

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

DH INTERNATIONAL LTD.,
Patent Owner.

IPR2024-01322
Patent 9,022,294 B2

Before KARL D. EASTHOM, BRIAN P. MURPHY, and
ANDREAS BALTATZIS, *Administrative Patent Judges*.

MURPHY, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Google LLC (“Petitioner”) filed a Petition pursuant to 35 U.S.C. § 311 requesting institution of *inter partes* review of claims 1–20 of U.S. Patent No. 9,022,294 B2 (Ex. 1001, “the ’294 patent”). Paper 1 (“Pet.”). DH International (“Patent Owner”) timely filed a Patent Owner Preliminary Response. Paper 7 (“Prelim. Resp.”). Pursuant to authorization from the Board, Petitioner filed a Pre-Institution Reply to Patent Owner’s Preliminary Response addressing certain arguments by Patent Owner (Paper 8, cited as “Reply”), and Patent Owner filed a Pre-Institution Sur-Reply (Paper 9, cited as “Sur-Reply”).

We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Under § 314, the Board may not institute review on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018). If the Board institutes a review, it will institute “on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.108(a). Upon consideration of the Petition, the Preliminary Response, the Pre-Institution Reply, Pre-Institution Sur-Reply, and the evidence of record, for the reasons set forth below, we conclude the Petition demonstrates a reasonable likelihood that Petitioner would prevail in showing the unpatentability of at least one challenged claim in the ’294 patent. Accordingly, we institute an *inter partes* review of claims 1–20 of the ’294 patent.

B. Real Parties in Interest and Related Matters

Petitioner, Google LLC, identifies itself as the real party in interest. Pet. 77. Petitioner also notes that “Google LLC is a subsidiary of XXVI Holdings Inc., which is a subsidiary of Alphabet Inc.,” and “XXVI Holdings Inc. and Alphabet Inc. are not real parties-in-interest to this proceeding.” *Id.* n.9. Patent Owner, DH International Ltd., identifies itself as the real party in interest. Prelim. Resp. 1.

Petitioner identifies the following related matters:

DH International Ltd. v. Google LLC, No. 1:23-cv-01116 (W.D. Tex., Sept. 15, 2023) (voluntarily dismissed Dec. 15, 2023); and

DH International Ltd. v. Apple Inc., No. 1:23-cv-01114 (W.D. Tex., Sept. 15, 2023). Pet. 77–78.

Petitioner notes that “G Holdings Ltd. previously asserted the ’294 patent in *G Holdings Ltd., v. Samsung Electronics Co., Ltd.*, No. 2:20-cv-342-JRG (E.D. Tex., Oct. 29, 2020) (voluntarily dismissed Aug. 19, 2021).” *Id.* at 78 n.10.

Patent Owner identifies *DH International Ltd. v. Apple.*, N.D. CA, No. 3:23-cv-06185-TLT as involving the ’294 Patent. Paper 4, 2. Patent Owner identifies *Google LLC v. DH International Ltd.* IPR2024-01321, filed September 11, 2024, challenging claims 1–13 of U.S. Patent No. 7,628,333 B2 (“the ’333 patent”), as a related matter. Prelim. Resp. 1; Paper 4, 2. Patent Owner further identifies the ’294 patent as issuing from a continuation-in-part application claiming priority to the ’333 patent. Prelim. Resp. 1.

C. The ’294 Patent

The claims in the ’294 patent are directed to an embodiment exemplified in Figure 4, reproduced below:

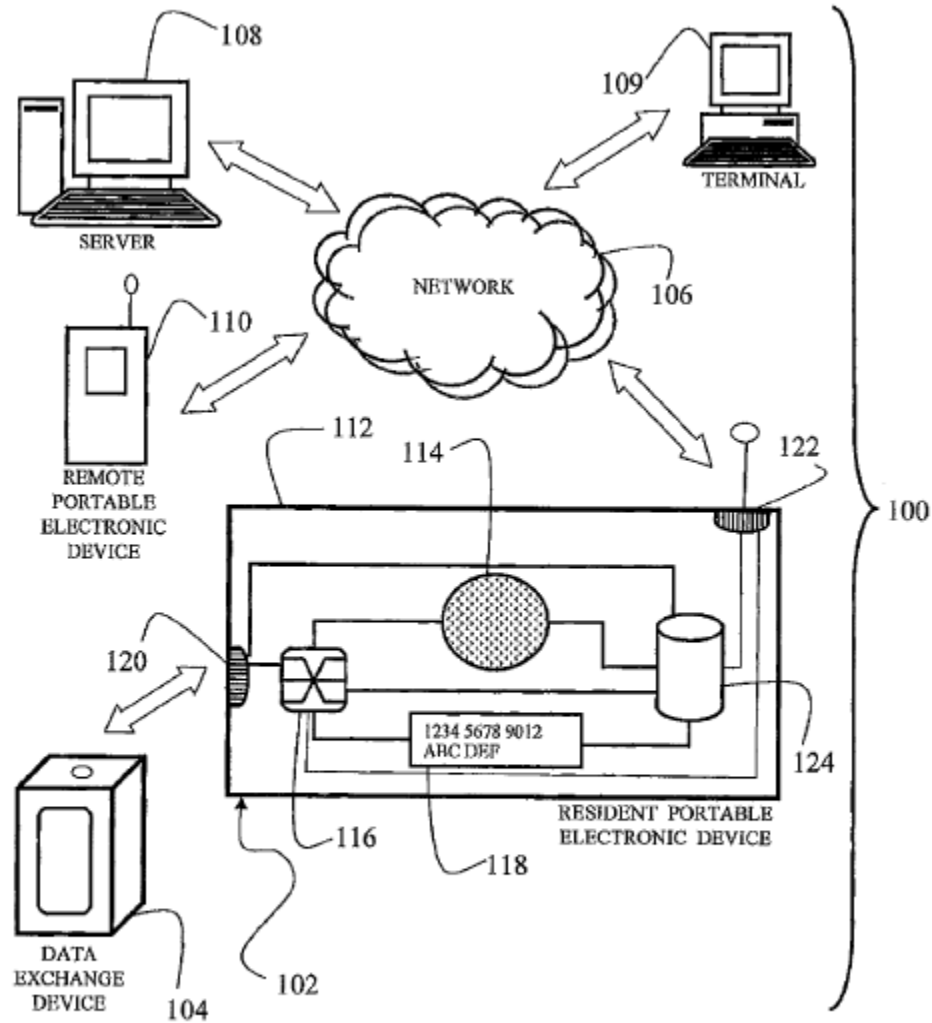


Fig. 4

Ex. 1001, 7:26–32, 13:25–32, Fig. 4. As shown in Figure 4, data exchange system 100 includes a user-owned portable electronic device 102, for example a cellular phone. *Id.* at 13:25–32, 13:42–49 (“device 102 may be for example a cellular phone”).¹ The cellular phone can communicate with a first data exchange device 104 or with a second data exchange device,

¹ Quotations from patent documents may omit or de-emphasize bold numerals.

including a remote portable electronic device 110, which also may be a cellular phone. *Id.*; *see also id.* at 14:48–52 (“device 110 . . . may be for example a cellular phone”).

In one embodiment,

portable electronic device 102 will communicate with data exchange device 104 through a direct link, for example in a proximity transaction wherein devices 102 and 104 are physically close to one another; while portable electronic device 102 will communicate with second data exchange device 108, 109 or 110 through a communication network 106 wherein devices 102 and 108, 109 or 110 may be physically distant from one another.

Id. at 13:34–41. When in use, cellular phone 102 can execute alternate data conveyance operations, where data will be conveyed to either the first or second data transceiver (120 or 122) depending on whether the switching element in electronic circuit 116 is in a “first state” or a “second state.” *Id.* at 14:53–59. First transceiver 120 provides a direct link to data exchange device 104, and second transceiver 122 provides a communication link to remote data exchange devices 108–110 via network 106. *Id.* at 14:4–10, 14:17–25.

