

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

DH INTERNATIONAL LTD.,
Patent Owner.

IPR2025-00172
Patent 9,022,294 B2

Before KARL D. EASTHOM, BRIAN P. MURPHY, and
MARY C. HOFFMAN, *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

Apple Inc. (“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 6 (“Prelim. Resp.”).

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, 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, Apple Inc., identifies itself as the real party in interest. Pet. 80. Patent Owner, DH International Ltd., identifies itself as the real party in interest. Paper 3, 2.

Petitioner and Patent Owner identify the following related matters:

- *DH International Ltd v. Apple Inc.*, No. 1:23-cv-01114 (W.D. Tex.), transferred to Northern District of California (3:24-cv-06185)
- *DH International Ltd v. Google LLC*, No. 1:23-cv-01116 (W.D. Tex.), dismissed
- *Google LLC v. DH International Ltd.*, IPR2024-01322 (PTAB)
- *Samsung Electronics Co., Ltd. v. G. Holdings, Ltd.*, IPR2021-00884 (PTAB), terminated pre-institution pursuant to settlement
- *Google LLC v. DH International Ltd.*, IPR2024-01321 (PTAB), challenging related U.S. Patent No. 7,628,333 (“the ’333 patent”)
- *Samsung Electronics Co., Ltd. v. G. Holdings, Ltd.*, IPR2021-00885 (PTAB), challenging related U.S. Patent No. 7,628,333, terminated pre-institution pursuant to settlement
- *G. Holdings Ltd. v. Samsung Electronics Co., Ltd. et al*, No. 2:20-cv-00342 (E.D. Tex.) (dismissed).
- *Apple Inc. v. DH International Ltd.*, IPR2025-00173 challenging U.S. Patent No. 7,628,333.

Pet. 80; Paper 3, 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:

