

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,  
Petitioner,

v.

UNILOC 2017 LLC,  
Patent Owner.

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IPR-2019-00918  
Patent 8,369,298 B2

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Before JEFFREY S. SMITH, BRYAN F. MOORE, and SHARON FENICK,  
*Administrative Patent Judges.*

MOORE, *Administrative Patent Judge.*

JUDGMENT

Final Written Decision

Determining All Claims Unpatentable

*35 U.S.C § 318(a)*

## I. INTRODUCTION

Apple Inc. (“Petitioner”)<sup>1</sup> filed a Petition (“Pet.,” Paper 1) pursuant to 35 U.S.C. § 311 to institute an *inter partes* review of claims 1, 3–6, and 8–10 of U.S. Patent No. 8,369,298 B2 (“the ’298 patent,” Ex. 1001). The Petition is supported by the Declaration of Henry H. Houh, Ph.D. (Ex. 1002). Uniloc 2017 LLC (“Patent Owner”)<sup>2</sup> filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). In an October 16, 2019 Institution Decision, we determined that Petitioner had a reasonable likelihood of prevailing as to at least one of the challenged claims of the ’298 patent. Paper 7 (“Inst. Dec.”). Accordingly, we instituted an *inter partes* review pursuant to 37 C.F.R. § 42.108. Inst. Dec. 35.

Patent Owner filed a Patent Owner Response (Paper 9, “PO Resp.”) to which Petitioner filed a Reply (Paper 10, “Reply”). Patent Owner also filed a Sur-Reply. (Paper 11, “Sur-Reply”).

Both parties requested a hearing for oral argument (Papers 12, 13), and a hearing was held July 23, 2020. *See* Paper 19 (“Tr.”).

### A. Related Matters

The parties advise that the ’298 patent has been asserted against Apple in *Uniloc USA, Inc. et al. v. Apple Inc.*, Case No. 1:18-cv-00166 (W.D. Tex.) (terminated) and *Uniloc USA, Inc. et al v. Apple Inc.*, Case No. 4:19-cv-01696 (N.D. Cal.). Pet. 2; Paper 4, 2.

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<sup>1</sup> Petitioner identifies only itself as the real party-in-interest pursuant to 37 C.F.R. § 42.8. Pet. 1.

<sup>2</sup> Patent Owner identifies only itself as the real party-in-interest pursuant to 37 C.F.R. § 42.8. Paper 4, 1.

*B. The '298 Patent*

The face of the '298 patent indicates the patent was filed on May 3, 2012, and is a continuation of Application No. 12/896,686 filed on October 1, 2010, which is a continuation of Application No. 11/288,505 filed on November 28, 2005, which is a continuation-in-part of various applications. Ex. 1001, codes (22), (63). We apply a priority date of November 28, 2005 because Patent Owner has not asserted, or shown, the challenged claims are supported by earlier applications. “[A] patent’s claims are not entitled to an earlier priority date merely because the patentee claims priority.” *In re NTP, Inc.*, 654 F.3d 1268, 1276 (Fed. Cir. 2011). “[T]o gain the benefit of the filing date of an earlier application under 35 U.S.C. § 120, each application in the chain leading back to the earlier application must comply with the written description requirement of 35 U.S.C. § 112.” *Zenon Env'tl., Inc. v. U.S. Filter Corp.*, 506 F.3d 1370, 1378 (Fed. Cir. 2007) (quoting *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571 (Fed. Cir. 1997)); *see also Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008) (explaining Patent Owner bears the burden to show not only the existence of the earlier applications through which Patent Owner seeks to claim priority, but also how the written description in the earlier applications supports the challenged claims); *see also PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305–06 (Fed. Cir. 2008); *Research Corp. Techs. v. Microsoft Corp.*, 627 F.3d 859, 871 (Fed. Cir. 2010) (explaining that the burden of production shifts to the patent owner once a petitioner provides invalidating art that predates the filing date of the challenged patent, where the patent-at-issue claims priority through continuations-in-part and the Examiner did not expressly address the priority

issue).

The '298 patent is titled, "Method for Establishing Network Connections Between Stationary Terminals and Remote Devices through Mobile Devices," and generally relates to a technique for seamless and transparent handoff of a network address of a remote mobile device from a user's mobile device to the user's stationary terminal for the purpose of establishing a direct communication channel between the remote device and the stationary terminal. *Id.* at codes (54), (57). The '298 patent explains that sometimes two mobile devices, such as smart phones, may wish to establish a virtual connection there between, such as a TCP connection, so that the devices may exchange data for various purposes, such as instant messaging ("IM"). *Id.* at 1:36–44. However, when a user of a mobile devices is actively engaged or focused on a more stationary terminal, such as a laptop, desktop, or workstation, diverting attention away from the stationary terminal in order to use the mobile device would be inconvenient. *Id.* at 1:45–50. The '298 patent therefore discloses a technique so that when a remote mobile device attempts to establish communication with a user's mobile device, the user's stationary remote terminal, rather than the user's mobile device, establishes a virtual connection thereby allowing the user to communicate using the stationary remote terminal. *Id.* at code (57), 1:57–62. In this manner, the user's attention is not diverted away from the stationary terminal to the user's mobile device. *Id.* at 1:45–50. Figure 1 of the '298 patent, reproduced below, is illustrative.

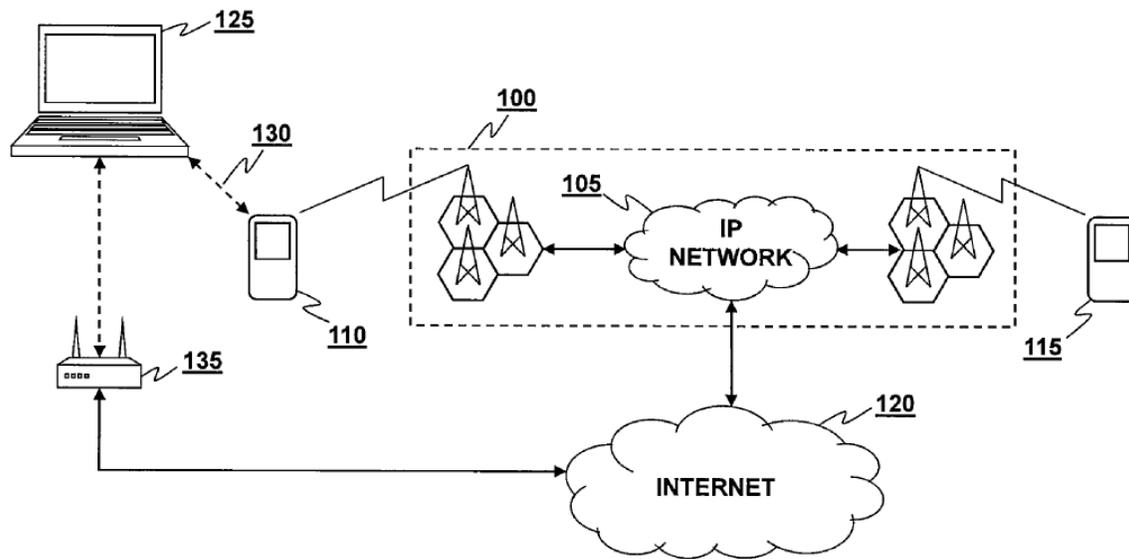


FIG. 1

Figure 1 “depicts one environment to deploy an embodiment of the present invention.” *Id.* at Fig. 1, 2:41–42. Figure 1 shows stationary terminal 125, depicted as a laptop, and two mobile devices, remote mobile device 115 and proximate mobile device 110. *Id.* at 2:41–61. Stationary terminal 125 and proximate mobile device 110 are in communication with each other via communications link 130, which may be, e.g., a Bluetooth communications link. *Id.* at 2:62–3:9. Stationary terminal 125 also supports access to Internet 120. *Id.* In Figure 1, stationary terminal 125 accesses Internet 120 through use of an IEEE 802.11 or Wi-Fi router, router 135. *Id.* at 3:10–17. Also, remote mobile device 115 and proximate mobile device 110 communicate with each other via digital cellular wireless network system 100, which may be, e.g., the General Packet Radio Service (“GPRS”), 2.5G, or 3G. *Id.* at 2:42–51. Due to the packet switching capability of network system 100, the network system is

able to implement an IP-based network that supports TCP/IP transmission protocol based communications, depicted by IP Network 105. *Id.* at 2:48–51.

Figure 2 depicts a flow chart for establishing a network connection between a stationary terminal and an initiating remote device. *Id.* at 3:18–21, Fig. 2. When the user of mobile device 110 is within short range of stationary terminal 125, device 110 and terminal 125 discover each other and automatically establish a Bluetooth (or other short range wireless technology) connection. *Id.* at 3:21–29. A remote device, such as remote mobile device 115, initiates a request to establish an IM session with mobile device 110 by transmitting to device 110, via SMS through cellular wireless network system 100, an invitation message containing device 115's IP address and TCP port, and an invitation text message. *Id.* at 3:42–56. Mobile device 110 receives the invitation text message, and extracts the IP address and TCP port. *Id.* at 3:56–60.

The Specification discloses that upon receiving the invitation text message, the user's attention is focused on stationary terminal 125, rather than the user's mobile device 110, and it would be undesirable to divert the user's attention to device 110 for the purpose of engaging in an IM session. *Id.* at 3:61–64. It would be preferable for the user to be able to engage in an IM session using stationary terminal 125. *Id.* at 3:65–4:8. As such, mobile device 110 transmits the IP address and TCP port of initiating remote mobile device 115 to stationary terminal 125 through communications link 130. *Id.* at 4:8–14. Stationary terminal 125 then uses the IP address and TCP port to establish a TCP connection between itself and mobile device 115, through Internet 120, so that terminal 125 and device 115 can engage in an IM or

other data transfer session over the established virtual connection directly between them without the continued participation of mobile device 110. *Id.* at 4:15–30.

### *C. Illustrative Claim*

Of the challenged claims, claims 1 and 6 are independent. Claims 3–5 depend directly from claim 1. Claims 8–10 depend directly from claim 6. Claims 1 and 6 include similar recitations. However, claim 1 recites a method, whereas claim 6 recites a non-transitory computer-readable medium. Claim 1, reproduced below, is illustrative.

1. A method for establishing a data communications session between a stationary terminal and an initiating terminal remote device, the method comprising:

establishing a communication link through a short-range wireless technology between the stationary terminal and a proximate mobile device wherein the proximate mobile device operates within a cellular wireless network system;

opening a listening port on the proximate mobile device to receive communications through a page-mode messaging service;

receiving, at the listening port and through the page-mode messaging service, an invitation message from the initiating remote device, wherein such invitation message comprises a network address and listening port related to the initiating remote device; and

transmitting the network address and listening port received by the proximate mobile device to the stationary terminal through the short-range wireless technology, whereupon the stationary terminal receives the network address and listening port, transmits a response to the network address and listening port related to the initiating remote device, and establishes a virtual reliable connection with the initiating remote device for data communications.