More particularly, if the cellular phone receives an “activation cue,” the switching element within the electronic circuit will be in a “first state,” but if no activation cue is received the switching element will be in a “second state.” *Id.* at 14:60–15:11. The ’294 patent describes the operation as follows:

Upon control device 114 having been triggered, if the switching element is in its first state, the method then comprises forwarding first data to first transceiver 120 for initiating a data exchange operation with first external data exchange device 104.

However, if the switching element is in its second state, which is the case if no activation cue has been received, the method then instead comprises forwarding second data to second transceiver 122 for initiating a data exchange operation with a second external data exchange device.

Id. at 15:19–28. Thus, a user of cellular phone 102 can initiate a data exchange operation, such as a financial transaction, using one of two alternate data conveyance operations. *See id.* at 16:7–10.

The '294 patent describes the alternate data conveyance operations as follows:

If portable electronic device 102 is *close to a merchant data exchange device 104* and initiates a transaction through the communication thus established with data exchange device 104, initial transaction data is first communicated between portable electronic device 102 and data exchange device 104. . . .

The user must authorize the transaction by using control device 114, which may include *entering a PIN code*. Once the control device 114 is triggered, it will issue an invariable activation command. If the merchant data exchange *device 104 has sent an activation cue to portable electronic device 102*, the electronic circuit *switching element* will react to this activation cue by being *assigned its first state* whereby the triggering of control device 114 will yield a first data conveyance operation in the form of user data being transferred from electronic circuit 116 to first transceiver 120 and then to data exchange device 104. . . .

Alternately, if portable electronic device 102 is *not close to a merchant data exchange device 104*, its user may still initiate a transaction through a communication established with a remote data exchange device such as remote portable electronic device 110 . . . through a communication network 106 such as the Internet. . . .

Once the control device 114 is triggered, it will issue the above-mentioned invariable activation command. Since *no activation cue is detected by portable electronic device 102* in the absence of a proximate data exchange device 104 emitting such an

activation cue, the electronic circuit *switching element* will . . . [be] *assigned its second state* whereby the triggering of control device 114 will yield a second data conveyance operation in the form of user data being transferred from electronic circuit 116 to second transceiver 122 and then to remote data exchange device 108, 109, 110.

Id. at 16:11–17:17 (emphasis added). Thus, a cellular phone user may complete a data exchange transaction with a remote data exchange device, including with another cellular phone, depending on whether the user’s cellular telephone receives an activation cue from a device in close proximity (data conveyance switching element in a “*first state*”) or does not receive an activation cue (data conveyance switching element in a “*second state*”).

In summary, when a user selectively triggers the control device (e.g., enters a PIN that is authenticated), the control device issues “an invariable activation command . . . that would result in two different possible data conveyance operations” depending on whether the switching element has received an activation cue (first state) or not received an activation cue (second state). *Id.* at 11:54–63; *see also id.* at 8:57–63, 9:65–10:6, 10:37–39.

D. Illustrative Claim

Petitioner challenges all claims 1–20 of the ’294 patent. Claims 1, 10–12, and 19 are the independent claims. Claims 2–9 depend, directly or indirectly, from claim 1. Claims 13–18 depend, directly or indirectly, from claim 12. Claim 20 depends from claim 19. Claim 1, reproduced below with Petitioner’s bracketed identifiers, illustrates the claimed subject matter:

[1.pre] A cellular phone, comprising:

[1.a] an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;

[1.b] a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, with said invariable activation command being issued when said control device is selectively triggered by the user;

[1.c] a first data transceiver operatively linked to said electronic circuit, said first data transceiver being for exchanging data between said electronic circuit and a first external data exchange device over a first communication link;

[1.d] a second data transceiver operatively linked to said electronic circuit, said second data transceiver being for exchanging data between said electronic circuit and a second external data exchange device over a second communication link that is distinct from said first communication link;

[1.e] a cue receiver operatively linked to said electronic circuit for receiving an activation cue from a source external to said cellular phone;

[1.f] a data conveyance switching element operatively linked to said electronic circuit, said switching element being assigned a first state upon an activation cue having been received by said cue receiver, and being assigned a second state when no activation cue was received by said cue receiver; and

[1.g] power means for providing power to said portable electronic device cellular phone;

[1.h] wherein upon said control device being selectively triggered by the user to issue said invariable activation command:

if said switching element is in said first state, a first data conveyance operation will be initiated through the instrumentality of said first data transceiver for sending data from said electronic circuit to the first external data exchange device over said first communication link; and

[1.i] if said switching element is in said second state, a second data conveyance operation will be initiated through the

instrumentality of said second data transceiver for sending data from said electronic circuit to the second external data exchange device over said second communication link.

Ex. 1001, 18:64–19:44.

E. Prior Art and Asserted Grounds

Petitioner asserts claims 1–20 are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–20	103(a) ²	Mooney ³
1–20	103(a)	Mooney, Lee ⁴

Petitioner also relies on the declaration of Stuart Lipoff (Ex. 1003).

Patent Owner relies on the declaration of Safwan Zaheer (Ex. 2001).

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends:

A person of ordinary skill in the art (“POSITA”) at the time of the alleged invention of the ’294 patent would have had at least a bachelor’s degree in electrical engineering, or a related field, and at least two years of experience in design, development, and/or testing of network-enabled consumer devices, and familiarity with payment cards, or the equivalent, with additional education substituting for experience and vice versa.

² The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), includes revisions to 35 U.S.C. §§ 102 and 103 that became effective after the filing of the application that led to the challenged patent. Hence, this *inter partes* review is governed by the pre-AIA provisions of 35 U.S.C. §§ 102 and 103.

³ U.S. Patent No. 6,941,156 B2 issued Sept. 6, 2005 to Mooney (“Mooney”) (Ex. 1005)

⁴ U.S. Patent No. 6,909,705 B1 issued June 21, 2005 to Lee et al. (“Lee”) (Ex. 1006)

Pet. 2 (citing Ex. 1003 ¶ 57). Patent Owner states that it “agrees with Petitioner on the level of ordinary skill in the art.” Prelim. Resp. 8.

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). “These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.” *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). There is uncontested evidence in the record before us that reflects the knowledge and experience of a POSITA.

We adopt the parties’ agreed level of ordinary skill in the art, which is consistent with the description in the ’294 patent and the prior art of record.

B. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc). Claim terms “are generally given their ordinary and customary meaning” as understood by a POSITA at the time of the invention. *Id.* When construing a disputed claim limitation, “we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the

prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner contends that “[o]ther than the means-plus-function limitations identified below, the Board need not construe any term of the ’294 patent to resolve the underlying controversy in view of the prior art.” Pet. 5 (citing *Toyota Motor Corp. v. Cellport Sys., Inc.*, IPR2015-00633, Paper 11 at 16 (PTAB Aug. 14, 2015)).

Patent Owner responds by offering constructions of the recited claim terms “*activation cue*,” “*data conveyance switching element*,” “*external data exchange device*,”⁵ and “*close proximity*” of the first external data exchange device to the claimed cellular phone. Prelim. Resp. 9–12.

Pursuant to Board authorization, Petitioner filed a Pre-Institution Reply addressing Patent Owner’s proposed constructions of “*activation cue*,” “*data conveyance switching element*,” and “*close proximity*.” Reply 1–5; Ex. 3001 (Board authorization email). Pursuant to Board authorization, Patent Owner filed a Pre-Institution Sur-Reply addressing Petitioner’s claim construction arguments in the Pre-Institution Reply. Ex. 3001; Sur-Reply 1–5. We address the parties’ arguments regarding the construction of “*activation cue*,” “*data conveyance switching element*,” and “*external data exchange device*” in the context of independent claim 1 and the ’294 patent specification. We invite the parties to present any additional claim construction arguments in their respective Response, Reply, and Sur-Reply following institution of *inter partes* review.