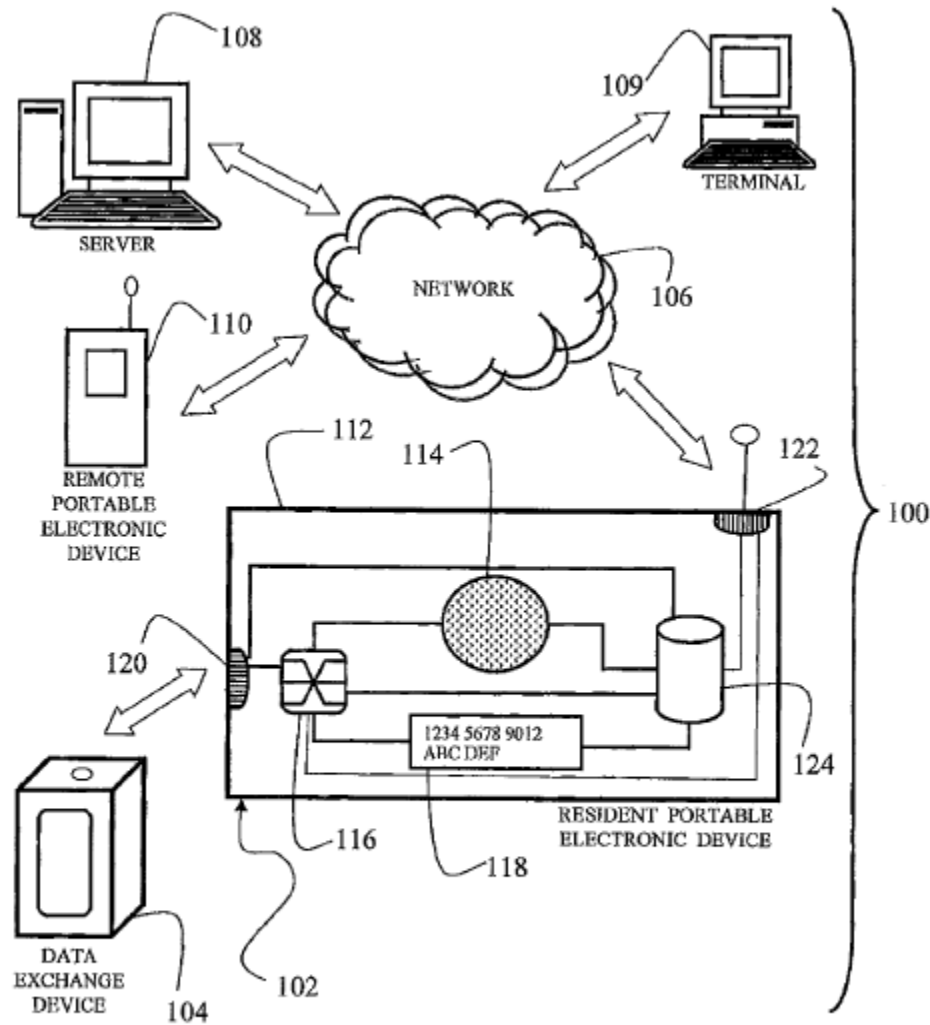


Fig. 4

Ex. 1001, 7:26–32, 13:25–32, Fig. 4. As shown in Figure 4, data exchange system 100 includes 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 first data exchange device 104 or with a second data exchange device, including remote portable electronic device 110, which also may be a cellular phone.

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

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)(i)] 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(h)(ii)] 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	Suga, ³ Gorsuch ⁴

Petitioner relies on the declaration of Michael Buehrer, Ph.D. (Ex. 1004). Patent Owner relies on the declaration of Mr. Safwan Zaheer (Ex. 2001).

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends:

A person of ordinary skill in the art at the time of the alleged invention of the '294 Patent (“POSITA”) would have had a bachelor’s degree in Electrical Engineering, Computer Engineering, or in a similar discipline with at least two years of experience with wireless communication devices and networks. More education can substitute for practical experience and vice versa.

Pet. 10 (citing Ex. 1004 ¶ 34). Patent Owner states that it “agrees with Petitioner on the level of ordinary skill in the art.” Prelim. Resp. 8 (citing Ex. 2001 ¶¶ 26–29).

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 Japan Patent Application No. 2003-110751 published April 11, 2003 to Suga (“Suga”) (Ex. 1005).

⁴ WO 01/22662 A1 published March 29, 2001 to Gorsuch (“Gorsuch”) (Ex. 1006).

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 “submits that all terms be given their plain and ordinary meaning consistent with the *Phillips* standard.” Pet. 28 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*)). The Petition addresses the plain meaning of “*invariable activation command*” with reference to the ’294 patent specification and prosecution history. *Id.* at 28–32. Patent Owner responds by offering constructions of the recited claim terms “*invariable activation command*,” “*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. 9–14.

We address the parties’ arguments regarding the construction of “*invariable activation command*,” “*activation cue*,” and “*data conveyance switching element*” in the context of independent claim 1 and the ’294 patent specification and prosecution history. 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.

1. “*invariable activation command*”

Petitioner contends the recited “*invariable activation command*” is “a command to transmit data through either a first or second data conveyance operation, where the decision of which operation to use is outside of user control.” Pet. 29. The Petition relies on the description of an invariable activation command in the ’294 patent specification, including that:

the portable electronic device holder will not be able to select to issue different activation commands by means of control device

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

12 depending on whether the user considers that a data exchange operation should be accomplished with an external data exchange device 9, or whether the user wishes to display information on screen 16 on the basis of data stored in memory 42. The same invariable activation command will thus be issued upon control device 12 being triggered, and ***it is the state of switching element 44b***, resulting from the receipt or non-receipt of an activation cue by portable electronic device 10, ***that will be decisive as to the type of data conveyance that will occur.***

Id. at 30 (citing Ex. 1001, 10:29–51). The Petition further contends its proposed construction is supported by the '294 patent prosecution history where, the Petition asserts, “applicant stressed that the term ‘invariable’ means the control device cannot determine which data path is used.” *Id.* at 31–32 (citing Ex. 1003, 124).

Patent Owner contends an “*invariable activation command*” is “an activation command issued by a control device in response to a user that relies on the state of the switching element to determine a data conveyance path. Once issued, the portable electronic device holder cannot select to issue different activation commands.” Prelim. Resp. 11 (citing Ex. 2001 ¶ 52). Patent Owner further cites to the '294 patent specification description that a user selectively triggers the control device to issue an activation command that initiates “one of two alternate data conveyance operations.” *Id.* at 10 (citing Ex. 1001, 10:14–20, 10:26–29; Ex. 2001 ¶ 49).