Ex. 1001, 6:30–54.

*D. Instituted Grounds of Unpatentability*

Petitioner asserts that claims 1, 3–6, and 8–10 are unpatentable on the following grounds (Pet. 7):

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>
1, 3, 5, 6, 8, 10	103(a)	Charbonnier, <sup>3</sup> RFC793, <sup>4</sup> SMS Specification <sup>5</sup> (ground 1)
1, 3, 5, 6, 8, 10	103(a)	Charbonnier, RFC793, SMS Specification, TURN <sup>6</sup> (ground 2)
1, 3, 5, 6, 8, 10	103(a)	Charbonnier, RFC793, SMS Specification, DECT Speakerphone <sup>7</sup> (ground 3)
1, 3, 5, 6, 8, 10	103(a)	Charbonnier, RFC793, SMS Specification, DECT Speakerphone, TURN (ground

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<sup>3</sup> Charbonnier, EP 1 077 567 A1, published Feb. 21, 2001 (as translated). Ex. 1028.

<sup>4</sup> “Transmission Control Protocol, DARPA Internet Program Protocol Specification,” RFC 793, Sept. 1981. Ex. 1010.

<sup>5</sup> *Universal Mobile Telecommunications System (UMTS); Technical realization of the Short Message Service (SMS) (3G TS 23.040 version 3.5.0 Release 1999)*, European Telecommunication Standards Institute (ETSI), 1991. Ex. 1014.

<sup>6</sup> Rosenberg, et. al., “Traversal Using Relay NAT (TURN),” Internet Engineering Task Force (IETF), Nov. 14, 2001. Ex. 1035.

<sup>7</sup> Digital Cordless Phone—Panasonic KXT-CD - £99.99 at Telephones Online (accessed Mar. 28, 2019), <https://web.archive.org/web/20030403010142fw-/http://www.telephonesonline.co.uk/details.asp?prodID=220>. Ex. 1029.

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
		4)
4 and 9	103(a)	Charbonnier, RFC793, SMS Specification, and Lee <sup>8</sup> (ground 5)
4 and 9	103(a)	Charbonnier, RFC793, SMS Specification, TURN, and Lee (ground 6)
4 and 9	103(a)	Charbonnier, RFC793, SMS Specification, DECT Speakerphone, and Lee (ground 7)
4 and 9	103(a)	Charbonnier, RFC793, SMS Specification, DECT Speakerphone, TURN, and Lee (ground 8)

## II. DISCUSSION

### *A. Relevant Law*

#### *1. Evidentiary Burden*

Petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail in its challenges, Petitioner must demonstrate by a preponderance of the evidence that the challenged claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

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<sup>8</sup> Lee, US 6,847,632 B1, issued Jan. 25, 2005. Ex. 1006.

## 2. Obviousness

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and, (4) where in evidence, objective indicia of non-obviousness (i.e., “secondary considerations”), including commercial success, long-felt but unsolved needs, failure of others, and unexpected results.<sup>9</sup> *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

## 3. Level of Skill

With regard to the level of ordinary skill in the art, Petitioner asserts a person having such skill “would have had a Bachelor’s degree in computer science or a comparable field of study, plus approximately two to three years of professional experience with cellular phone and IP networks, or other relevant industry experience. Additional graduate education could substitute for professional experience and significant experience in the field could substitute for formal education.” Pet. 11 (citing Ex. 1002 ¶ 41). Patent Owner “does not offer a competing definition at this stage of the proceeding.” PO Resp. 4. We determine that Petitioner’s description of the

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<sup>9</sup> Patent Owner does not put forth evidence it alleges tends to show secondary considerations of non-obviousness in its Patent Owner Response.

level of ordinary skill in the art is supported by the record. Therefore, we adopt Petitioner's proposal.

With regard to the specific *knowledge* of a person of ordinary skill in the art about particular areas of prior art, Petitioner asserts that such person would have had knowledge of the following subject matter: (1) networking and the Internet, (2) TCP/IP ports, (3) SMS ports, and (4) MS Invitations and TCP/IP-based responses. Pet. 11–20. Petitioner provides a nine-page discussion concerning specific knowledge it asserts a skilled artisan would have had about the above four topics. *Id.* at 11–20. Although we consider Petitioner's assertions regarding the specific knowledge of a person of ordinary skill in the art as background in reviewing the question of obviousness, because such assertions are directed to *knowledge* (scope and content of the prior art) rather than to *level* of skill within the subject matter, we do not incorporate wholesale Petitioner's assertions into our determination of the level of ordinary skill in the art.

### *B. Claim Construction*

We interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C.

282(b).” 37 C.F.R. § 42.100(b).<sup>10</sup> Under that standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Petitioner proposes constructions for a number of claim terms. Pet. 21–26. Patent Owner addresses the meaning of “stationary terminal” and “mobile device” as recited in claims 1 and 6. PO Resp. 6–12. We determine the only proposed constructions we need to address are “terminal” and “mobile device.” *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (providing that only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy).

### *Terminal*

Claim 1 recites “[a] method for establishing a data communications session between a stationary *terminal* and an initiating remote device,” “establishing a communication link through a short-range wireless technology between the stationary *terminal* and a proximate mobile device,”

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<sup>10</sup> The Office has changed the claim construction standard in AIA proceedings, replacing the broadest reasonable interpretation standard with the same claim construction standard used in a civil action in federal district court. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340, 51,358 (Oct. 11, 2018). This change applies to petitions filed on or after November 13, 2018. *Id.* Because the present Petition was filed on January 18, 2019, we construe the claims in accordance with the standard used in federal district court, now codified at 37 C.F.R. § 42.100(b).

and “transmitting the network address and listening port received by the proximate mobile device to the stationary *terminal* . . . whereupon the stationary *terminal* receives the network address and listening port” and “establishes a virtual reliable connection with the initiating remote device.” Ex. 1001, 6:30–54 (emphasis added).

Petitioner states that “terminal” should be given its plain and ordinary meaning consistent with the Specification of the ’298 patent. Pet. 21. Patent owner construed this term implicitly with a focus on the term “short-range wireless technology” found elsewhere in the claim. PO Resp. 13–17. The parties’ proposed constructions for “terminal” in the phrase “stationary terminal” are as follows:

<b>Petitioner</b>	<b>Patent Owner</b>
“a point in a system or communication network at which data can either enter or leave” (Pet. 21)	a device “capable of short-range wireless communications, such as Bluetooth communications, that may be employed by computers” (PO Resp. 10–14)

We do not adopt Petitioner’s construction. First, for reasons discussed below, Petitioner’s construction does not find sufficient support. Second, Petitioner’s construction does not resolve the controversy between the parties. We also do not adopt Patent Owner’s construction, that the “terminal” must be capable of short-range wireless communications, such as Bluetooth communications, that may be employed by computers, for the reasons discussed below.

### *1. Petitioner’s Proposed Construction*

Petitioner’s proposed construction is taken from a technical

dictionary, namely The IEEE Standard Dictionary of Electrical and Electronics Terms. Pet. 21 (citing Ex. 1040). Petitioner also cites to an unrelated patent that uses the phrase “personal computer or dumb terminal.” *Id.* (citing Ex. 1030, 9:34–37). Petitioner neither discusses the intrinsic record, explains the reasons for relying primarily on extrinsic evidence, nor discusses why the extrinsic definition taken from the IEEE dictionary is consistent with the ’298 patent Specification. *See id.*; *see also* PO. Resp. 10–12. The dictionary provides at least two potentially applicable definitions of “terminal.” The first definition, relied on by Petitioner, appears to relate to network communications: “[a] point in a system or communication network at which data can either enter or leave.” Ex. 1040, 1095.

However, the second definition, which relates to computers, appears consistent with requiring a user interface, defining “terminal” as “[a]n input/output device capable of transmitting entries to and obtaining output from the system of which it is a part, for example cathode-ray tube (crt) terminal.” *Id.* Petitioner neither explains nor provides evidence showing why the networking sense of “terminal” should be applied rather than the computer sense of the word. The ’298 patent Specification discloses that mobile phones are terminals, stating that the present invention relates to messaging techniques for mobile devices, and more specifically, for transferring network addresses from mobile devices to more stationary terminals in order to establish communication. Ex. 1001, 1:26–32. This reference to mobile phones as terminals, as well as reference to transferring network addresses, may potentially indicate the networking sense of “terminal.”

However, the Specification also refers to stationary terminals “such as laptops, desktops and workstations,” which might suggest a computer sense of the word “terminal.” The Petition lacks any discussion regarding which of these two senses is intended, or whether yet another meaning is intended. As to the patent Petitioner cites (Exhibit 1030), Petitioner makes no effort to show it is in the same field of endeavor as the ’298 patent or to otherwise explain the relevance of this unrelated patent’s use of the word “terminal” to the ’298 patent. Pet. 21. Petitioner has not provided sufficient evidence and argument to support its proposed claim construction. For the foregoing reasons, we do not adopt Petitioner’s proposed construction of “terminal.”

## *2. Patent Owner’s Proposed Construction*

Patent Owner asserts that terminal should be construed to be “capable of short-range wireless communications, such as Bluetooth communications, that may be employed by computers.” PO Resp. 10–14; Sur-Reply 6–7.<sup>11</sup> Claim 1, however, recites that a communications link is established through a short-range wireless technology between the stationary terminal and a proximate mobile device, and so this capability does not need to be added to

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<sup>11</sup> For the first time in its Sur-Reply, Patent Owner notes that the term “stationary terminal” in claims of related patent 8,194,632 (“the ’632 patent”) have been interpreted by the district court in litigation asserting the ’632 patent as construes “stationary terminal” to mean “computing device that is not handheld in its ordinary use.” Sur-Reply 3 (citing Ex. 2001, 45, Claim Construction Memorandum and Order, *Uniloc 2017 LLC v. Google LLC*, Case No. 2:18-CV-00499-JRG-RSP, Dkt. 152 (E.D. Tex. Jan. 20, 2020)). The entire record of that case is not before us and Patent Owner does not argue in this IPR that the DECT base station is handheld in its ordinary use or is not a computing device. Thus, it has not been shown that this construction would change the result in this IPR.

the construction of “terminal.” Additionally, besides asserting that short-range wireless technology is a technology “such as” Bluetooth “that may be employed by computers” (PO Resp. 13 (citing Ex. 1001, Fig. 2, steps 205, 210)), Patent Owner does not provide a construction for “short-range wireless connection.” To the extent that Patent Owner is suggesting that the short-range wireless connection must be Bluetooth specifically, we decline to adopt such a limitation. Bluetooth is explicitly recited in dependent claims 2, 7, and 12 suggesting that the independent claim is broader than Bluetooth. Under the principles of claim differentiation, “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.” *Phillips v. AWH Corp.*, 415 F.3d at 1315 (Fed. Cir. 2005) (en banc). Thus we decline to construe “terminal” as Patent Owner suggests.