⁵ Construction includes the “*data exchange device*” recited in claim 11.

1. “*activation cue*”

Patent Owner argues that the recited “*activation cue*” means a predetermined indicator, such as “a predetermined bit sequence” that is “recognized by the electronic device as an activation cue.” Prelim. Resp. 9 (citing Ex. 1001, 6:1-3). Patent Owner also contends the “activation cue” must be intended as a predetermined indicator and not a message or signal recognized as a message or signal for other action.” *Id.* at 9–10 (citing Zaheer Decl. Ex. 2001 ¶ 46). Patent Owner further argues that Petitioner is somehow precluded from responding to Patent Owner’s proposed construction because Petitioner did not construe “activation cue” in the Petition. *Id.* at 10 (citing 37 C.F.R. § 41.104(b)(3)); Consolidated Trial Practice Guide 44-45 (Nov. 2019); *Microsoft Corp. v. Uniloc*, IPR2019-01188, Paper 27 at 19, (PTAB Nov. 4, 2020) (hereafter cited as “*Microsoft*”).

On the present record, we agree with Petitioner’s construction.

First, the Petition complies with PTAB Rule 104(b)(3) by offering claim constructions for potential “means-plus-function or step-plus-function limitation[s]” recited in claims 1–20 of the ’294 patent, and otherwise invoking the plain and ordinary meaning of the claim terms. Pet. 5–8 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc); 37 C.F.R. § 42.100(b) (2018)); 37 C.F.R. § 42.104(b)(3). Pursuant to our authorization, Petitioner’s Pre-Institution Reply responds to claim construction arguments presented by Patent Owner in the Preliminary Response regarding the “*activation cue*,” “*data conveyance switching element*,” and “*close proximity*” limitations. Reply 1–5; Ex. 3001. Nothing in the *Microsoft* case or the Consolidated Trial Practice Guide prevents Petitioner from responding to Patent Owner’s claim construction arguments

as authorized by the Board. *See Microsoft*, Paper 27, 19 (“Petitioner’s arguments in the Reply are timely because they respond to a claim construction dispute raised by Patent Owner.”) (quoting Consolidated Trial Practice Guide 44–45 (Nov. 2019): “The petitioner may respond to any such new claim construction issues raised by the patent owner, but cannot raise new claim construction issues that were not previously raised in its petition.”).

Second, Petitioner’s Pre-Institution Reply emphasizes that “neither the claims nor the specification of the ’294 Patent require such a narrow reading of the term ‘activation cue’” as that proposed by Patent Owner. Reply 1 (citing Prelim. Resp. 9–10). Operative claim language—“*a cue receiver operatively linked to said electronic circuit for receiving an activation cue from a source external to said cellular phone*”—does not limit “*activation cue*” to a predetermined bit sequence or predetermined indicator as argued by Patent Owner. Claim 1 further recites the “*data conveyance switching element . . . being assigned a first state upon an activation cue having been received by said cue receiver,*” which also does not limit “*activation cue*” to a predetermined bit sequence or predetermined indicator. Both parties, moreover, cite the same description of the structure and function of the “*activation cue*” in the ’294 patent: “This activation cue is in the form of a data communication of a specific type which will be recognized by electronic device 10 as an activation cue, for example a predetermined bit sequence.” Prelim. Resp. 22 (citing Ex. 1001, 9:24–27); Reply 1 (citing Ex. 1001, 9:24–27); Sur-Reply 1 (citing same).

The recited “*activation cue,*” when read in context and in view of the description in the ’294 patent, does not appear to be limited to a predetermined bit sequence or a data communication “intended as” a

predetermined indicator. *See Kamstrup A/S v. Axioma Metering UAB*, 43 F.4th 1374, 1382–83 (Fed. Cir. 2022) (Board correctly declined to import “cast into a single mold” embodiment from specification into claims reciting “cast in one piece”). The ’294 patent specification identifies a “predetermined bit sequence” as one “example” of an activation cue but does not compel reading that limitation into broader claim language. Ex. 1001, 9:24–27. Based on the present record at this stage of the proceeding, we determine Patent Owner’s proposed construction runs afoul of the claim construction rule prohibiting the reading of a non-limiting example from the specification into the claims. *See SuperGuide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (care should be taken “not to import into a claim limitations that are not part of the claim”); *see also In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (“limitations are not to be read into the claims from the specification”); *see also IQIRIS Techns. LLC v. Point Blank Enterprises, Inc.*, 2025 WL 727717, *4 (Fed. Cir. 2025) (“It is the claims, not the preferred embodiments, that define the metes and bounds of the patentee’s invention.”) (citing *Phillips*). The rule prohibits limiting claims to a particular embodiment described in the specification “when the claim language is broader than the embodiment.” *SuperGuide*, 358 F.3d at 875.

In sum, based on the present record at this stage of the proceeding, we preliminarily construe “*activation cue*” as a data communication of a specific type that will be recognized by the cellular phone as an activation cue received from a source external to the cellular phone.

2. “*data conveyance switching element*”

The Petition sets forth a proposed means-plus-function construction for the recited “*data conveyance switching element*” pursuant to §112, sixth

paragraph. Pet. 6 (citing 35 U.S.C. § 112, sixth paragraph (pre-AIA)). The Petition characterizes the corresponding structure as “*a physical structure, a virtual program, or both*” because the ’294 patent explains that a switching element ‘can be any type of device allowing data to be conveyed according to alternate data conveyance operations,’ such as ‘a series of instructions programmed onto [a] microchip’ or a ‘decisional logical circuit,’ and ‘can be a physical structure, a virtual program, or both.’” *Id.* (citing Ex. 1001, 9:28–31, 9:40–41; Lipoff Decl. Ex. 1003 ¶ 64). The Petition identifies the claimed function as switching between inactive and activated states based on whether or not the cellular phone receives an activation cue. *Id.* (citing Ex. 1001, 2:4–9, 4:18–23, 5:48–53; Ex. 1003 ¶ 64).

Patent Owner asserts the “*data conveyance switching element*” “should be given its plain meaning, which is the switching of the data” because “[i]t is the data that is being switched.” Prelim. Resp. 10–11 (citing Ex. 1001, Abstract (code 57), 9:28–31; Ex. 2001 ¶ 47).

On the present record, we agree with Petitioner’s construction.

The ’294 patent claims and specification make clear that the switching element switches between a “*first state*” and a “*second state*” depending on whether or not an activation cue is received. Ex. 1001, 9:28–41, 14:53–59. The state of the switch, in turn, “allow[s] data to be conveyed according to *alternate data conveyance* operations.” *Id.* (emphasis added). Thus, the claim limitation is recited as a “*data conveyance switching element*,” not a “data switch,” because the switching element allows the device to switch between alternate operations for conveying data from the cellular phone to an external data exchange device. *Id.* As Petitioner points out, Patent Owner’s proposed construction “conflicts with the express disclosure of the ’294 Patent.” Reply 2. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315

(Fed. Cir. 2005) (en banc) (The “specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’”) (citation omitted).

3. “*external data exchange device*”

The Preliminary Response takes issue with the Petition’s proposed construction of an “*external data exchange device*” as a data transceiver coupled to a circuit that carries out the function of exchanging data. Prelim. Resp. 11 (citing Ex. 1001, 9:4–6, 12:62, 13:28, Figs. 1, 3, 4; Ex. 2001 ¶ 48); see Pet. 7–8 (citing Ex. 1001, 2:14–17, 4:7–14, 9:3–6; Ex. 1003 ¶¶ 67–68). Patent Owner states that “[a]n external data exchange device is not a transceiver but a device with a transceiver.” Prelim. Resp. 11 (citing Ex. 2001 ¶ 48). On this preliminary record, we need not construe “external data exchange device” to decide whether or not to institute. To the extent there is a dispute over the plain meaning of “*external data exchange device*,” the parties are invited to address it in detail in their briefs following institution.