Both parties rely on the language of claim 1 and the '294 patent specification to support their respective constructions, and they emphasize that a user’s selective triggering of the control device does not issue different activation commands or control which data conveyance operation is used.

Claim 1 recites an “*invariable activation command*” as a command that is “*issued when said control device is selectively triggered by the user.*”

Ex. 1001, 19:5–8. Thus, a user of the claimed cellular phone must selectively trigger a control device “*via one of a button, a keypad, a tactile screen, and a biometric parameter detector,*” e.g., by entering a PIN that is authenticated, in order for an invariable activation command to be issued. *Id.* at 8:43–50, 10:26–29, 19:3–5. The claimed function of an invariable activation command is to “*initiate[]*” either a “*first data conveyance operation*” or a “*second data conveyance operation*” depending on whether “*said switching element is in said first state*” or “*in said second state.*” As explained above, the state of the switching element depends on whether or not an “*activation cue*” has been received by a “*cue receiver.*” The ’294 patent specification confirms the operation. *Id.* at 10:26–36, 15:14–28.

The parties joust over the proper terminology for characterizing an “*invariable*” activation command, but they appear to agree on how the claimed cell phone and method work. The ’294 patent specification makes clear that the activation command is “invariable” in the sense that whenever a user selectively triggers the control device on the cell phone, for example by pressing a button on a keypad, the same command is issued to initiate a data conveyance operation regardless of the “state” of the “switching element” (i.e., in a “*first state*” or “*second state*”). The user cannot select or issue different activation commands. The selection of which of the two possible data conveyance operations will be initiated by selectively triggering the control device depends not on the activation command—it is always the same—but on whether the switching element has received an activation cue (“*first state*”) or not (“*second state*”). The ’294 patent neatly summarizes that “[t]he same invariable activation command will thus be issued upon [the] control device being triggered, and it is the state of [the]

switching element . . . that will be decisive as to the type of data conveyance that will occur.” *Id.* at 10:46–51.

Thus, we preliminarily construe an “*invariable activation command*” as a command issued to initiate a data conveyance operation, such that the command itself is the same regardless of which data conveyance operation is used.

2. “*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. 11 (citing Ex. 1001, 6:1-3). Patent Owner also contends the “*activation cue*” “must be intended as a predetermined indicator.” *Id.* at 11–12 (citing Zaheer Decl. Ex. 2001 ¶ 53). As explained in our Institution Decision entered in IPR2024-01322, we disagree with Patent Owner’s proposed construction. IPR2024-01322, Paper 10, 13–14 (PTAB March 24, 2025).

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. As stated 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.” Ex. 1001, 9:24–27. The predetermined bit

sequence embodiment for the activation cue is not recited in the '294 patent claims.

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 IQRIS 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.

3. “*data conveyance switching element*”

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 switched by the switching element between data paths.” Prelim. Resp. 12 (citing Ex. 1001, Abstract (code 57), 9:28–31; Ex. 2001 ¶ 54).

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.* Patent Owner’s proposed construction “conflicts with the express disclosure of the ’294 Patent.” *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).

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 invited to address any further claim construction issues bearing on this *inter partes* review following institution.

C. Asserted Obviousness of Claims 1–20 Over Suga, Gorsuch

Petitioner contends claims 1–20 of the ’294 patent are obvious over Suga in view of Gorsuch. Pet. 32–76 (citing Ex. 1003 ¶¶ 77–154). The Petition asserts that Suga and Gorsuch disclose, teach, suggest or otherwise render obvious all of the limitations recited in the claims. *Id.* 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, 18–62 (citing Ex. 2001 ¶¶ 59–209).

“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)).