For the foregoing reasons, we determine that neither party’s proposed construction of “terminal” is persuasive.<sup>12</sup>

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<sup>12</sup> Patent Owner suggests “Petitioner’s obviousness theory should likewise be rejected as tainted by reliance on an incorrect claim construction.” PO Resp. 12. (citing *United Microelectronics Corp. v. Lone Star Silicon Innovations LLC*, IPR2017-01513, Paper 10 at 4–5, 6 (PTAB May 22, 2018)). We have reviewed the decision cited by Patent Owner and disagree that it would be prudent to terminate this IPR merely because Petitioner has proposed a construction that we find to be incorrect. “The Board is not constrained by the parties’ proposed constructions and is free to adopt its own construction. *See SAS*, 825 F.3d at 1351. In this instance, Petitioner argues, for its incorrect construction, that “PO does not dispute that the DECT base station is a ‘stationary terminal’ based on any particular claim construction” (Reply 4) and we determine Petitioner’s analysis in the Petition is relevant to the construction adopted by the Board. *See* Sec. II.C.5.a., *infra*; Inst. Dec. 27–30; Pet. 66–67.

We need not, and do not, expressly construe this term further.

*Mobile Device*

Patent Owner asserts the term “mobile device” should be construed to mean “a smartphone or smartphone-like device, which uses wireless cellular radio technology and includes short range communications functionality and the capability to support instant messaging functionality.”

PO Resp. 6, 14.<sup>13, 14</sup> Additionally, Patent Owner asserts that a mobile

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<sup>13</sup> For the first time in its Sur-Reply, Patent Owner notes that “mobile device” in claims of related patent 8,194,632 (“the ’632 patent”) have been interpreted by the district court in litigation asserting the ’632 patent as construes “stationary terminal” to mean “computing device that is not handheld in its ordinary use.” Sur-Reply 3 (citing Ex. 2001, 39, Claim Construction Memorandum and Order, *Uniloc 2017 LLC v. Google LLC*, Case No. 2:18-CV-00499-JRG-RSP, Dkt. 152 (E.D. Tex. Jan. 20, 2020)). The entire record of that case is not before us and Patent Owner does not argue in this IPR that the mobile phones 6 and 8 are not handheld in their ordinary use or are not computing devices. Thus, it has not been shown that this construction would change the result in this IPR.

<sup>14</sup> For the first time in its Sur-Reply, Patent Owner argues “In addition to requiring access to the Internet or other wide area network, the mobile phone would need to provide a user interface to display incoming invitation messages from an initiating remote device, a keyboard for responding to those invitation messages, short range communications functionality

device is “smartphone or smartphone-like device such as a tablet computing device that can establish a short range connection such as Bluetooth between the mobile device and the terminal device.” *Id.* at 7–8. Patent Owner relies on the following statement in the Specification:

A current commercial example of a mobile device (e.g., smartphone, PDA, handheld, etc.) that might be used in FIG. 1 could be Research In Motion’s (RIM) BlackBerry handheld devices which supports cellular communication technologies and includes a QWERTY keyboard to facilitate the typing of text.

Ex. 1001, 2:52–57. Additionally, Patent Owner asserts a mobile device would include “a hard or soft keyboard to facilitate the typing of text, and the capability for installation and execution of communication applications.”

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(e.g., Bluetooth), the capability to support instant messaging, and the capability for installation and execution of communication applications, such as responding to the invitation messages by transmitting a response to the network address and listening port related to the initiating remote device, and establishing a virtual reliable connection with the initiating remote device for data communications.” Sur-Reply 5. As to the recitation of a “user interface” and “capability to support instant messaging, and the capability for installation and execution of communication applications, such as responding to the invitation messages by transmitting a response to the network address and listening port related to the initiating remote device,” these functions were not mentioned in the Reply and thus we consider them waived. Arguments not presented in the Patent Owner Response “will be deemed waived.” Update to the Trial Practice Guide, 83 Fed. Reg. 38,989 (Aug. 13, 2018) (notifying the public of the updated “Trial Practice Guide” and its accessibility through the USPTO website: <https://go.usa.gov/xU7GP>) (“Practice Guide Update”) at 15 (A “sur-reply that raises a new issue or belatedly presents evidence may not be considered”; a sur-reply may “respond” to arguments “raised” in the reply but “respond . . . does not mean embark in a new direction with a new approach as compared to positions taken in a prior filing.”)).

PO Resp. 7. Patent Owner asserts these limitations represent the ordinary meaning of “mobile device.” Sur-Reply 5. Additionally, Patent Owner argues “[t]he ’298 patent plainly does not contemplate “any device” that can be carried, but a ‘mobile device’ such as a smartphone, PDA, handheld, etc.” Sur-Reply 5 (citing Ex. 1001, 2:52–57).

The phrases “e.g.,” “etc.,” “might,” “and “could be” do not show “a clear indication in the intrinsic record that the patentee intended the claims to be so limited” to one of the devices listed between “e.g.” and “etc.,” or the device or functions listed after “could be.” See *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1327 (Fed. Cir. 2012). Rather, the terms “e.g.” and “etc.” indicate that the patentee intended this list of examples of terminals to be non-exclusive, rather than limiting. Thus, we do not adopt Patent Owner’s suggested limitation of the claimed “mobile phone” to a smartphone or smartphone-like device that has a QWERTY keyboard. Additionally, Patent Owner’s suggested limitations to cellular communication and Bluetooth are separately recited in the claims and do not need to be imported into the construction of “mobile phone.”

Patent Owner asserts Petitioner has implicitly construed “mobile device” by contending that Charbonnier’s bimode device<sup>15</sup> is a mobile device. PO Resp. 7. Patent Owner asserts several implicit constructions in order to refute Petitioner’s contentions. *Id.* at 6–10. Patent Owner asserts that the bimode device is a “special-purpose” device for use with and within range of a DECT (Digital Enhanced Cordless Communications) base station. *Id.* Based on this assertion, Patent Owner implies that the bimode device

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<sup>15</sup> Charbonnier is described in more detail *infra* at Section II.C.1.

could not be a “typical mobile device” which would not be intended only for local use within the range of a base station. *Id.* Additionally, Patent Owner asserts that Charbonnier’s bimode device that uses a DECT phone and mobile technology is “theoretical” and is not known in the art or “real-life” but rather only described in Charbonnier. *Id.* at 10. Patent Owner further argues that the bimode device is too large to be a mobile device and is not intended to be and is not the proper form-factor to used outside the home. *Id.* at 9–10. Patent Owner also asserts that the bimode device is not clearly taught as using GSM functions as a back-up to the STN connection, and therefore it cannot be considered a smartphone. *Id.* at 10. Finally, Patent Owner suggests the mobile device, unlike the bimode device, must be used in contexts other than the DECT base station. *Id.*

We note that none of these implicit constructions are supported by further citation to the Specification (other than the citation above), extrinsic evidence, or declaration testimony. *See id.* at 6–10.

As to whether the claimed “mobile device” must be a “typical” mobile device, “the words of a claim ‘are generally given their ordinary and customary meaning.’” *Phillips*, 415 F.3d at 1312 (internal citations omitted). “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313.

Patent Owner’s assertion that the DECT phone is not a typical device or is a “special-purpose” device fails to establish what the ordinary meaning of mobile device is and why a DECT phone is outside this ordinary meaning. DECT phone device may meet claim language as long as any feature of the device the makes it allegedly special does not take the device

outside of the limit of the claims. The claims do not include or exclude DECT phones or the context of a DECT phone so use of a device associated with a DECT phone by itself is not relevant. As explained above, we do not limit the claimed “mobile device” to a smartphone. Additionally, Patent Owner has not presented evidence in the Specification or extrinsic evidence regarding the minimum range of mobile phone or whether a mobile phone must be able to be used outside of a home.

As to whether the DECT phone is “theoretical,” in an obviousness analysis, prior art is valid for all that it teaches even if it is “theoretical” or has not been produced to a real-life device.<sup>16</sup> The Court of Appeals for the Federal Circuit addressed the issue of whether enablement is a requirement for a reference cited in an obviousness rejection and determined the following:

While a reference must enable someone to practice the invention in order to anticipate under § 102(b), a non-enabling reference may qualify as prior art for the purpose of determining obviousness under § 103. *Reading & Bates Constr. Co. v. Baker Energy Resources Corp.*, 748 F.2d 645, 652, 223 USPQ 1168, 1173 (Fed.Cir.1984) (reference that lacks enabling disclosure is not anticipating, but “itself may qualify as a prior art reference under § 103, but only for what is disclosed in it” (emphasis in original)); see *Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551, 13 USPQ2d 1301, 1304 (Fed.Cir.1989) (“[e]ven if a reference discloses *an inoperative device*, it is prior art for all that it teaches”).

*Symbol Technologies, Inc. v. Opticon, Inc.*, 935 F.2d 1569, 1578 (Fed. Cir.

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<sup>16</sup> Patent Owner does not appear to be arguing that the bimode device needed to be reduced to practice.

1991) (emphasis added).<sup>17</sup>

As to the form-factor or size of the “mobile device,” Patent Owner has not presented evidence in the Specification or extrinsic evidence regarding the minimum or maximum size the claimed “mobile device” or whether the claimed “mobile device” must be able to be used outside of a home. Also, as explained above, we do not limit the “mobile device” to a smartphone so it is not relevant whether prior art device uses GSM functions as a back-up to the STN connection.

For the foregoing reasons, we do not adopt Patent Owner’s proposed construction of “mobile device” or its implicit limitations on the term “mobile device.”

The Petitioner’s Reply asserts that the claim term “mobile device” should be any device that is mobile. Reply 2. Patent Owner asserts “[s]uch a construction is plainly overbroad, as separating the two words fails to give any weight to the term as a whole as it would have been understood by one of ordinary skill in the art.” Sur-Reply 5.

We determine that the claim itself limits the “mobile device” to one that “operates within a cellular wireless network system.” A “mobile device” must be a device able to carry out the functions recited in the claim.