On the present record, we determine that no further construction of claim terms is necessary to determine whether to institute a trial in this case. See, e.g., *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). The parties are free to address any further claim construction issues bearing on this *inter partes* review following institution.

C. *Asserted Obviousness of Claims 1–20 Over Mooney (Ground 1)*

Petitioner contends claims 1–20 of the ’294 patent are obvious over Mooney (Ground 1). Pet. 8–75 (citing Ex. 1003 ¶¶ 70–211). The Petition

asserts that Mooney discloses, teaches, suggests or otherwise renders obvious all of the limitations recited in the claims, including all independent claims 1, 10–12, and 19. *Id.* at 15–42 (claim 1), 53–56 (claim 10), 56–62 (claim 11), 63–66 (claim 12), and 71–75 (claim 19). The Petition also argues that, to the extent Mooney does not disclose, teach, suggest, or otherwise render obvious limitations [1.h] and [1.i] (and their corresponding limitations in independent claims 10–12 and 19), the combination of Mooney and Lee discloses, teaches, suggests, or otherwise renders obvious those claim limitations (Ground 2). *Id.* at 42–47 (claim 1), 56 (claim 10), 62 (claim 11), 65–66 (claim 12), 71–72 (claim 19).

Patent Owner contends the Petitioner has failed to meet its burden to show a reasonable likelihood that at least one of the challenged claims is unpatentable. Prelim. Resp. 1, 14–58 (citing Ex. 2001 ¶¶ 52–214).

“In an *inter partes* review, the burden of persuasion is on the petitioner to prove ‘unpatentability by a preponderance of the evidence,’ 35 U.S.C. § 316(e), and that burden never shifts to the patentee.” *In re Magnum Oil Tools Int’l Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016) (quoting *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015)); *see also Aqua Products, Inc. v. Matal*, 872 F.3d 1290, 1306 (Fed. Cir. 2017 (en banc (quoting *Magnum Oil*))).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). Obviousness is resolved based on 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 ordinary skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). A party who petitions the Board for a determination of obviousness must show that “a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)).

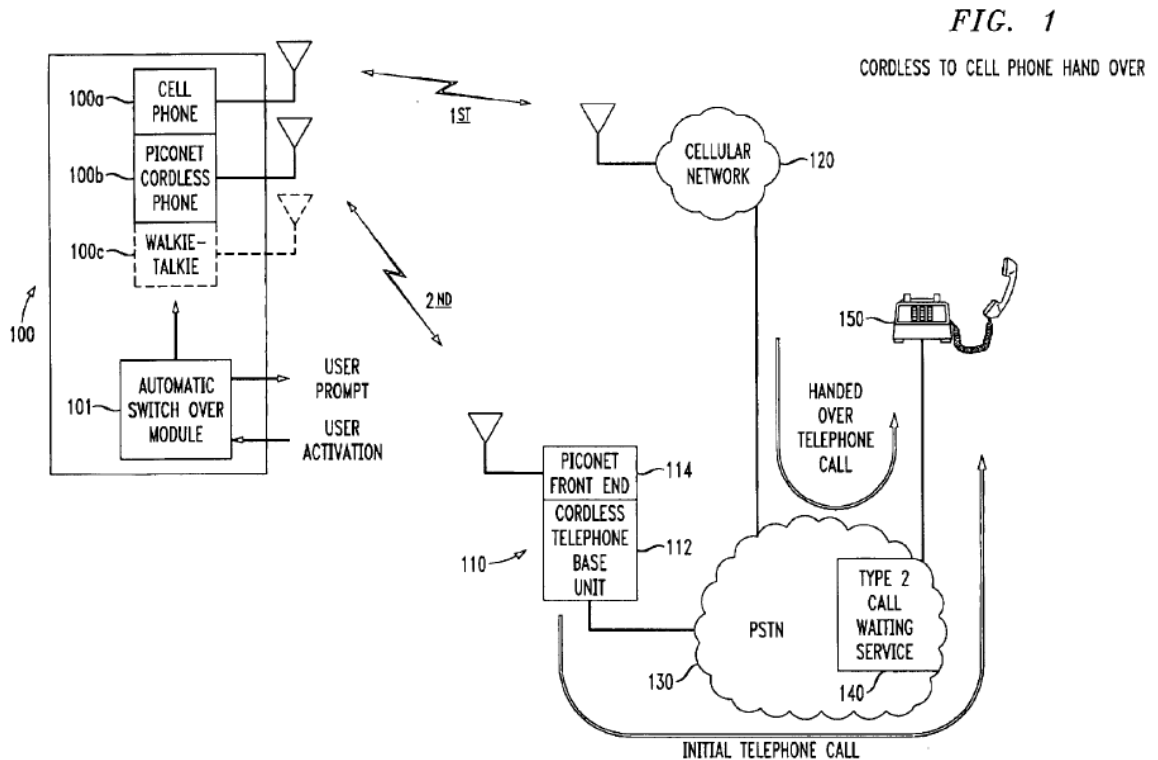
We assess Petitioner’s evidence and argument according to the above-referenced obviousness standard. We determine that the Petition satisfies the reasonable likelihood of prevailing standard under 35 U.S.C. § 314(a).

I. Overview of Mooney

Mooney, titled “Automatic Handoff for Wireless Piconet Multimode Cell Phone,” is directed to “[a] technique and apparatus for transferring a communication link between two different modes of a multimode cell phone.” Ex. 1005, code (54), Abstract (code (57)). For example, if a multimode cell phone user is on a call “using a cordless telephone RF communication link,” the call “may be automatically switched (with user prompt if desired) to a cell phone call . . . (e.g., when the cordless telephone goes out of range of its base unit), and vice versa.” *Id.* at Abstract (code (57)). In particular, Mooney discloses and teaches the use of an “automatic switch over module” that functions to “switch a communication path established on either the cell phone functionality or the RF communication functionality, with another communication path established on the other of

the cell phone functionality and the RF communication functionality.” *Id.* at 1:51–61.

Figure 1 of Mooney, reproduced below, depicts a multimode cell phone handing over a telephone call from cordless mode to cellular mode. *Id.* at 2:10–12.



In the example of Mooney Figure 1, a telephone call is established in cordless mode “between the multimode cell phone 100 and a far end telephone 150.” *Id.* at 4:7–15. If the multimode cell phone user moves so that the phone “extends beyond its acceptable range” from the cordless telephone base unit 110 at far end phone 150, the call can be switched to cell phone mode. *Id.* at 4:7–27. An automated procedure for switching the call from cordless mode to cell phone mode “may be initiated by the user of the multimode cell phone 100 at the press of a designated button,” although “the

transfer may be entirely automated without requiring input from the user.”
Id. at 4:37–49.

2. *Analysis of Claim 1 in View of Mooney*

Petitioner asserts that claim 1 would have been obvious over Mooney. Pet. 15–42 (citing Ex. 1003 ¶¶ 81–126). Our analysis of independent claim 1 applies equally to independent claims 10–12 and 19. For the reasons articulated below, on the present record at this stage of the proceeding, we determine Petitioner has established a reasonable likelihood of showing that at least independent claims 1, 10–12, and 19 of the ’294 patent are unpatentable as obvious over Mooney.

Limitation [1.pre]: “*A cellular phone, comprising:*”

Petitioner contends that, if the preamble is limiting, Mooney discloses Limitation [1.pre] “because it discloses a ‘multimode cell phone’.” Pet. 15 (citing Ex. 1003 ¶ 81; Ex. 1005, Abstract (code 57), 1:51–54, 3:49–51, Fig. 1). The Petition particularly points out Mooney’s disclosure of “a multimode cell phone [100] compris[ing] a cell phone functionality, and an RF communication functionality separate from the cell phone functionality.” *Id.* (citing Ex. 1003 ¶ 82; Ex. 1005, Abstract (code 57), 1:51–54, 3:49–51, Fig. 1). Petitioner’s contention is consistent with the cited disclosures in Mooney.