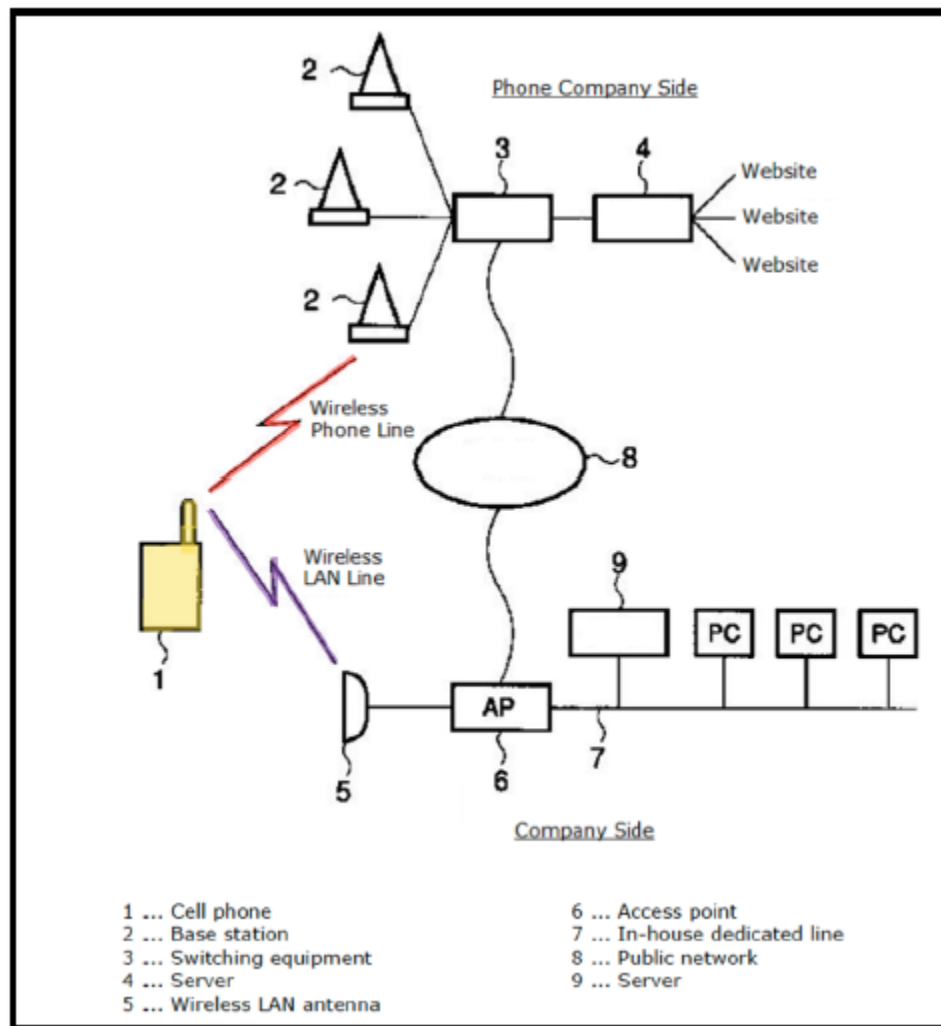
We assess Petitioner’s evidence and argument according to the above-referenced obviousness standard. We determine that the Petition satisfies the reasonable likelihood of prevailing standard under 35 U.S.C. § 314(a). We begin our analysis with a discussion of the Suga and Gorsuch references.

1. Overview of Suga

Suga, titled “Portable Information Device and Line Switching Method,” is directed to “[a] cell phone [] configured to selectively switch and use one of a plurality of wireless phone lines . . . and to prioritize use of a wireless LAN line for data transmission.” Ex. 1005, code (54), Abstract (code (57)).⁶ Figure 1 of Suga, reproduced below in annotated form from the Petition, depicts cell phone 1 (yellow) configured to switch between

⁶ Patent Owner correctly notes the Japanese-to-English translation certification in Ex. 1005 at page 20 is non-compliant. Prelim. Resp. 3–4 (citing 37 C.F.R. § 42.63). Petitioner shall have 10 business days from the date of this Decision to file a translation “affidavit” or sworn declaration pursuant to 37 C.F.R. §§ 1.68, 42.63(b). See *Hengdian Group DMEGC Magn. Co. v. Hitachi Metals, Ltd.*, IPR2017-01312, Paper 14, 2 (PTAB Jan. 3, 2018) (“order[ing] Petitioner to file satisfactory affidavits attesting to the accuracy of the translation within ten business days of the Decision”).

wireless cellular (red) and wireless LAN data exchange connections (purple):