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<sup>17</sup> In its Reply, Petitioner cites to Ex. 1049. Reply 5. Patent Owner asserts the cited standard of Exhibit 1049 cannot be considered to be applicable to Charbonnier because it did not teach any standard involving Internet access via GSM because the General Packet Radio Service (GPRS), on which Internet access through GSM is provided, was not available until the year 2000. Sur-Reply 8. This dispute regarding GSM is not relevant because the claims as properly construed do not require a smartphone device.

The use of the word “mobile” shows the device is cordless or otherwise not fixed to a location. We determine no other construction of the term “mobile device” is necessary. We need not, and do not, expressly construe this term further.

*C. Obviousness of Claims the Combination of Charbonnier, RFC793, SMS Specification, and DECT Speakerphone (ground 3)*

Petitioner contends that claims 1, 3, 5, 6, 8, and 10 are unpatentable under 35 U.S.C. § 103(a) as obvious over of Charbonnier, RFC793, SMS Specification, and DECT Speakerphone. Pet. 8. To support its contentions, Petitioner provides explanations as to how the prior art allegedly teaches each claim limitation. *Id.* at 26–52, 65–68. For convenience, all references cited in the grounds of the Petition are summarized below.

*1. Charbonnier (Ex. 1028)*

Charbonnier is a European Patent Application titled, “Method for Establishing Communication Between Two Telephone Facilities Through a Computer Network by SMS Message.” Ex. 1028, code (54). Charbonnier discloses a technique for bimode mobile phones, which operate on both cellular (e.g., GSM) and DECT wireless networks, to establish TCP/IP communications over the Internet. *Id.* ¶ 18. According to Charbonnier, in order for two mobile phones to establish an Internet connection with each other, the phones first must obtain temporary computer addresses, known as Internet Protocol (“IP”) addresses, and exchange the temporary IP addresses with each other. *Id.* ¶ 2. Charbonnier discloses that it would be desirable for the mobile phones to maintain a connection with the Internet while they exchange their respective IP addresses. *Id.* ¶¶ 2–3. Charbonnier proposes that bimode mobile phones provide this opportunity by allowing the mobile

phone's to exchange IP addresses using a cellular network, thereby leaving open for other uses the mobile phones' respective connections with the Internet. *Id.* ¶¶ 6–9. Figure 1 of Charbonnier, reproduced below, is illustrative.

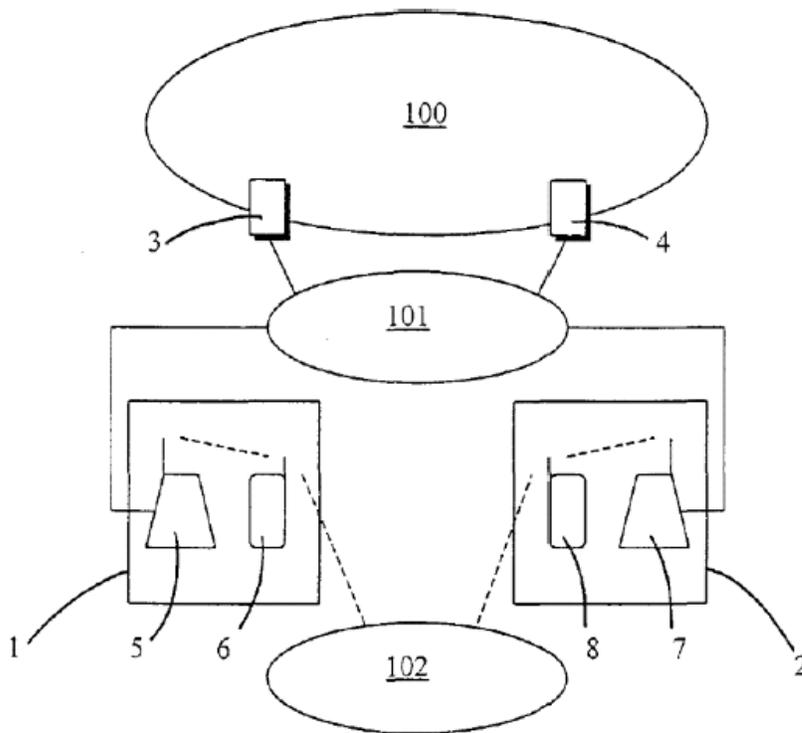


Figure 1

Figure 1 shows a schematic view of telephone facilities 1 and 2 connected to Internet 100 via Switched Telephone Network (“STN”) 101 and servers 3 and 4, respectively. *Id.*; *see also id.* ¶ 15–16. Each of telephone facility 1 and 2 also is connected to cellular telephone network 102 (e.g., GSM). *Id.* Fig. 1, ¶¶ 15–16. Each of facility 1 and 2 include a bimode mobile phone 6 and 8 and DECT base station 5 and 7, respectively. *Id.* ¶ 18. Each of mobile phone 6 and 8 communicate with DECT base station 5 and 7, respectively, using a DECT radio link. *Id.* ¶ 30.

Charbonnier discloses that mobile phones 6 and 8 obtain temporary IP addresses from their service providers. *Id.* ¶¶ 2–3, Fig. 2 (step 25). Mobile phone 6 then sends an SMS message containing its temporary IP address (IP1) to phone 8. *Id.* at Fig. 2 (step 26), ¶¶ 36, 48. Upon receipt of the SMS message, phone 8 connects to the Internet and obtains a temporary IP address (IP2). *Id.* at Fig. 2 (step 27), ¶¶ 37, 48. Phone 8 then sends an IP-based response message via Internet 100 to phone 6, addressing the message to IP1 (the IP address of phone 6 from the SMS message) and including IP2 (the IP address of phone 8). *Id.* at Fig. 2 (step 28), ¶¶ 37–39, 48. This response is transmitted from phone 8 to its DECT base station 7, which transmits the response to phone 6 via fixed network 101, Internet 100 (through any service providers 3, 4), and DECT base station 5. *Id.* at Fig. 1, ¶¶ 37–40, 48. Thus, a bidirectional TCP/IP data connection is established over Internet 100 between DECT base station 7 and phone 6. *Id.* at Fig. 2 (step 29), ¶ 10.

## 2. RFC793 (Ex. 1010)

RFC793 is from the Request for Comments (“RFC”) series of documents, *see, e.g.*, Ex. 1010, 1, and is titled “Transmission Control Protocol, DARPA Internet Program Protocol Specification,” *id.* at 5.<sup>18</sup> RFC793 includes disclosure regarding opening and using TCP ports for application addressing. *Id.* at 10, 11, 12, 14, 16, 17, 18–21, 24–28, 30, 32,

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<sup>18</sup> Here we cite to the page number printed on the exhibit by Petitioner, e.g., “Ex. 1010 – Page 1” and “Ex. 1010 – Page 5.” For the remainder of this Decision, to be consistent with the citations in the Petition, we instead cite to the TCP specification page numbers, e.g., [Page 1] (which corresponds to Ex. 1010 – Page 10).

45, 46, 54, 55, 79, 90, 93.

### 3. *SMS Specification (Ex. 1014)*

SMS Specification is a document titled “Universal Mobile Telecommunications System (UMTS); Technical realization of the Short Message Service (SMS) (3G TS 23.040 version 3.5.0 Release 1999).”

Ex. 1014. SMS includes disclosure regarding opening and using SMS ports for application addressing. *Id.* at 13–14, 66–69, 72, 73.

### 4. *DECT Speakerphone (Ex. 1029)*

DECT Speakerphone is a printout of a product page describing the Panasonic KXT-CD 735 DECT phone. Ex. 1029. A picture of the phone is reproduced below.

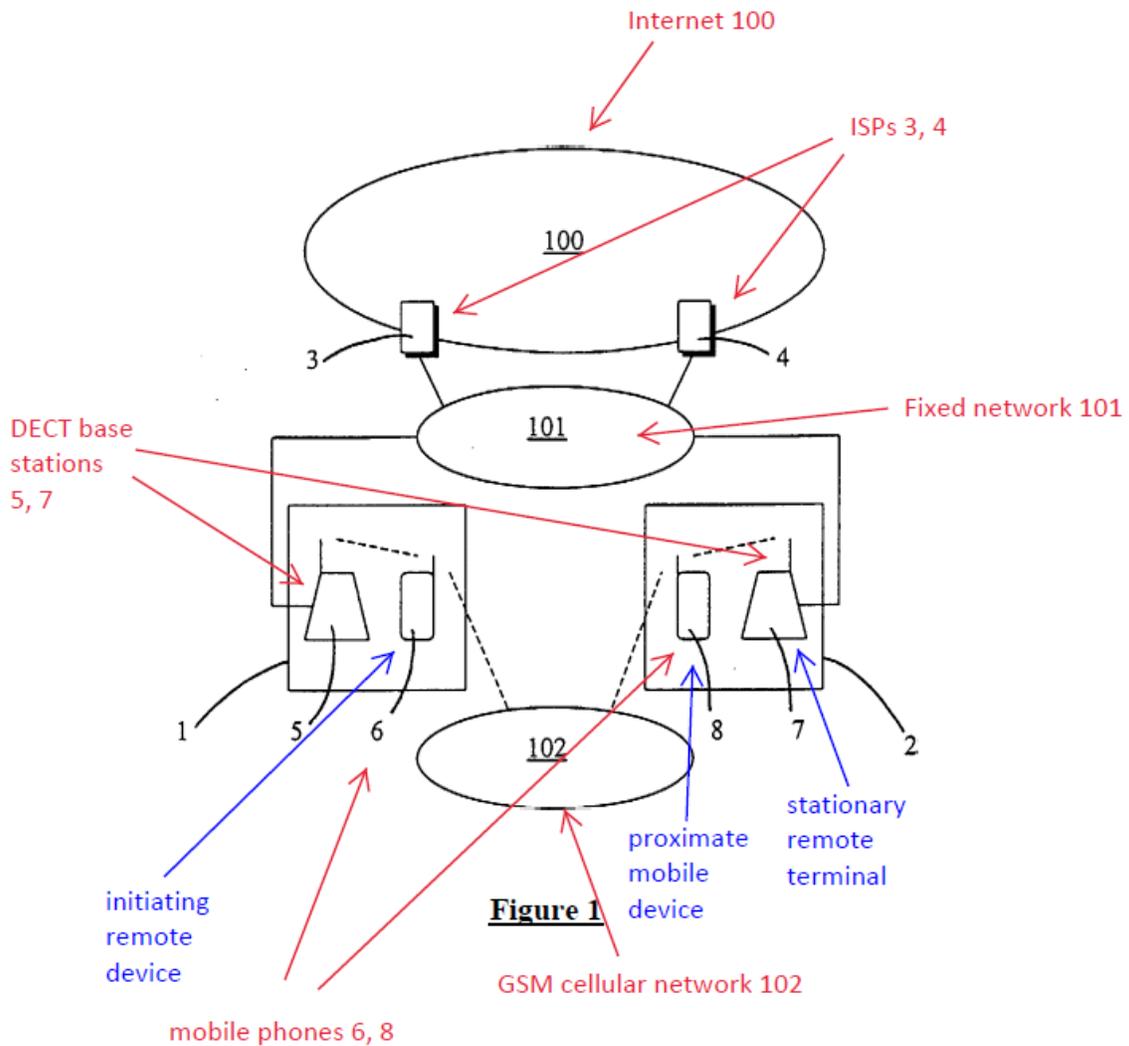


The picture shows a Panasonic KXT-CD 735 DECT phone, which includes a handset and a base unit or base station. *Id.* As can be seen in the picture, and described in the product page, the base station includes a dual keypad and digital speakerphone for making and receiving calls when the handset is elsewhere. *Id.* The base station also includes a visual display, shown in the picture. *Id.*

### 5. *Analysis*

a. Claims 1 and 6

Petitioner identifies where it asserts each recitation of claims 1 and 6 are taught in the asserted prior art references, and sets forth a rationale to combine the references. Pet. 35–52, 65–68. Petitioner relies primarily on Charbonnier. Figure 1 of Charbonnier, which we have annotated and reproduced below, is illustrative. Red annotations identify elements described in Charbonnier’s disclosure; blue annotations indicate Petitioner’s identification of claim elements.