Patent Owner does not address this limitation. Prelim. Resp. 14–34.

On the present record, Mooney and the Lipoff Declaration adequately support Petitioner’s contention that Mooney discloses Limitation [1.pre].

Limitation [1.a]: “*an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;*”

Petitioner contends that Mooney discloses Limitation [1.a] “because Mooney’s ‘multimode cell phone’ includes various electrically coupled electronic components, including conventional storage for storing data,” a data processor, “multiple functional modes,” and an “‘automatic switchover module’ capable of data input and output (collectively, ‘an electronic circuit’).” Pet. 16 (citing Ex. 1003 ¶ 83; Ex. 1005, 1:54–66, 3:52–63, 7:9–12). The Petition addresses the claimed storing and processing of data as follows:

Regarding the claimed “storing” and “processing,” Mooney explains that “the 3-in-1 cell phone . . . include[s] the ability and convenience of *storing all phone book data, calling history and user preferences.*” Mooney also explains that “the need to initiate, establish and switch over to another mode (e.g., to a cordless telephone call using a piconet cordless telephone) is determined, either automatically or manually, by an appropriate processor in the multimode cell phone.” A POSITA would have understood that the electronic circuit of Mooney’s multimode cell phone is *capable of storing instructions (data) (in addition to “phone book data, calling history and user preferences”)* that the processor processes to achieve the aforementioned “initiate, establish and switch over” functions.

Id. at 16–17 (citing Ex. 1003 ¶ 84; Ex. 1005, 1:32–45, 3:60–63, 7:9–12) (emphasis added). Thus, the Petition relies on Mooney’s capability of storing data, such as programmable instructions, phone book data, user preferences and the like, as a disclosure of Limitation [1.a].

Patent Owner contends that Mooney does not disclose Limitation [1.a] because the

’294 patent teaches *data that is stored prior to transmission, which is not simply stored data* as asserted by Petitioner.

Petitioner referring to “memory” or “data that may be saved in a memory” fails to establish that the data will be transmitted through a transceiver as required in the claims, (e.g., element 1.h).

The “data” term in the claims of the ’294 Patent has to be able to be transferred. . . . *Mooney* uses real-time voice data being transmitted between telephones over circuits in a PSTN. Therefore, *the “data” term described in the Petition is not stored data, rather it is real-time data*, and this type of data fails to meet the data element used in later elements of the claims. The same data that is stored is processed, and capable of being input and output in the ’294 Patent.

Prelim. Resp. 20–21 (citing Ex. 1005, 1:32–45; Ex. 2001 ¶¶ 64–66) (emphasis added); *see also id.* at 15–18 (citing Ex. 2001 ¶¶ 53–61).

The Preliminary Response appears to be reading a limitation from a preferred embodiment into claim language that is not so limited. The Petition identifies disclosures in *Mooney* to support the assertion that *Mooney*’s cellular phone is capable of storing data as recited in Limitation [1.a], such as phone book data or instruction data. Limitation [1.a], moreover, does not recite or imply a data transfer function for “stored” data as argued in the Preliminary Response.

Limitation [1.a], for example, does not recite the capability of storing “user data” such as a credit card number for transmission to an external data exchange device, as exemplified in Figure 4 of the ’294 patent. Ex. 1001, 16:28–46 (“user data being transferred from electronic circuit to first transceiver and then to data exchange device . . . for example a credit card number”), 17:5–17 (“user data being transferred from electronic circuit to second transceiver and then to remote data exchange device”). Limitations [1.h] and [1.i], which follow on from Limitation [1.a], recite “sending data from said electronic circuit to the first [second] data exchange device,” not

sending user data or sending stored data from the electronic circuit.

Therefore, Mooney's transmission of real-time voice or call data would satisfy Limitations [1.h] and [1.i] as "*data*" sent from the electronic circuit on the cellular phone to the far end phone. Claim 1 does not recite sending "stored" data from the electronic circuit to a data exchange device or otherwise rely on antecedent basis—such as "said data" or "the data"—to limit the data being sent from the electronic circuit.

Therefore, on the present record, Mooney and the Lipoff Declaration adequately support Petitioner's contention that Mooney discloses Limitation [1.a].

Limitation [1.b]: *"a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, with said invariable activation command being issued when said control device is selectively triggered by the user;"*

Petitioner contends that Mooney discloses or renders obvious Limitation [1.b] because "calls are 'initiated' or 'established' (an invariable activation command) by a user operating the multimode cell phone (a user-triggered control device configured to be operated by a user to issue the command)." Pet. 19 (citing Ex. 1003 ¶ 87; Ex. 1005, 4:12–15, 4:54–56, 5:36–41, Fig. 2). The Petition relies on Mr. Lipoff's testimony to assert that a POSITA would have understood Mooney's cellular phone to include "buttons (a user-triggered control device) for dialing a phone number and triggering a phone call to the far end phone (issue an invariable action command upon after being operated)." *Id.* (citing Ex. 1003 ¶ 88; Ex. 1005, 4:12–17). Petitioner's contention is consistent with the cited disclosures in Mooney.

Patent Owner does not address this limitation. Prelim. Resp. 14–34.

On the present record, Mooney and the Lipoff Declaration adequately support Petitioner’s contention that Mooney discloses Limitation [1.b].

Limitation [1.c]: *“a first data transceiver operatively linked to said electronic circuit, said first data transceiver being for exchanging data between said electronic circuit and a first external data exchange device over a first communication link;”*

Petitioner contends that Mooney discloses Limitation [1.c] because the cellular phone “includes a ‘piconet cordless module 100b’ that exchanges data between the electronic circuit and a ‘cordless telephone base unit’ (first external data exchange device) of a ‘far end telephone’ over ‘a first type [of] RF communication link’ such as a Bluetooth link.” Pet. 20–21 (citing Ex. 1003 ¶ 91; Ex. 1005, 3:4–7, 3:49–51, 4:34–37, 4:54–56, 6:15–24, Fig. 1). The Petition relies on Mr. Lipoff’s testimony to assert that a “POSITA would have understood that the data exchange is facilitated by a first data transceiver of the piconet cordless module.” *Id.* at 21 (citing Ex. 1003 ¶¶ 91–93). Petitioner’s contention is consistent with the cited disclosures in Mooney.

Patent Owner does not address this limitation. Prelim. Resp. 14–34.

On the present record, Mooney and the Lipoff Declaration adequately support Petitioner’s contention that Mooney discloses Limitation [1.c].

Limitation [1.d]: *“a second data transceiver operatively linked to said electronic circuit, said second data transceiver being for exchanging data between said electronic circuit and a second external data exchange device over a second communication link that is distinct from said first communication link;”*

Petitioner contends that Mooney discloses Limitation [1.d] because “the multimode cell phone includes a ‘cellphone module 100a’ that exchanges data between the electronic circuit and a ‘cellular network’

infrastructure (second external data exchange device),” which is connected to “the ‘far end telephone’ over ‘second type [of] RF communication link different from the first type [of] RF communication link’ such as a cellular link.” Pet. 23 (citing Ex. 1003 ¶ 94; Ex. 1005, 3:4–7, 3:49–51, 4:34–37, 4:54–56, 6:15–24, Fig. 1). The Petition relies on Mr. Lipoff’s testimony to assert that a “POSITA would have understood that the data exchange is facilitated by a second data transceiver of the cell phone module,” because the module both receives and transmits voice (call) data using the same device. *Id.* at 23–24 (citing Ex. 1003 ¶ 95; Ex. 1005, Fig. 1). Petitioner’s contention is consistent with the cited disclosures in Mooney.

Patent Owner does not address this limitation. Prelim. Resp. 14–34.

On the present record, Mooney and the Lipoff Declaration adequately support Petitioner’s contention that Mooney discloses Limitation [1.d].