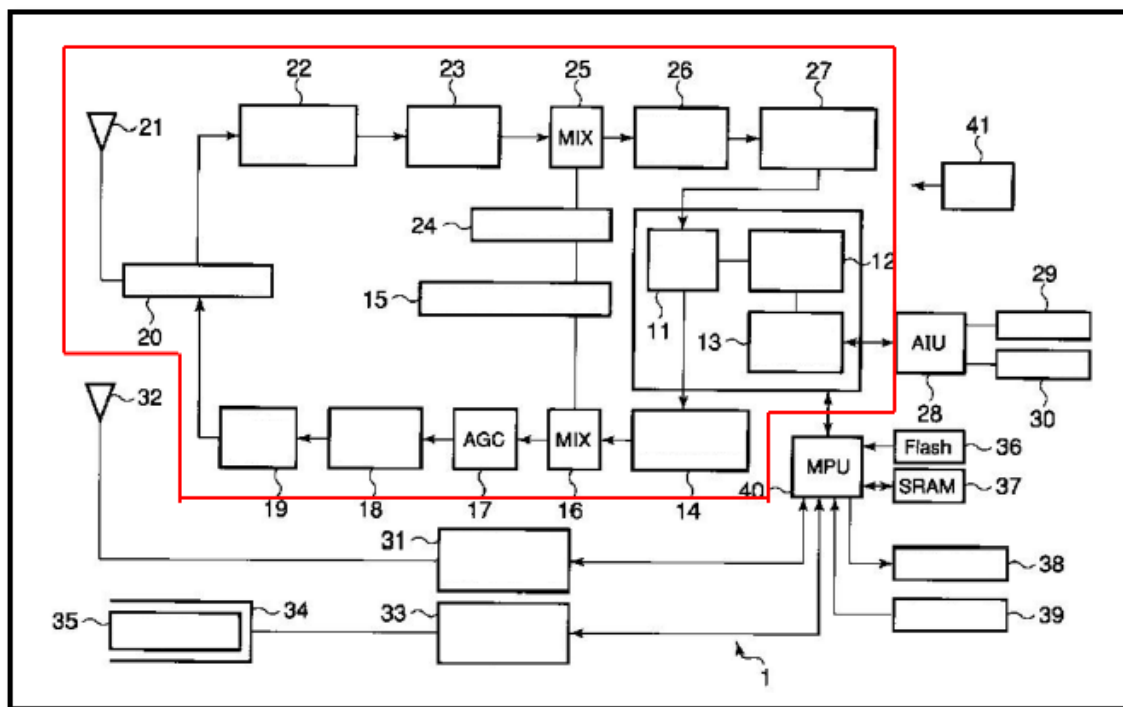
Pet. 11–12 (citing Ex. 1004 ¶ 64; Ex. 1005 ¶¶ 16, 35–37, 52, Fig. 1). Suga discloses that the cell phone in Figure 1 “is configured to switch selectively between a wireless phone line and wireless LAN line,” can be “set to prioritize use of a wireless LAN line during a data transmission,” and also can be “set to automatically switch to a wireless phone line if connection to a wireless LAN line is not possible.” Ex. 1005 ¶ 17. For example,

[b]ased on cellular mobile communication services provided by a phone company, the cell phone 1 is able to place calls to other phones via a wireless phone line that connects to a base station

2, exchange data with websites via an Internet connection service, and exchange data (such as sending and receiving e-mail) with other information devices. The cell phone 1 also exchanges data (such as e-mail) with other devices via a wireless LAN line.

Id. ¶ 16.

The control technology for implementing Suga's wireless cell phone communication system, which includes an email data exchange function, is shown in the cell phone block diagram depicted in annotated Figure 2 reproduced below from the Petition:



Pet. 13 (citing Ex. 1005, Fig. 2). In Suga Figure 2, wireless LAN controller 31, under the control of Master Processing Unit (“MPU”) 40, allows the cell phone to transmit and receive data, such as email, through a W-LAN connection. Ex. 1005 ¶¶ 34, 47. The cell phone is also equipped with cellular transceiver circuitry shown within the red boundary. Pet. 12–13 (citing Ex. 1005 ¶¶ 29–31, 34, Fig. 2). Suga further discloses that when a

“user gives instructions to send data such as an e-mail, the controller determines whether or not the "Priority use of wireless LAN" setting has been enabled.” *Id.* ¶ 47.