Ex. 1028, Fig. 1 (annotated). Figure 1 shows a schematic view of telephone facilities 1 and 2 connected to Internet 100. Pertinent to the discussion below, Petitioner identifies DECT base station 7, modified to include a speakerphone as taught in DECT Speakerphone, as the “stationary terminal,” mobile phone 6 as the “initiating remote device,” and mobile phone 8 as the “proximate mobile device.” Pet. 35–37, 67–68. Petitioner identifies the local DECT radio link between mobile phone 8 and DECT base station 7 as the “short-range wireless technology” “communication link” “between the stationary terminal and proximate mobile device.” *Id.* at 37–39. Petitioner identifies GSM cellular network 102 as part of the cellular wireless network system within which the proximate mobile device (mobile phone 8) operates. *Id.* at 39–40.

Although Charbonnier discloses using SMS messaging (*see, e.g.*, Ex. 1028 ¶ 36) to send notices from mobile phone 6 to facility 2, and using the TCP/IP protocol (*see, e.g.*, Ex. 1028 ¶ 40) for communication between facility 1 and facility 2, Charbonnier does not expressly disclose certain details regarding SMS ports, TCP ports, and destination IP addresses. Petitioner relies on SMS Specification and RFC793 to provide such details, asserting such were “well-known implementation details set forth in the TCP standard [RFC793] and SMS Specification related to TCP ports and SMS ports, respectively.” Pet. 29; *see generally id.* at 40–52.

Patent Owner does not raise arguments disputing Petitioner’s showing, except certain limitations, as explained below. As detailed below, having reviewed Petitioner’s arguments and the evidence regarding the subject matter, we are persuaded Petitioner has made a sufficient showing.

*Preamble*

Petitioner establishes by a preponderance of the evidence that Johnson teaches a “method of establishing a data communications session between a stationary terminal and an initiating remote device, the method comprising.” as recited in claim 1 and “A non-transitory computer-readable medium including instructions that, when executed by a processor, cause the processor to establish a data communications session between a stationary terminal and an initiating remote mobile device, the instructions of the computer-readable medium comprising instructions for.” Pet. 35–37; Ex. 1028 ¶¶ 20, 24, 26, 31–40, 48, 51–52, Figs. 1–2; Ex. 1002 ¶¶ 91–94. For example, as to claim 1 Petitioner contends Charbonnier discloses a method of establishing a data communications session (VoIP call using TCP/IP) between a stationary terminal (DECT base station 7) and an initiating remote device (mobile phone 6). Pet. 35–36. Additionally, Petitioner contends Charbonnier discloses the mobile phones 6 and 8 contain “programmable logic blocks,” including “applications” for establishing the Internet connection and VoIP communication automatically, without user intervention. *Id.*

“... stationary terminal ...”

Petitioner establishes by a preponderance of the evidence that Charbonnier and the DECT Speakerphone teach “establishing a communication link through a short-range wireless technology between the stationary terminal and a proximate mobile device wherein the proximate mobile device operates within a cellular wireless network system,” as recited in claims 1 and 6. Pet. 37–40; Ex. 1028 ¶¶ 10, 14–23, 30, 41–43, Fig. 1, claim 5; Ex. 1002 ¶¶ 95–101; Ex. 1042 (DECT as ESTI standard); Ex. 1048,

8 (DECT TR 1010 159 v.1.2.1); Ex. 1043, at code (57), 1:27–31,1:42–46 (Nilssen patent on cordless cell phone system).

Petitioner argues it would have been obvious to modify Charbonnier’s DECT base 7 to include a digital speakerphone as taught by DECT Speakerphone. Pet. 67. We find persuasive Petitioner’s rationale for the combination because both Charbonnier and DECT Speakerphone relate to DECT phones, and DECT Speakerphones provides several express motivations to combine by teaching digital speakerphones in DECT base stations. *Id.* at 66–67 (citing Ex. 1029, 1). Furthermore, DECT Speakerphone provides several reasons to include a digital speakerphone, including: (1) making and receiving calls from the base unit even when the handset is elsewhere, (2) hand free for more convenience, and (3) conference calling where more than one person can listen or speak. *Id.* (citing Ex. 1029, 1). We are persuaded by Petitioner’s argument that a person of ordinary skill in the art would have had a reasonable expectation of success in adding a speakerphone to Charbonnier’s DECT base station 7 based on, for example, DECT Speakerphone and other documents showing Samsung and other phones with similar DECT speakerphones in the base station. *Id.* at 67 (citing Ex. 1046, Exhibit A).

Furthermore, we find persuasive Petitioner’s argument that DECT base station 7, modified to include a speakerphone, would have been considered a “stationary terminal.” As we discussed above with regard to claim construction, we do not adopt Patent Owner’s construction of “terminal.” *Supra* Sec. II.C.

Patent Owner does not dispute that it would have been obvious to combine a speakerphone with DECT base station 7. However, Patent Owner

asserts DECT base station is not a “stationary terminal” and a bimode phone is not a “mobile device.” PO Resp. 10–17. Patent Owner’s assertion is based on: its argument that DECT telephone base is not capable of establishing a communication link through a short-range wireless technology between the stationary terminal and a proximate mobile device; and, its proposed construction of “mobile device.” *Id.* at 8, 14–16.

Patent Owner also asserts “A DECT telephone base is not capable of short-range wireless communications, such as Bluetooth communications, that may be employed by computers. Rather, a DECT telephone base is only capable of special-purpose communication with a corresponding handset.” *Id.* at 13–14. In its Sur-Reply, Patent Owner further asserts “whatever short-range link is used, it needs to be one that is established between two computing devices, not pre-configured using the DECT protocol between the base and handset of Charbonnier.” Sur-Reply 9–10. Patent Owner has not provided a construction for “short-range wireless communication.” Patent Owner has not established that such communication must be between two computing devices. Other than the suggestion in the Specification that a smartphone is an example of the mobile device and that Bluetooth is an example of the short-range wireless communication, Patent Owner has not provided support for the limitations it suggests we impose on the claims. The radio connection between the DECT telephone base 7 and mobile phone 8 is undoubtedly short-range wireless communication.

Further, even under Patent Owner’s unduly narrow construction of “mobile device” as a computing device, Petitioner contends that Charbonnier discloses that mobile phones 6 and 8 contain programmable logic blocks that run applications. Pet. 35–37 (citing Ex. 1028 ¶¶ 20, 24, 26,

27, 48, 51, 52; Ex. 1002 ¶¶ 92–93); *see id.* at 37–40; Reply 4–5. We agree with Petitioner. Charbonnier discloses that mobile phone 6 is a GSM phone incorporating a DECT radio handset module, a programmable logic block for communicating through the Internet, an Internet connection block, an Internet telephony block, a DECT call button, a GSM call button, and Internet button. Ex. 1028 ¶ 20. Charbonnier discloses that the mobile phone contains an application for connection to the Internet. Ex. 1028 ¶ 26. Charbonnier discloses that the mobile phone contains a telephony over the Internet application. Ex. 1028 ¶ 27. Dr. Houh testifies that “a ‘programmable logic block’ running an ‘application’ is inherently a ‘processor.’” Ex. 1002 ¶ 93. We credit Dr. Houh’s testimony in determining that Charbonnier’s disclosure of a mobile phone that runs applications for establishing an Internet connection and VoIP communication describes a “mobile device” even under Patent Owner’s unduly narrow construction.

Patent Owner also asserts that “even assuming *arguendo* that a bimode phone is a mobile device, and the DECT base station is a stationary terminal, the bimode phone and DECT base do not ‘establish’ a short range connection as that phrase is described in the ‘298 Patent Specification.” PO Resp. 14. Patent Owner asserts that “establishing” is setting up or configuring as opposed to initiating. *Id.* at 14–15 (citing *Atlas IP, LLC v. Medtronic, Inc.*, 809 F.3d 599, 605–06 (Fed. Cir. 2015) (determining, in an unrelated case, that “establish” means “set up” rather than “initiate”)). Additionally, Patent Owner asserts that the ‘298 patent Specification uses the short-range connection between the mobile device and the stationary terminal to facilitate “transparent handoffs” in which the user is assumed to

be “away from the stationary terminal” when a short-range connection cannot be made. *Id.* at 15–16.

Petitioner contends “just like a Bluetooth device, the DECT mobile phone can be ‘paired’ with a DECT base station to establish a trusted relationship in advance.” Reply 7 (citing Pet. 39-40). Petitioner further contends “[t]he uncontested evidence of record is that an actual DECT radio communication link, i.e., the claimed ‘communication link,’ is not ‘established’ unless and until the devices are within the 300 foot DECT radio range.” *Id.* (citing Pet. at 37–40 (discussing the radio ranges of the systems); Ex. 1052 ¶ 11 (Houh declaration in support of Reply)). We agree. Establishing a connection can be associated with pairing a mobile phone with a DECT stationary terminal. In that way, losing the connection is an indication that the mobile phone is away from the DECT stationary terminal, similar to how Bluetooth is described in the specification.