Limitation [1.e]: “*a cue receiver operatively linked to said electronic circuit for receiving an activation cue from a source external to said cellular phone;*”

Petitioner contends that Mooney discloses Limitation [1.e] because the first transceiver (a cue receiver) is operatively linked to the piconet/Bluetooth cordless module and processor (electronic circuit) (as explained in [1.c]), and is also for *receiving* “*quality*” *Bluetooth signals (an activation cue)* from a “piconet front end” and “base unit” (source external to the cellular phone).

Pet. 26 (citing Ex. 1003 ¶ 98; Ex. 1005, 1:31–34, 2:36–47, 2:53–3:7, 3:13–25, 3:49–51, 4:6–15, 4:28–36, 6:14–25, 6:45–51) (emphasis added). The Petition explains that a Bluetooth signal from the cordless base unit of the far end telephone is received as an “*activation cue*” by the cellular phone when it is within range of the base station. *Id.* at 26–27 (citing Ex. 1003 ¶ 99; Ex. 1005, 6:14–25, 6:45–51). The Petition asserts that the piconet/Bluetooth cordless module of the cellular phone “is informed of the

[Bluetooth] signal quality (via its first transceiver/cue receiver) and a call may be established in cordless mode via the BLUETOOTH™ link.” *Id.* at 27 (citing Ex. 1003 ¶ 99; Ex. 1005, 2:53–3:7, 4:34–37, 6:18–25, Fig. 2).

The Petition further asserts a “POSITA would have understood that a ‘good quality’ Bluetooth signal originating from the base unit . . . is an activation cue.” *Id.* at 27 (citing Ex. 1003 ¶ 100; Ex. 1005, 1:31-34, 3:49-51, 4:6-15, 4:28-36, 6:14-25, 6:45-51).

The Preliminary Response emphasizes the following disclosure in Mooney:

Preferably, the multimode cell phone 100 maintains a configuration such that when a cordless telephone link (e.g., a piconet BLUETOOTH™ link of good quality) has been established with the cordless base for a given length of time (e.g., for at least two minutes), then the multimode cell phone handset 100 will allow switch over to the cordless telephone call and ultimately drop or terminate the original cell phone call.

Prelim. Resp. 23 (citing Ex. 1005, 6:14–24). Patent Owner contends that the Mooney disclosure, quoted immediately above,

refers to a “link,” that is, the call between the cordless base station and the end telephone user that has been set up and ready to be transferred to, and not the Bluetooth “signal” between the cellular telephone in the cordless telephone mode and the cordless telephone base unit.

No Bluetooth link exists without the cellular telephone in the cordless telephone mode, actively communicating with the cordless telephone base unit.

Prelim. Resp. 23 (citing Ex. 2001 ¶ 71). The Preliminary Response argues that the cellular phone transmits a “Bluetooth ping *to*” the cordless base station, which “is not an ‘activation cue’ received *by* the cellular telephone when it detects a signal from the cordless telephone base.” *Id.* at 24–25 (citing Ex. 2001 ¶ 72; Ex. 2003 ¶ 111) (emphasis added)).

It is unclear, however, what signal the Preliminary Response is referring to when it states the cellular telephone “detects a signal from the cordless telephone base.” In any event, Patent Owner also contends that an “activation cue cannot be a Bluetooth link that has been set for two minutes because call data has already been sent from the Bluetooth transceiver to the cordless telephone base unit in order to set up the link, i.e., caller ID data to establish the path through the PSTN.” Prelim. Resp. 26 (citing Ex. 2001 ¶ 75). The Preliminary Response further asserts that the “timer is internal to the cellular telephone” and is not received “*from a source external to said cellular phone*” as recited in Limitation [1.e]. *Id.* (citing Ex. 2001 ¶¶ 76–77).

At this stage of the proceeding based on the present record, the Petition adequately supports Petitioner’s assertion that the piconet/Bluetooth cordless module of the cellular phone in Mooney receives a quality Bluetooth signal from the cordless base unit, which acts as an “*activation cue*” to switch a phone call (transmission of voice/call data) from cell phone mode to Bluetooth mode. The parties are directed to address the competing arguments and testimony of Mr. Lipoff (Ex. 1003 ¶¶ 98–100) and Mr. Zaheer (Ex. 2001 ¶¶ 69–77) regarding Limitation [1.e] during the *inter partes* review proceeding.

Limitation [1.f]: “*a data conveyance switching element operatively linked to said electronic circuit, said switching element being assigned a first state upon an activation cue having been received by said cue receiver, and being assigned a second state when no activation cue was received by said cue receiver; and*”

Petitioner contends that Mooney discloses Limitation [1.f] because the multimode cell phone includes an automatic switch over module (“*data conveyance switching element*”) operatively connected to the processor,

piconet/Bluetooth cordless module, and cell phone module (“*electronic circuit*”) that is assigned (1) a “piconet cordless telephone mode” (“*first state*”) when a quality Bluetooth signal is received by the piconet module transceiver (“*upon an activation cue having been received by the cue receiver*”) or (2) a “cell phone mode” (“*second state*”) when no quality Bluetooth signal is received by the piconet module transceiver (“*when no activation cue was received by said cue receiver*”). Pet. 28–29 (citing Ex. 1003 ¶ 101; Ex. 1005, 1:53–61, 2:36–47, 2:53–64, 2:65–3:7, 3:13–25, 3:55–62, 3:55–62, 3:64–4:1, 4:6–10, 4:28–36, 4:56–57, 5:7–20, 5:21–61, 5:57–61, 6:14–40, 7:9–12, Figs. 1–2). The Petition asserts that a “POSITA would have also understood that . . . the processor controls the switch—i.e., assigns an operational mode (cellular or piconet/Bluetooth cordless) to the switch.” *Id.* at 30 (citing Ex. 1003 ¶ 103).

Patent Owner contends that when Mooney’s system transfers a call from cordless mode to cell phone mode, the transfer “occurs ONLY after the second [call] path has been successfully established.” Prelim. Resp. 29–30 (citing Ex. 2001 ¶ 83; Ex. 1005, 6:26–39). Patent Owner argues that there “can be no change of state or transfer of a communication path until after the second communication path is established.” *Id.* Patent Owner asserts that such an operation does not satisfy the claim language recited in Limitation [1.f]. *Id.*; *see also id.* at 30–32 (citing Ex. 1005, 6:41–44; Ex. 2001 ¶¶ 84–86).

On the present record, Mooney and the Lipoff Declaration adequately support Petitioner’s contention that Mooney discloses Limitation [1.f] because the processor controls the automatic switchover module by assigning either a cellular mode or piconet/Bluetooth cordless mode to the switch depending on whether or not a quality Bluetooth signal is received by

the piconet module transceiver. The parties are directed to address the competing arguments and testimony of Mr. Lipoff (Ex. 1003 ¶¶ 101–110) and Mr. Zaheer (Ex. 2001 ¶¶ 78–86) regarding Limitation [1.f] during the *inter partes* review proceeding.

Limitation [1.g]: “*power means for providing power to said portable electronic device cellular phone;*”

Petitioner contends that Mooney discloses Limitation [1.g] because the “cell phone includes electrical components requiring power to operate and cell phones were known to include power means, like batteries, to power these electronic components.” Pet. 34 (citing Ex. 1003 ¶ 111). The Petition asserts a POSITA would have understood that Mooney’s cellular phone includes a power source because “at least its modules and processor would have required a power source to operate.” *Id.* (citing Ex. 1003 ¶ 112).

Petitioner’s contention is consistent with the cited disclosures in Mooney.

Patent Owner does not address this limitation. Prelim. Resp. 14–34.

On the present record, Mooney and the Lipoff Declaration adequately support Petitioner’s contention that Mooney discloses Limitation [1.g].