2. Overview of Gorsuch

Gorsuch, titled “Dual Mode Subscriber Unit for Short Range, High Rate and Long Range, Lower Rate Data Communications,” discloses techniques for a mobile communication device to switch between a local wireless connection (W-LAN), *e.g.*, WiFi, and a long-range cellular network connection. Ex. 1006, 3:25–28. In *Gorsuch*, a mobile communication device connects directly to a W-LAN when available and “automatically reverts” to a cellular network (CDMA) when the W-LAN is unavailable (*e.g.*, when out of range of a W-LAN base station). *Id.* at 3:25–28; *see also id.* at 3:16–19 (“a device which can automatically select the cheaper and faster W-LAN when possible . . . and to resort to the long range cellular network when access to the W-LAN is not possible”). To switch between the W-LAN and CDMA transceivers and connections, the mobile communication device includes a W-LAN detection circuit. *Id.* at Abstract, 4:31–5:1, 13:14–22, 14:10–14, 16:1–10, Fig. 6.

The W-LAN detection circuit detects the availability of a W-LAN base station by receiving a “beacon frame” or “beacon signal” transmitted at regular intervals by the W-LAN base station. *Id.*, 16:1–5; *see also id.*, Abstract, 4:31–5:1, 13:14–22, 14:10–14. If the W-LAN detection circuit receives a beacon frame, the mobile communication device is switched to a W-LAN communication path. *Id.* at Abstract, 16:6–8 (“switches 211A and 211B are switched to the position shown to utilize the W-LAN protocol converter 230 and transceiver 240”), Fig. 6. If no beacon frame is received, the device is set to a long range cellular CDMA communication path. *Id.*,

Abstract, 16:3-5 (“If no W-LAN base station is detected, switches 211A and 211B are controlled by the detection circuit 201 such that the CDMA protocol converter 130 is switched in along with the CDMA transceiver 140”), Fig. 6.

3. Analysis of Claim 1 in View of Suga and Gorsuch

Petitioner asserts that claim 1 would have been obvious over Suga and Gorsuch. Pet. 32–76 (citing Ex. 1004 ¶¶ 77–154). 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 Suga and Gorsuch.

Motivation to Combine and Analogous Art

Petitioner offers several motivations to combine Suga and Gorsuch in the manner claimed in the ’294 patent with a reasonable expectation of success, which we find sufficient on the present record. First, the Petition asserts a POSITA “would have looked to known solutions in the art for detecting W-LAN availability,” such as Gorsuch which “includes a starkly similar disclosure to *Suga*, making its solution an intuitive one to incorporate into *Suga*’s cellular phone.” Pet. 23–24 (citing Ex. 1004 ¶ 74). As Petitioner points out, “both *Suga* and *Gorsuch* teach dual-transceiver equipped mobile devices that automatically choose a prioritized network based on availability.” *Id.* Second, we also agree with Petitioner that the evidence of record supports the assertion that “a POSITA would recognize that implementing *Gorsuch*’s W-LAN detection circuit in *Suga*’s cell phone would improve *Suga*’s similar device in the same way it benefits *Gorsuch*,” namely by assessing “the W-LAN connection to determine its

availability . . . without attempting to transmit the full data payload.” *Id.* at 24–25 (citing Ex. 1004 ¶ 75; *KSR*, 550 U.S. at 417 (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious[.]”)).

The Suga-Gorsuch combination provides the “benefits of automatically detecting network availability and choosing the optimal available network [that] was widely recognized and implemented in the art.” *Id.* at 26 (citing Ex. 1004 ¶ 76; Ex. 1007, 1:21–27; 2:22–24, 16:29–41, Fig. 4; Ex. 1008, 5:52–54, 8:8–14, Fig. 6; Ex. 1009, 59). Dr. Buehrer explains that:

integrating *Gorsuch*’s W-LAN detection circuit in *Suga*’s cellular phone would have been straightforward and well within the capabilities of a POSITA. As discussed above, a number of cellular phones at the time included both cellular and W-LAN (Wi-Fi) connectivity. Further, a POSITA would understand how to physically connect the W-LAN detection circuit to the MPU and would understand how to program the MPU to use the information provided by the W-LAN detection circuit. Further, the benefits of automatically detecting network availability and choosing the optimal available network was widely recognized and implemented in the art.