In fact, Patent Owner admits “Charbonnier states that the handsets 6, 8 are paired, and therefore connected by radio link to the respective DECT bases thereof 5, 7 . . . .” Sur-Reply 10. Nevertheless, Patent Owner asserts “Charbonnier does not teach or suggest when or how this pairing is accomplished.” *Id.* at 10–11. To the extent that Patent Owner requests some higher level of detail regarding specifically how a pairing would be accomplished, we determine that such detail is not required. *Cf., In re Fisher*, 427 F.2d 833, 839 (CCPA 1970) (indicating patents in the mechanical or electrical arts involve predictable factors compared to the more unpredictable chemical and biological arts); *cf. also Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384 (Fed. Cir. 1986) (“a patent need not teach, and preferably omits, what is well known in the art”).

We are persuaded that Petitioner’s contentions are sufficient.

Also, according to Patent Owner, the DECT bimode phone does not comprise a mobile device for the reasons discussed above associated with Patent Owner’s construction of that term. *Id.* at 14, 7–9. Patent Owner’s arguments do not undermine Petitioner’s showing. As we discussed above with regard to claim construction, *supra* Sec. II.B, we do not adopt Patent Owner’s construction of “mobile device,” nor its implicit constructions. Therefore, we find unavailing Patent Owner’s argument that DECT bimode phone (mobile phone 6 shown in Figure 1 above) does not comprise a mobile device.

For the foregoing reasons, we find Petitioner’s arguments and the evidence of record to be sufficient for the purposes of showing this limitation by a preponderance of the evidence.

*“opening a listening port on the proximate mobile device to receive communications through a pagemode messaging service”*

Petitioner establishes by a preponderance of the evidence that Charbonnier and the SMS Specification teach “opening a listening port on the proximate mobile device to receive communications through a pagemode messaging service,” as recited in claims 1 and 6. Pet. 40–41; Ex. 1028 ¶¶ 8, 37, 48, Figs. 1, 2, claims 3, 10; Ex. 1002 ¶¶ 102–105. For example, Charbonnier discloses the proximate mobile device (phone 8) receiving communications (SMS invitation messages) through a page-mode messaging service (SMS service on GSM network 102) and the SMS Specification discloses opening a listening port (opening an SMS port) by associating SMS ports with applications, just like TCP ports. Pet. 40–41.

*“receiving . . . an invitation message . . .”*

Petitioner establishes by a preponderance of the evidence that Charbonnier and the SMS Specification teach “receiving, at the listening port and through the page-mode messaging service, an invitation message from the initiating remote device, wherein such invitation message comprises a network address and listening port related to the initiating remote device,” as recited in claims 1 and 6. Pet. 42–46; Ex. 1028 ¶¶ 8, 37, 48, Figs. 1, 2, claims 3, 10; Ex. 1002 ¶¶ 106–115. For example, Petitioner contends it would have been obvious to a person having ordinary skill in the art to include in the SMS message the listening port (destination TCP port) related to the initiating remote device (phone 6) along with the IP address (IP1). Pet. 43–46.

*“transmitting the network address and listening port”*

Petitioner establishes by a preponderance of the evidence that Charbonnier and the DECT Speakerphone teaches “transmitting the network address and listening port received by the proximate mobile device to the stationary terminal though the short-range wireless technology whereupon the stationary terminal receives the network address and listening port, transmits a response to the network address and listening port related to the initiating remote device,” as recited in claims 1 and 6. Pet. 46–48; Ex. 1028 ¶¶ 20, 24–27, 37, 40, 48, 52, Figs. 1, 2, claims 3, 10; Ex. 1002 ¶¶ 116–123; Ex. 1031, Figs. 1, 9–10 (DECT ESTI TS 102 265 v.1.1.1); Ex. 1032, 124 (DECT ETSI EN 301 649 v.1.3.1). For example, Petitioner contends, in a configuration of Charbonnier in which Charbonnier’s programmable logic blocks for establishing Internet communication are internal to the DECT base station 7, it would have been obvious that mobile phone 8 would have

transmitted the destination network address (IP1) and TCP port to the DECT base station 7 using other DECT protocols, so that the Internet communication block in the DECT base station 7 can create, address, and transmit the TCP/IP response to mobile phone 6. Pet. 49 (citing Ex. 1028 ¶ 52). Additionally, Petitioner contends it would have been obvious to also receive the listening port (TCP port), either in the properly addressed header of the TCP/IP response (in a configuration where the programmable logic blocks for establishing Internet communication are internal to the mobile phones) or via the DECT protocols so that the DECT base station 7 can create and properly address the TCP/IP response (in a configuration where the programmable logic blocks for establishing Internet communication are internal to the DECT base station 7). *Id.* at 49–50. Petitioner further contends the IP1 and TCP port are “related to mobile phone 6” as they uniquely identify the addressable communication socket or transport address for mobile phone 6. *Id.* at 50.

*“whereupon the stationary terminal . . . establishes a virtual reliable connection with the initiating remote device for data communications”*

Petitioner establishes by a preponderance of the evidence that Charbonnier and the DECT Speakerphone teaches “whereupon the stationary terminal . . . establishes a virtual reliable connection with the initiating remote device for data communications,” as recited in claims 1 and 6. Pet. 46–48; Ex. 1028 ¶¶ 20, 24–27, 37, 40, 48, 52, Figs. 1, 2, claims 3, 10; Ex. 1002 ¶¶ 116–125; Ex. 1031, Figs. 1, 9–10; Ex. 1032, 124. For example, Petitioner contends in a configuration of Charbonnier in which Charbonnier’s programmable logic blocks for establishing Internet communication are internal to the DECT base station 7, the TCP/IP

connection with the initiating remote device (phone 6) terminates at DECT base station 7, with the connection between mobile phone 8 and DECT base station 7 using other DECT protocols. Pet. 52. Although, Petitioner relies on another configuration (termed “the first configuration” in the Petition), we rely on this configuration (termed “the second configuration” in the Petition) where the endpoints of the virtual reliable connection are the stationary terminal (DECT base station 7) and mobile phone 6 for the purpose of this decision.

For this limitation, Petitioner argues Charbonnier’s DECT base station 7 (stationary terminal) establishes a TCP/IP connection (virtual reliable connection) with mobile phone 6 (initiating remote device) for data communications (for example, a VoIP call). Pet. 51–52. Figure 1 of Charbonnier, as annotated by Petitioner and reproduced below, is illustrative.

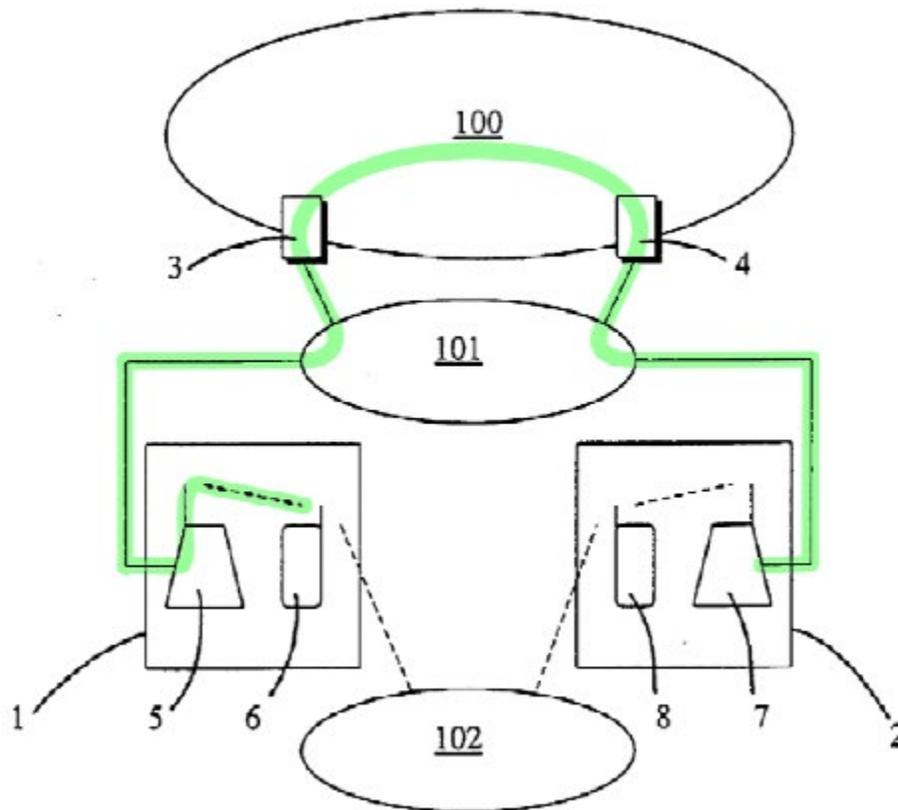


Figure 1 shows a schematic of telephone facilities 1 and 2 connected to Internet 100.

Ex. 1028, Fig. 1. Figure 1 shows a schematic of telephone facilities 1 and 2 connected to Internet 100. Figure 1 is annotated with green to show the path of the connection between DECT base station 7 and mobile phone 6, which connects through STN network 101, access provider 4, Internet 100, access provider 3, STN network 101, and DECT base station 5. Relying on the declaration of Dr. Houh, Petitioner explains:

In the first configuration, the DECT base station 7 establishes a TCP/IP connection with the initiating remote device (phone 6) that terminates at phone 6 and phone 8. In the second configuration, the TCP/IP connection with the initiating remote device (phone 6) terminates at DECT base station 7, with the connection between mobile phone 8 and DECT base station 7 using other DECT protocols. Under each configuration, the

DECT base station 7 has established a virtual reliable connection (TCP/IP) with the initiating mobile device 6.

Pet. 52 (citing Ex. 1002 ¶125).

At issue is whether the asserted stationary terminal (DECT base station 7), rather than some other element in Charbonnier, establishes a connection with mobile device 6, as required by the claim. In particular, Charbonnier describes a “method for establishing communication between the facilities 1 and 2 through Internet 100.” Ex. 1028 ¶¶ 2, 5, 29, 39. However, each of facility 1 and facility 2 includes both a mobile phone and DECT base station. *See, e.g., id.* at Fig. 1. Patent Owner asserts Charbonnier does not expressly disclose which element(s) within facility 2 establish(es) the connection between the two facilities. PO Resp. 18. Patent Owner argues the communication ultimately is between mobile device 6 and mobile device 8 and the DECT base station’s function of passing along or originating packets to enable such communication does not *establish* the connection between the mobile devices. *Id.* Patent Owner further argues that, in the combination including DECT Speakerphone, Petitioner does not provide any further analysis regarding how DECT base station 7 (asserted stationary terminal) establishes the claimed connection. *Id.*

We find Petitioner’s showing that DECT base station 7 establishes a virtual reliable connection is sufficient. DECT base station 7 is the interface between facility 2 and the network (STN network), which suggests that DECT base station 7 establishes a connection with the network. For example, paragraph 52 of Charbonnier states “[t]he programmable logic blocks for establishing communication through the Internet could be incorporated into the base . . . .” Ex. 1028 ¶ 52; Pet. 36, 49. We find this

evidence is sufficient to show this limitation by a preponderance of the evidence.