Limitation [1.h]: “*wherein upon said control device being selectively triggered by the user to issue said invariable activation command:*

if said switching element is in said first state, a first data conveyance operation will be initiated through the instrumentality of said first data transceiver for sending data from said electronic circuit to the first external data exchange device over said first communication link; and”

Limitation [1.i]: “*if said switching element is in said second state, a second data conveyance operation will be initiated through the instrumentality of said second data transceiver for sending data from*

said electronic circuit to the second external data exchange device over said second communication link.”

Petitioner contends that Mooney discloses or renders obvious Limitation [1.h] because

when the automated switch module (switching element) is in piconet/Bluetooth cordless mode (the first state), and the user initiates a phone call by *dialing a telephone number on the keypad (upon said control device being selectively triggered by the user to issue said invariable activation command)*, call data is communicated (conveyed) from the piconet/Bluetooth module (electronic circuit element) through its corresponding first transceiver to the piconet/Bluetooth base unit (first external data exchange device) over the ‘Bluetooth link’ (first communication link).

Pet. 36–37 (citing Ex. 1003 ¶¶ 117–118; Ex. 1005, 1:34–38, 4:41–49, 5:8–11, 6:14–24, 7:9–12, Fig. 1) (emphasis added). Petitioner similarly contends that Mooney discloses or renders obvious Limitation [1.i], because when no Bluetooth signal is received and “the automated switch module (switching element) is in cellular mode (the second state) . . . data is communicated (conveyed) from the cell phone module (electronic circuit element) . . . over the ‘cell phone link’ (second communication link).” *Id.* at 37–38 (citing Ex. 1003 ¶¶ 119–120; Ex. 1005, 4:17–30, 4:57–58, 6:45–51, 7:9–12, Fig. 1).

The Petition further contends a “POSITA would have understood that the automatic switch over module is assigned to the piconet/Bluetooth mode (first state) or the cell phone mode (second state) *before* the call is ‘established.’” *Id.* at 39 (citing Ex. 1003 ¶ 122; Ex. 1005, 1:56–61, 4:54–56, 5:6–7, 6:45–51, Fig. 2, step 202). The Petition asserts that, in Mooney, calls are “‘established on either the cell phone functionality or the RF communication functionality’ from the outset, such that the operational mode may be switched at a later time.” *Id.* at 39 (citing Ex. 1005, 1:56–61).

The Petition also points to the example in Mooney Figure 2, where a phone call begins in cordless/Bluetooth mode and is later switched “to the second cellular phone external data transceiver [step 212].” *Id.* at 40 (citing Ex. 1003 ¶¶ 123–124; Ex. 1005, Fig. 2). The Petition argues that a “POSITA would have also understood that implementing Mooney’s switching and data conveyance operations at the outset would have permitted Mooney’s multimode cell phone to quickly and efficiently connect to the mode best suited for communication.” *Id.* at 41 (citing Ex. 1003 ¶125; Ex. 1005, 1:45–47, 1:23–44, 6:18–25).

Patent Owner argues that if dialing a telephone number to connect the cellular phone to the cordless base unit triggers an “*invariable activation command*,” then the Petition effectively “admits that the first state is not dependent upon [receiving] an activation cue.” Prelim. Resp. 32 (citing Ex. 2001 ¶ 89). As we understand Patent Owner’s argument, the Petition’s assertion that Mooney’s cellular phone receives a quality Bluetooth signal from the base unit as an “*activation cue*,” which places the automatic switch over module into a “*first state*” before a call is placed, is inconsistent with the assertion that dialing the cordless phone to place a call triggers an “*invariable activation command*.” Patent Owner further highlights the asserted inconsistency:

Dialing a phone is not issuing an invariable activation command. As mentioned in *Mooney*, a user can use call features of the PSTN to make another call while placing one on hold. Exh. 1005, 4:59–5:57. Multiple “invariable activation commands[“] cannot be issued, as it would not be invariable. *If entering a phone number is an invariable activation command, then a second number cannot be entered.* But the Bluetooth specification teaches exactly that.

Prelim. Resp. 33 (citing Ex. 1005, 4:59–5:57; Ex. 2001 ¶¶ 91; Ex. 2003, 112). The Preliminary Response argues, therefore, that “[d]ialing a phone number is not ‘invariable’ and a second phone number can be dialed while the call to the first number is active.” *Id.* at 33–34 (citing Ex. 2001 ¶¶ 92–94).

At this stage of the proceeding based on the present record, Mooney and the Lipoff Declaration adequately support Petitioner’s contention that Mooney discloses Limitations [1.h] and [1.i] because the automatic switch over module is set before the call is established. The parties are directed to address the competing arguments and testimony of Mr. Lipoff (Ex. 1003 ¶¶ 116–126) and Mr. Zaheer (Ex. 2001 ¶¶ 87–94) regarding Limitations [1.h] and [1.i] during the *inter partes* review proceeding.

3. Conclusion for Ground 1

For the reasons given above, the Petition adequately supports the assertion that Mooney discloses, teaches, suggests, or otherwise renders obvious independent claims 1, 10–12, and 19. Therefore, at this stage of the proceeding, the arguments and evidence in the Petition demonstrate a reasonable likelihood Petitioner would prevail in showing the unpatentability of at least independent claims 1, 10–12, and 19 as obvious over Mooney.⁶

D. Analysis of Limitations [1.h]–[1.i] in View of Mooney and Lee (Ground 2)

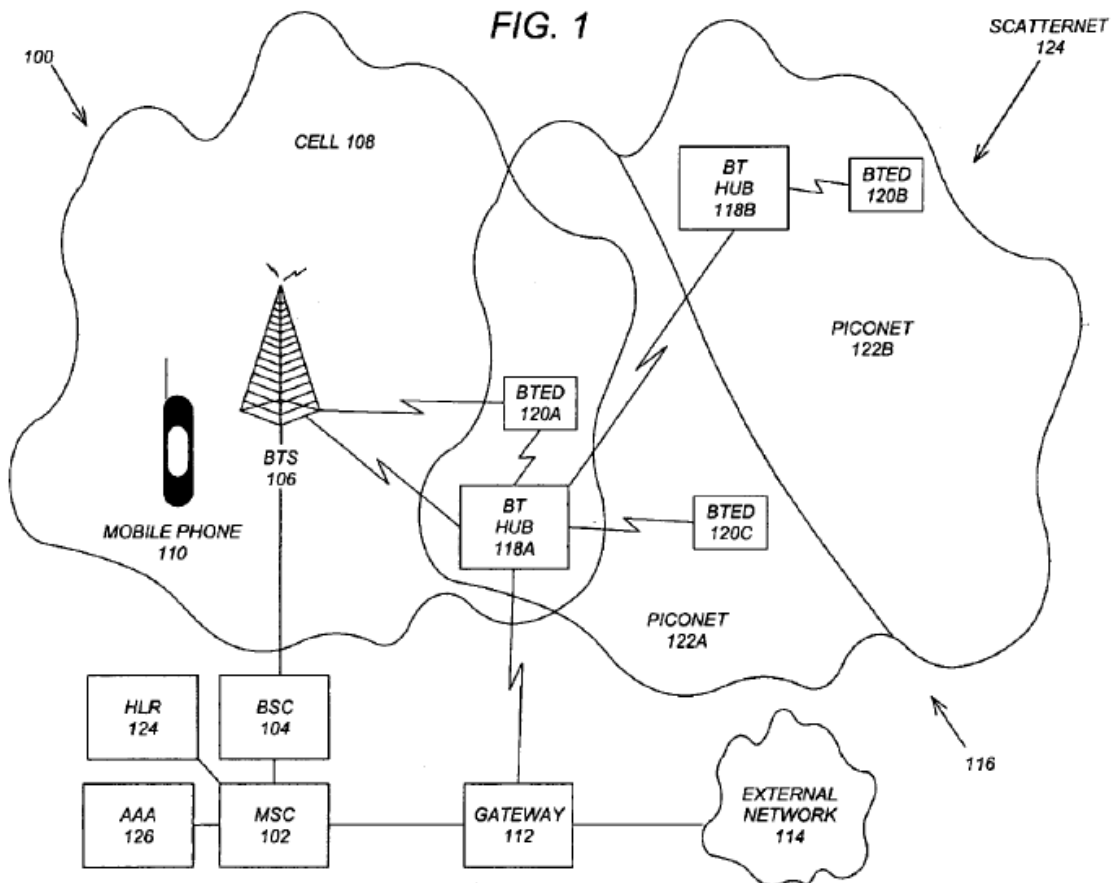
Petitioner contends that the combination of Mooney and Lee renders obvious Limitations [1.h] and [1.i]. Pet. 42–47 (citing Ex. 1003 ¶¶ 129–135). Patent Owner opposes. Prelim. Resp. 49–54 (citing Ex. 2001 ¶¶ 181–

⁶ The Board need not address the dependent claims on the merits at this stage of the proceeding. *See SAS Inst.*, 138 S. Ct. at 1356 (“Director need not even consider any other claim before instituting review”).