Ex. 1004 ¶ 76. The Petition and Dr. Buehrer cite the example of a Nokia cellular phone that included “seamless handoff of mobile voice and data from a wide area cellular network to WLAN or Wireless Fidelity (Wi-Fi), so it is possible to connect at a high speed to the internet from virtually anywhere.” Pet. 26 (citing Ex. 1009, 59). The Petition and Dr. Buehrer provide additional examples that are consistent with and corroborate Dr. Buehrer’s expert opinion testimony quoted above. *Id.* at

Patent Owner's counter-arguments are unavailing on the present record. For example, Patent Owner's assertion that Suga "teaches the election of a communication path rather than switching based on a trigger, e.g., an invariable activation command, in response to an invariable activation cue," misconstrues the claim language and Petitioner's argument. Prelim. Resp. 19–21 (citing Ex. 1005 ¶¶ 47–49, Fig. 6; Ex. 2001 ¶¶ 60–62). The '294 patent claims recite an "*invariable activation command*" issued in response to a user selectively triggering the control device, not in response to an invariable activation cue, which is not language recited in the claim or described in the specification.⁷ Patent Owner's argument does not undermine Petitioner's well-supported contention that Suga teaches selectively switching between two different data conveyance paths, i.e. switching selectively between a wireless phone line and wireless LAN line.⁸

Nor are we persuaded that "*Suga* and *Gorsuch* are from different fields of endeavor than the '294 Patent" as asserted by Patent Owner. Prelim. Resp. 24 (citing Ex. 2001 ¶ 67). We agree with Petitioner that Suga and Gorsuch are in the same field of endeavor as the '294 patent because they are directed to mobile electronic devices that switch between data communication paths or networks. Pet. 16 (citing Ex. 1001, 13:47–49, 16:8–10, 17:27–32; Ex. 1004 ¶¶ 65, 71; Ex. 1005 ¶¶ 11, 45–52); Ex. 1006, Abstract, 3:29–4:4). Both Suga and Gorsuch teach dual-transceiver

⁷ Similarly, Patent Owner's assertion that "[n]either *Suga* nor *Gorsuch* teaches or describes an 'invariable activation cue' in addition to other elements," is not understood. Prelim. Resp. 24. Patent Owner seems to be conflating an "*invariable activation command*" with an "*activation cue*."

⁸ Patent Owner acknowledges that "if any switching occurs, it is between phone lines and wireless LAN lines used to access the different networks." Prelim. Resp. 21 (citing Ex. 1005, Abstract; Ex. 2001 ¶ 63).

equipped mobile devices that can switch between available W-LAN networks and long-range cellular networks to exchange data. Ex. 1005 ¶¶ 42–52; Ex. 1006, 3:16–4:11, 13:14–32, 16:1–12. On the present record at this stage of the proceeding, we determine the mobile communication devices taught by Suga and Gorsuch are in the same field of endeavor as the '294 patent.

We now turn to the parties' arguments regarding whether the Petition has established a reasonable likelihood that Suga and Gorsuch disclose, teach, suggest, or otherwise render obvious claim 1 of the '294 patent.

Limitation [1(Pre)]: *“A cellular phone, comprising:”*

Petitioner contends that, if the preamble is limiting, Suga discloses Limitation [1(Pre)] because “*Suga discloses ‘cell phone’ 1 that can ‘exchange data with websites via an Internet connection service, and exchange data (such as sending and receiving email) with other information devices.’”* Pet. 32 (citing Ex. 1004 ¶ 77; Ex. 1005 ¶ 16, Fig. 1). The Petition particularly points out Suga’s cell phone functionality depicted in Figure 1. *Id.* Petitioner’s contention is consistent with the cited disclosures in Suga and supported by Dr. Buehrer’s declaration testimony.

Patent Owner does not address this limitation. Prelim. Resp. 26–39.

On the present record, Suga and the Buehrer Declaration adequately support Petitioner’s contention that Suga 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 Suga discloses Limitation [1(a)] because “*Suga discloses that the cell phone includes, among other parts, MPU 40, a memory card 35, flash memory 36, and SRAM 37 that comprise an*

electronic circuit.” Pet. 33 (citing Ex. 1005 ¶¶ 35–37, Fig. 2). The Petition addresses the claimed storing, processing, and exchange of data as follows:

Suga further discloses the MPU 40 “controls the entire operation of the cellular phone 1[,]” including performing switching control between the cellular and W-LAN connections, and sending/receiving data “such as an e-mail” through either network. Therefore, a POSITA would understand that the MPU 40 “is capable of processing data[,]” “data [output,]” and “data input[.]” The memory card 35 “is used to store content handled by the cell phone 1” such as “e-mails, audio information, and video information.” Flash memory 36 “is a memory built into the cell phone 1 and is used to store various types of data” and SRAM 37 “is a memory that provides a work area for the MPU 40.” A POSITA would understand that a circuit including at least the MPU 40, memory card 35, flash memory 36, and SRAM 37 is “capable of storing data therein, capable of processing data, and capable of data input and output” to send and receive e-mails—functionality expressly ascribed to *Suga*’s cellular phone.