Patent Owner asserts that in the “first configuration” wherein the DECT base station 7 is alleged to “establish[] a TCP/IP connection with the initiating remote device (phone 6),” the connection “terminates at phone 6 and phone 8,” which are the devices users are using to communicate with one another. PO Resp. 18 (citing Pet. 52) (alteration in original). Patent Owner asserts in the “second configuration,” Petitioner alleges that “the TCP/IP connection with the initiating remote device (phone 6) terminates at DECT base station 7,” but does not specify where the connection terminates at the other end and admits that the communication between user devices does not use the virtual reliable connection because “the connection between mobile phone 8 and DECT base station 7 uses other DECT protocols.” *Id.* at 18–19. Finally, regarding combinations including the DECT Speakerphone reference, Patent Owner asserts “the Petition does not address the nature of any connection between mobile phone 6 and its DECT base station.” *Id.* at 19 (citing Pet. 65–67).

Thus, because the claim requires the established connection to be with mobile phone 6, Patent Owner argues the connection in Charbonnier has not been shown, in Petitioner’s contention or citations to evidence, to terminate (or have an endpoint) at mobile phone 6 (asserted initiating remote device). *Id.* at 19–26. We determine Petitioner’s showing of a virtual reliable connection with mobile phone 6 is sufficient. Additionally, Charbonnier states “[t]he programmable logic blocks for establishing communication through the Internet could be incorporated into the base or else shared by the base and the mobile telephone.” Ex. 1028 ¶ 52; Pet. 48–49, 52.

Thus, the Petition established that the logic for communication via the internet can be in the base station or the phone. According to Charbonnier, “[d]uring telephone communication through the Internet 100 (step 29), the facilities 1 and 2 send each other data packets through the Internet 100 according to TCP/IP standard protocols,” i.e. a virtual reliable connection. Ex. 1028 ¶ 40(cited at Pet. 50). Thus, as recited in the claim, the stationary terminal (DECT base station 7) . . . establishes a virtual reliable connection with the initiating remote device (mobile phone 6) for data communications. Additionally, Petitioner contends “when [an] audible warning signal is provided (Ex. 1028 at [0039]), a user could optionally use the digital speakerphone on the DECT base station 7 to conduct the VoIP call directly with mobile phone 6 [and] mobile phone 8 would not continue to participate in the data communication between DECT base station 7 and mobile phone 6.” Pet. 68 (citing Ex. 1002 ¶ 159). Thus, we are persuaded that this suggests telephone communication over Internet 100 between facility 1 and facility 2 involves, and may terminate at, mobile phone 6 and involves and may be established by and terminate at DECT base station 7.

Patent Owner also argues that Petitioner’s argument in the Reply that the claims do not require endpoints to the virtual reliable connection is incorrect. Sur- Reply 15–17 (citing Reply 12–14). As explained above, we determine that the Petitioner has shown that the stationary terminal (DECT base station 7 . . . establishes a virtual reliable connection with the initiating remote device (mobile phone 6) as to be endpoints of a virtual reliable connection, thus this argument is moot.

Patent Owner also argues:

Petitioner argues one of ordinary skill in the art “would have been motivated to include a NAT [Network Address Translator] traversal technique as disclosed in TURN<sup>19</sup>” because “a POSITA would know that there is no way to know *a priori* whether the mobile phones 6 and 8 are separated by NAT and, if so, what type of NAT.” Pet. 58 (discussing ground 2<sup>20</sup>). Thus, Petitioner is arguing one of ordinary skill in the art would not have implemented Charbonnier without using a NAT traversal technique such as TURN, which contradicts Petitioner’s assertions in Grounds 1, 3, 5, and 7. At the same time, however, Petitioner admits that “the TURN server establishes a connection and facilitates a data exchange session between the TURN client and the peer,” rather than the stationary terminal establishing the connection as claimed. Pet. 57.

PO Resp. 26–27. In other words, Patent Owner asserts TURN (ground 2, Pet. 53–65) and Petitioner contentions regarding TURN, are necessary for this ground (ground 3) and attempts to show that this ground fails because either it does not describe the operation of a NAT or the NAT terminates the virtual reliable connection so it does not terminate in the DECT base station 7. In the Decision to Institute, we rejected this argument as not being relevant to the grounds that do not include TURN. Inst. Dec. 33. Patent Owner further argues “[t]he Decision on Institution misapprehends that the argument in the preceding paragraph regarding TURN pertains only to the ground involving Charbonnier and TURN. *See* Decision 33.” PO Resp. 27.

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<sup>19</sup> Ex. 1035. TURN is asserted in grounds 2 and 4.

<sup>20</sup> Ground 2 is obviousness of the claims over Charbonnier, RFC793, SMS Specification, TURN and ground 4 is obviousness of the claims over Charbonnier, RFC793, SMS Specification, TURN, and DECT Speakerphone

Patent Owner argues to the contrary, “that Petitioner’s arguments as to the TURN reference would logically apply to *any combination* with Charbonnier, such that one of ordinary skill in the art would not have implemented Charbonnier without using a NAT traversal technique such as TURN.” *Id.*

The Petition states “[because] service providers would often provide a private IP address, rather than a public IP address because of the scarcity of IPv4 addresses . . . if the DECT systems in Charbonnier are separated by NAT” there would be motivation to use a known NAT transversal technique. Pet. 57–58. We determine this is not a statement that a NAT is required in all cases but rather a statement that a NAT *could* be involved. Thus, we disagree that the combination asserted in ground 3 requires a description of a NAT or that the inability to determine “whether the mobile phones 6 and 8 are separated by NAT and, if so, what type of NAT” is inconsistent with Petitioner’s contentions in ground 3. *See* PO Resp. 26–27 (quoting Pet. 58); Reply 16. Petitioner’s ground 3 does not mention a NAT. Thus, because Patent Owner’s argument involves a different asserted ground of unpatentability, it does not alter our analysis with regard to the ground we address in this section of our Decision.

Patent Owner also argues, for the first time in the Sur-Reply, that the “whereupon” language should be construed to mean certain action(s) are to be performed based on the occurrence of certain other action(s), i.e. the stationary terminal transmits a response to the network address and listening port related to the initiating remote device, and establishes a virtual reliable connection with the initiating remote device for data communications in response to receiving the network address and listening port that was

transmitted in an immediately preceding claim element. Sur-Reply 13. Patent Owner then presents scenarios based on Petitioner’s contentions that would allegedly fail to meet its new proposed claim construction. *Id.* at 13–15. At the time of filing its Patent Owner Response, Patent Owner knew Petitioner’s contentions regarding the whereupon clause and nothing in the Reply purports to construe the whereupon clause in any way that would open the door to a response from Patent Owner. *See* Pet. 20, 55–57. Thus, Patent Owner cannot raise this new claim construction and arguments based on that construction for the first time in a Sur-Reply. Arguments not presented in the Patent Owner Response “will be deemed waived.” Practice Guide Update at 15 (A “sur-reply that raises a new issue or belatedly presents evidence may not be considered”; a sur-reply may “respond” to arguments “raised” in the reply but “respond . . . does not mean embark in a new direction with a new approach as compared to positions taken in a prior filing.”)). We decline to adopt this construction or consider this argument.

For the reasons above, we are persuaded that Petitioner has shown by a preponderance of the evidence that Charbonnier, RFC793, SMS Specification, and DECT Speakerphone teach the limitations of claims 1 and 6.

*b. Claims 3 and 8*

Claim 3 depends from claim 1. Claim 8 depends from claim 6. Claims 3 and 8 recite “the page-mode messaging service comprises SMS,” which Petitioner sufficiently shows to be disclosed in Charbonnier by a preponderance of the evidence. Pet. 52; Ex. 1028 ¶¶ 8, 37, 48, code (54), Fig. 2, claims 3, 10; Ex. 1002 ¶ 126. For example, Petitioner contends Charbonnier discloses that the page-mode messaging service is SMS. Pet.

52. Patent Owner does not make arguments specific to this claim.

For the reasons above, we are persuaded that Petitioner has shown by a preponderance of the evidence that Charbonnier, RFC793, SMS Specification, and DECT Speakerphone teach the limitations of claims 3 and 8.

*c. Claims 5 and 10*

Claim 5 depends from claim 1. Claim 10 depends from claim 6. Claims 5 and 10 recite “the network address comprises an IP address,” which Petitioner sufficiently shows to be disclosed in Charbonnier by a preponderance of the evidence. Pet. 52; Ex. 1028 ¶¶ 35, 37, 48, code (54), Fig. 2; Ex. 1002 ¶ 127. For example, Petitioner contends Charbonnier discloses “IP address is a computer address on the Internet 100 which can be fixed or dynamic.” Pet. 52 (quoting Ex. 1028 ¶ 35). Patent Owner does not make arguments specific to this claim.

For the reasons above, we are persuaded that Petitioner has shown by a preponderance of the evidence that Charbonnier, RFC793, SMS Specification, and DECT Speakerphone teach the limitations of claims 5 and 10.

*D. Obviousness of Claims over Charbonnier, RFC793, SMS Specification (ground 1)*

Petitioner contends that claims 1, 3, 5, 6, 8, and 10 are unpatentable under 35 U.S.C. § 103(a) as obvious over Charbonnier, RFC793, SMS Specification. Pet. 26. This ground, not including the DECT Speakerphone reference, challenges claims we have already determined are unpatentable based on the ground including the DECT Speakerphone (i.e., ground 3).

Thus, this Decision addresses all claims challenged. *See* 35 U.S.C. § 318(a) (“If an inter partes review is instituted and not dismissed under this chapter, the Patent Trial and Appeal Board shall issue a final written decision with respect to the patentability of any patent claim challenged by the petitioner and any new claim added under section 316(d).”).

In addition, Petitioner’s challenge without the DECT Speakerphone hinges on the same issues as the grounds already addressed, because Patent Owner’s argument against the ground 3 is based on Patent Owner’s arguments regarding ground 1. *See* PO Resp. 13–27.

Accordingly, in the circumstances of this case, we decline to address the challenges presented in Petitioner’s ground 1.

*E. Obviousness of Claims over Charbonnier, RFC793, SMS Specification, TURN (ground 2) and Obviousness of Claims over Charbonnier, RFC793, SMS Specification, TURN, and DECT Speakerphone (ground 4)*

The grounds including TURN (i.e., grounds 2 and 4) challenge claims we have already determined are unpatentable based on the ground including the DECT Speakerphone (i.e., ground 3). Thus, this Decision addresses all claims challenged. *See* 35 U.S.C. § 318(a) (“If an inter partes review is instituted and not dismissed under this chapter, the Patent Trial and Appeal Board shall issue a final written decision with respect to the patentability of any patent claim challenged by the petitioner and any new claim added under section 316(d).”).