200). We address the parties' arguments and evidence below, beginning with an overview of Lee.

1. Overview of Lee

Lee, titled "Integrating Wireless Local Loop Networks with Cellular Networks," is directed to "Bluetooth networks, also known as wireless local loop, [being] integrated with cellular networks, so that the two networks can inter-operate with devices enabled for both types of networks." Ex. 1006, code (54), Abstract (code (57)). Lee Figure 1, reproduced below, depicts wireless network 100:



Id. at 2:45. As shown in Figure 1, wireless network 100 comprises a cellular telephone system that includes MSC (Mobile Switching Center) 102, BSC (Base Station Controller) 104, and BTS (Base Transceiver Station) 106. *Id.*

at 2:45–50. The radio frequency (RF) signal from BTS 106 defines a perimeter of associated cell site 108 that is irregular in shape due to the terrain, buildings, and other structures. *Id.* at 2:51–54. “MSC 102 interfaces via [] gateway 112 both to one or more external networks 114 and/or a Bluetooth network 116.” *Id.* at 2:64–66.

Lee discloses a “dual-enabled” device, e.g., a mobile phone, configured to route a call over a Bluetooth network or a cellular network. *Id.* at 3:17–27, 4:17–30, Figs. 1–2. Lee’s mobile phone includes transceivers for communicating with a Bluetooth base unit (“BT Hub”) or a cellular network. *Id.* at 3:17–27, 4:17–21, Fig. 1. A mobile phone may be directed to “the Bluetooth network exclusively when the cellular network is unavailable or subject to interference, such as within a building or vehicle,” or to the cellular network when “the Bluetooth network is unavailable or subject to interference, such as outside a building or vehicle.” *Id.* at 4:17–31, Fig. 2.

2. *Analysis of Limitations [1.h]–[1.i]*

Petitioner contends that “Lee discloses ‘a discovery and/or registration process’ through which its [dual-enabled] device’s internal logic determines whether to use a cellular or Bluetooth network *prior* to transmitting data.” Pet. 42–45 (citing Ex. 1003 ¶¶ 129–132; Ex. 1006, 4:17–31, 4:42–46, 4:56–5:10, 5:27–36, Fig. 2, claim 20). The Petition emphasizes that a “POSITA would have recognized that assessing signal (communication link) availability prior to sending data over that communication link, as taught by Lee, would have been similarly advantageous for Mooney’s multimode cell.” *Id.* at 45–46 (citing Ex. 1003 ¶ 133). The Petition argues, in particular, that a

POSITA would have been motivated and found it obvious to implement ‘discovery process’ logic, as taught by Lee, in Mooney’s multimode to *reduce congestion and interference* over Mooney’s cellular and Bluetooth networks by enabling the multimode phone to determine whether to use cellular or Bluetooth mode before sending data over the corresponding communication links.

Id. at 46 (citing Lee, 4:6–16, 4:25–31, 4:66–5:6, 5:27–36; Ex. 1003 ¶ 134) (emphasis added).

Patent Owner contends that “[i]f the teachings of *Lee* [] are used, there is no reason for *Mooney*.” Prelim. Resp. 50 (citing Ex. 2001 ¶ 186). Patent Owner further contends “there is no advantage to using the approach of *Lee* [] to increase capacity or reduce congestion in *Mooney* . . . because *Mooney* is circuit based and does not use shared resources as the cellular approach of *Lee* [].” *Id.* (citing Ex. 2001 ¶ 194). The Preliminary Response contrasts Lee’s system, where “the piconet is part of the cellular network enabling calls to [] be handed over from one base station to another,” whereas Mooney “transfer[s] calls over a PSTN between the cordless base unit and a cellular network.” *Id.*

The Preliminary Response emphasizes that

[a] POSITA would understand that *Mooney* uses a Bluetooth connection to make a cellular telephone operate in a mode where . . . [t]he cellular telephone is simply a Bluetooth handset extension of the cordless telephone base station. But *Lee* [] teaches using the cellular telephone as a complete telephone and not simply a Bluetooth handset. The cellular telephone in a *Lee* [] network would never use a cordless telephone Bluetooth profile. A POSITA would understand, that . . . [t]he [two] approaches use a cellular telephone and Bluetooth piconets in fundamentally different ways that are incompatible.

Id. at 51 (citing Ex. 1005, 2:65–66; Ex. 2001 ¶¶ 189–190). The Preliminary Response asserts there “is no motivation to combine the *Mooney* and *Lee* []

references because *Mooney* is dependent upon a PSTN network and network features, . . . and *Lee* [] is dependent upon a VOIP network with a cellular telephone . . . that hands off between piconet base stations and cellular base stations.” *Id.* at 52–53 (citing Ex. 2001 ¶ 194).

At this stage of the proceeding based on the present record, Mooney, Lee, and the Lipoff Declaration adequately support Petitioner’s contention that a POSITA would have been motivated to combine Mooney and Lee with a reasonable expectation of success in switching a cellular phone between alternate data conveyance operations as recited in Limitations [1.h] and [1.i].⁷ The use of Lee’s discovery process logic to reduce congestion and interference over Mooney’s cellular and Bluetooth networks is a sufficient motivation, based on the present record, to combine the two references in the manner asserted by Petitioner. The parties are directed to address the competing arguments and testimony of Mr. Lipoff (Ex. 1003 ¶¶ 129–134) and Mr. Zaheer (Ex. 2001 ¶¶ 186–194) regarding Limitations [1.h] and [1.i] during the *inter partes* review proceeding.

3. Conclusion for Ground 2

In conclusion, at this stage of the proceeding, the arguments and evidence in the Petition demonstrate a reasonable likelihood Petitioner would prevail in showing the unpatentability of at least independent claims 1, 10–12, and 19 as obvious over Mooney and Lee.⁸

⁷ The Petition cross-references the same arguments and evidence to apply to Limitations [10.h], [10.i] (Pet. 56), [11.k], [11.l] (Pet. 62), [12.c], [12.d] (Pet. 64–66), and [19.c], [19.d] (Pet. 71–72).

⁸ The Board need not address the dependent claims on the merits at this stage of the proceeding. *See SAS Inst.*, 138 S. Ct. at 1356 (“Director need not even consider any other claim before instituting review”).

III. CONCLUSION

For the foregoing reasons, we determine Petitioner has established a reasonable likelihood of prevailing in its challenge to the patentability of at least one claim in the '294 patent. Therefore, we institute *inter partes* review of all challenged claims on all grounds. *See SAS*, 138 S. Ct. at 1359–60.

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claims or any underlying factual or legal issues. A final determination will be made based on the record as developed during the *inter partes* review. Any final determination will be based on the record developed during trial. Any argument not asserted in a timely-filed brief, such as a response to the Petition, may be deemed forfeited or waived, even if that argument appears in the Preliminary Response.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–20 of the '294 patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '294 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2024-01322
Patent 9,022,294 B2

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