed at a "communication device at the user end" as Patent Owner argues. Further, to the extent such a requirement was present, Patent Owner's argument also fails because it misrepresents the disclosure of de Moraes. De Moraes teaches the multicast protocol operations taking place at

end user workstations “with operating system support for IP multicast” (MBONE). Ex_1022 at 7. In particular, Figure 2 illustrates examples of “MBONE routers” that were “workstations functioned as Internet hosts and as media processors,” which were “communication devices at the user end.” *Id.* at 8-9 (e.g., workstation connected to the “Surenet” “T1 router” and workstation with “video capture board” at the “Rio Palace Hotel”). Thus, even if this were a requirement of the claims, the combination of Knappe, de Moraes, and Shepard teaches Limitation 2.7. Pet. at 65-67.

d. Limitation 2.8

Patent Owner’s argument regarding this limitation appears to be essentially a copy of the argument regarding Limitation 2.7, referring to “determination of multicast data from unicast data” as not being taught by de Moraes or Shepard. *See* POR at 30. Thus, this argument fails as already discussed above. As shown in the Petition, “de Moraes and Shepard, both individually and in combination, disclose this element of claim 2.” Pet. at 67-69. The POR does not rebut any of the arguments Petitioner provides or addresses any of the Board’s initial determinations as to Limitation 2.8.

Therefore, as determined by the Board as shown in the Petition, claim 2 is rendered obvious by the combination of Knappe, Elliott, the VPN Textbook, de Moraes, and Shepard.

Given that none of the arguments raised by Patent Owner in the POR successfully rebut any of Petitioners' arguments as to claims 1, 2, or 7, the only claims addressed in the POR, or the Board's initial determinations as to these claims, all of the challenged claims, 1-10, should be finally deemed unpatentable.

III. CONCLUSION

For the reasons given above, Petitioners have demonstrated a reasonable likelihood of success in establishing the unpatentability of claims 1-10 of the '997 patent and respectfully requests cancellation of claims 1-10.

Respectfully submitted,

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CERTIFICATE OF WORD COUNT PURSUANT TO 37 C.F.R. § 42.24(D)

The undersigned hereby certifies that the word count for the above
Petitioners' Reply to Patent Owner's Response is 4,682, which is less than the
5,600 words allowed under 37 CFR § 42.24(c)(1).

Date: January 12, 2024

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CERTIFICATE OF SERVICE

The undersigned certifies that on January 12, 2024, a copy of this PETITIONERS' REPLY TO PATENT OWNER RESPONSE and all supporting exhibits were provided via electronic mail (by consent) to the Patent Owner by serving the correspondence address identified in the Mandatory Notices:

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