Accordingly, in the circumstances of this case, we decline to address the challenges presented in Petitioner’s grounds 2 and 4.

*F. Obviousness of Claims the Combination of Charbonnier, RFC793, SMS Specification, DECT Speakerphone, and Lee (ground 7)*

Petitioner contends that claims 4 and 9 are unpatentable under 35 U.S.C. § 103(a) as obvious over of Charbonnier, RFC793, SMS Specification, DECT Speakerphone, and Lee. Pet. 8. To support its contentions, Petitioner provides explanations as to how the prior art allegedly teaches each claim limitation. *Id.* at 68–73. Lee (Ex. 1006)

Lee is a United States Patent Application titled, “Method and Apparatus for Digital Cellular Internet Voice Communications.” Ex. 1006, code (54). Lee discloses that the GSM cellular wireless network system supports TCP/IP communications. *Id.* at Fig. 2 (Digital Cellular Network 62), 3:1–12 (data rates are sufficient); 4:46–54 (GSM and others), 14:55–65 (TCP/IP), 15:48–63 (TCP/IP).

*Analysis*

Petitioner identifies where it asserts each recitation of claims 4 and 9 are taught in the asserted prior art references, and sets forth a rationale to combine the references. Pet. 69–73. Claims 4 and 9 are dependent from claims 1 and 6 (respectively) and Petitioner’s contentions regarding these dependent claims are based on its contention’s relating to the independent claims from which these claims depend.

Petitioner argues it would have been obvious to modify Charbonnier’s GSM network 102 to include the GSM network supported TCP/IP based communications as taught by Lee. *Id.* at 70. We find persuasive Petitioner’s rationale for the combination because would have known that the disclosure in Lee that the GSM network supported TCP/IP was consistent with the standards that defined the GSM network. *Id.* (citing Ex. 1033, 6 (GSM EN

301 113 v.6.1.1); Ex. 1002 ¶ 164). We are persuaded Petitioner has shown that a person of ordinary skill in the art would have had a reasonable expectation of success in modifying Charbonnier's GSM network 102 to include the GSM network supported TCP/IP based communications as taught by Lee. *Id.*

*“the cellular wireless network system supports TCP/IP based communications”*

Petitioner establishes by a preponderance of the evidence that Charbonnier and Lee teach “the cellular wireless network system supports TCP/IP based communications,” as recited in claims 4 and 9. Pet. 70–71; Ex. 1028 ¶¶ 10, 15, Fig. 1; Ex. 1002 ¶¶ 165–167. For example, Charbonnier states that the GSM network supports data communications and Lee discloses that the GSM network supports TCP/IP based communications, for example, the H.225 and H.245 TCP/IP communications within the H.323 VoIP protocol. Pet. 70.

*“the listening port comprises a TCP port”*

Petitioner establishes by a preponderance of the evidence that Charbonnier and Lee teach “the listening port comprises a TCP port,” as recited in claims 4 and 9. Pet. 71; Ex. 1002 ¶¶ 168–169. For example, Petitioner contends it would have been obvious for “the listening port [to comprise] a TCP port” in order to receive the TCP-based response taught by Charbonnier as taught by RFC793. Pet. 71.

*“the virtual reliable connection comprises a TCP connection”*

Petitioner establishes by a preponderance of the evidence that Charbonnier and Lee teach “the virtual reliable connection comprises a TCP

connection,” as recited in claims 4 and 9. Pet. 72–73; Ex. 1028 ¶ 53; Ex. 1006, 3:1–35, 4:46–54, 6:10–8:11, 8:1–10:3, 14:55–65, 16:61–17:6, Fig. 2; Ex. 1002 ¶¶ 168–169. For example, Petitioner contends Lee, like Charbonnier, discloses using SMS invitations and TCP/IP responses to establish VoIP communications. Pet. 71.

For the reasons above, we are persuaded that Petitioner has shown by a preponderance of the evidence that Charbonnier, RFC793, SMS Specification, and DECT Speakerphone, and Lee teach the limitations of claims 4 and 9.

*G. Obviousness of Claims over Charbonnier, RFC793, SMS Specification, Lee (ground 5), Obviousness of Claims over Charbonnier, RFC793, SMS Specification, TURN, and Lee (ground 6), Obviousness of Claims over Charbonnier, RFC793, SMS Specification, TURN, DECT Speakerphone, and Lee (ground 8)*

Here, the grounds including TURN (i.e., grounds 6 and 8) challenge claims we have already determined are unpatentable based on the ground including the DECT Speakerphone (i.e., ground 7). Also, the ground not including the DECT Speakerphone (i.e., ground 5) challenge claims we have already determined are unpatentable based on the ground including the DECT Speakerphone (i.e., ground 7). Thus, this Decision addresses all claims challenged. *See* 35 U.S.C. § 318(a) (“If an inter partes review is instituted and not dismissed under this chapter, the Patent Trial and Appeal Board shall issue a final written decision with respect to the patentability of any patent claim challenged by the petitioner and any new claim added under section 316(d).”).

Accordingly, in the circumstances of this case, we decline to address the challenges presented in Petitioner’s grounds 5, 6, and 8.

#### IV. CONSTITUTIONAL CHALLENGES

Patent Owner asserts adjudication of the challenged patent violates the United States Constitution because (1) “the *Arthrex* decision’s remedy (invalidation of the statutory limitations on removal of APJs) impermissibly re-writes the statutes governing APJs.” Sur-Reply 18. Patent Owner, therefore asserts “only Congress can fix the IPR statutory scheme, and this case must be dismissed.” *Id.* at 21.

We note that this argument was raised for the first time in the Sur-Reply. We decline to consider Patent Owner’s arguments; in spite of Patent Owner’s disagreement with the decision, the issue has been addressed by the Federal Circuit’s decision in *Arthrex v. Smith & Nephew*, 947 F.3d 1320, 1337–38 (Fed. Cir. 2019) (addressing an appointments clause challenge), *cert. granted sub nom United States v. Arthrex, Inc.* (U.S. October 13, 2020) (No. 19-1434).

#### V. CONCLUSION

For the foregoing reasons, we determine Petitioner has demonstrated, by a preponderance of the evidence, the unpatentability of claims 1, 3–5, 6, 8–10 of the ’298 patent.<sup>21</sup>

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<sup>21</sup> Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

VI. ORDER

Accordingly, it is

ORDERED that claims 1, 3–5, 6, 8–10 of U.S. Patent No. 8,964,298 B2 are unpatentable; and

FURTHER ORDERED that parties to the proceeding seeking judicial review of this Final Written Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1, 3, 5, 6, 8, 10 <sup>22</sup>	103(a)	Charbonnier, RFC793, SMS Specification		

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<sup>22</sup> We need not reach the question of whether Petitioner has shown by a preponderance of the evidence that the combination of Charbonnier, RFC793, and SMS Specification render claims 1, 3, 5, 6, 8, and 10 unpatentable (Ground 1) as Petitioner has met its burden of demonstrating by a preponderance of the evidence that claims 1, 3, 5, 6, 8, and 10 are unpatentable over the combination of Charbonnier, RFC793, SMS Specification, and DECT Speakerphone.

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1, 3, 5, 6, 8, 10 <sup>23</sup>	103(a)	Charbonnier, RFC793, SMS Specification, TURN		
1, 3, 5, 6, 8, 10 <sup>24</sup>	103(a)	Charbonnier, RFC793, SMS Specification, DECT Speakerphone	1, 3, 5, 6, 8, 10	
1, 3, 5, 6, 8, 10	103(a)	Charbonnier, RFC793, SMS Specification, TURN, and DECT Speakerphone		

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<sup>23</sup> We need not reach the question of whether Petitioner has shown by a preponderance of the evidence that the combination of Charbonnier, RFC793, SMS Specification, and TURN render claims 1, 3, 5, 6, 8, and 10 unpatentable (Ground 2) as Petitioner has met its burden of demonstrating by a preponderance of the evidence that claims 1, 3, 5, 6, 8, and 10 are unpatentable over the combination of Charbonnier, RFC793, SMS Specification, and DECT Speakerphone.

<sup>24</sup> We need not reach the question of whether Petitioner has shown by a preponderance of the evidence that the combination of Charbonnier, RFC793, SMS Specification, TURN, and DECT Speakerphone render claims 1, 3, 5, 6, 8, and 10 unpatentable (Ground 4) as Petitioner has met its burden of demonstrating by a preponderance of the evidence that claims 1, 3, 5, 6, 8, and 10 are unpatentable over the combination of Charbonnier, RFC793, SMS Specification, and DECT Speakerphone.

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
4, 9 <sup>25</sup>	103(a)	Charbonnier, RFC793, SMS Specification, Lee		
4, 9 <sup>26</sup>	103(a)	Charbonnier, RFC793, SMS Specification, TURN, and Lee		
4, 9	103(a)	Charbonnier, RFC793, SMS Specification, DECT Speakerphone, Lee	4, 9	

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<sup>25</sup> We need not reach the question of whether Petitioner has shown by a preponderance of the evidence that the combination of Charbonnier, RFC793, SMS Specification, and Lee Speakerphone render claims 4 and 9 unpatentable (Ground 5) as Petitioner has met its burden of demonstrating by a preponderance of the evidence that claims 4 and 9 are unpatentable over the combination of Charbonnier, RFC793, SMS Specification, DECT Speakerphone, and Lee.

<sup>26</sup> We need not reach the question of whether Petitioner has shown by a preponderance of the evidence that the combination of Charbonnier, RFC793, SMS Specification, TURN, and Lee render claims 4 and 9 unpatentable (Ground 6) as Petitioner has met its burden of demonstrating by a preponderance of the evidence that claims 4 and 9 are unpatentable over the combination of Charbonnier, RFC793, SMS Specification, DECT Speakerphone, and Lee.

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
4, 9 <sup>27</sup>	103(a)	Charbonnier, RFC793, SMS Specification, TURN, DECT Speakerphone, Lee		
Overall Outcome			1, 3–6, 8–10	

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<sup>27</sup> We need not reach the question of whether Petitioner has shown by a preponderance of the evidence that the combination of Charbonnier, RFC793, SMS Specification, TURN, DECT Speakerphone, and Lee render claims 4 and 9 unpatentable (Ground 8) as Petitioner has met its burden of demonstrating by a preponderance of the evidence that claims 4 and 9 are unpatentable over the combination of Charbonnier, RFC793, SMS Specification, DECT Speakerphone, and Lee.

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