Id. at 34–35 (citing Ex. 1004 ¶¶ 78–79; Ex. 1005 ¶¶ 35–37, 45–47, 53) (internal citations omitted). Thus, the Petition relies on *Suga*’s control circuitry and associated memory components as a disclosure of Limitation [1(a)].

Patent Owner contends that *Suga* does not disclose Limitation [1(a)] because the “stored data of the claim is the same data later exchanged in a later claim element,” and the “stored data must also be the data that is sent in element [1.h.i] and [1.h.ii].” Prelim. Resp. 26–27 (citing Ex. 2001 ¶¶ 72–73). Patent Owner further contends that the Petition fails to “identify what ‘data’ the Petitioner is referring to in order to meet” Limitation [1(a)]. *Id.* Patent Owner’s contentions are unavailing or inconsistent with the present record.

First, the Petition identifies that *Suga*’s cellular phone is capable of storing data as recited in Limitation [1(a)], which includes “e-mails, audio

information, and video information.” Pet. 34–35 (citing Ex. 1005 ¶ 35). The Petition particularly points out that Suga teaches the capability of storing, processing, and sending and receiving email data. *Id.* (citing Ex. 1004 ¶¶ 78–79; Ex. 1005 ¶¶ 35–37, 45–47 (“user gives instructions to send data such as an e-mail”)); *see also id.* at 53 (citing Ex. 1004 ¶ 101) (“The user selection to send the email is processed by MPU 40 (part of the ‘electronic circuit’ in *Suga*), which initiates the sending of the email data to an external device via either the W-LAN line or wireless phone line.”). Thus, Patent Owner’s argument that the Petition fails to identify the stored data in *Suga* is unavailing.

Second, the Preliminary Response appears to be reading a limitation from a preferred embodiment into claim language that is not so limited. Limitation [1(a)] does not recite or imply a data transfer function for “stored” data as argued in the Preliminary Response. For example, Limitation [1(a)] 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)(i)] and [1(h)(ii)], which follow on from Limitation [1(a)], recite “sending data from said electronic circuit to the first [second] data exchange device.” 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. And even under Patent

owner's improper construction, Suga's transmission of stored email data would satisfy Limitations [1(h)(i)] and [1(h)(ii)].

On the present record, Suga and the Buehrer Declaration adequately support Petitioner's contention that Suga 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 Suga discloses Limitation [1(b)] because “Suga discloses keyboard 39 (‘a user-triggered control device’) that a user engages (*i.e.*, “selectively trigger[s]”) to initiate the process of sending an email.” Pet. 35–39 (citing Ex. 1004 ¶¶ 70–85). *Id.* The Petition makes the common sense assertion that a POSITA would have understood that “by pressing one or more buttons on the keyboard,” which is operatively connected to the MPU, a user would initiate the email transmission. *Id.* at 36–37 (citing Ex. 1004 ¶ 81; Ex. 1010, Abstract, ¶¶ 2–3, Figs. 1, 4, and 5). The Petition further asserts that “the device’s command to transmit an email (‘activation command’) is ‘invariable[,]’ as claimed,” because “the choice between wireless networks is based on the availability of W-LAN and cannot be influenced by the user (at the time of transmission).” *Id.* at 35, 37–39 (citing Ex. 1004 ¶¶ 82–85; Ex. 1005 ¶¶ 43, 47–52, Figs. 5, 6). Petitioner’s contention is consistent with the cited disclosures in Suga and our preliminary construction of an “*invariable activation command*.”

Patent Owner attempts to distinguish Suga by reading preferred embodiment limitations into broader claim language without a sufficient evidentiary basis or persuasive reason for doing so. Prelim. Resp. 27–31.

For example, the independent claims do not recite a control device “used for activating a security feature,” such as a PIN, in order to issue an invariable activation command. *Id.* at 27–28 (citing Ex. 1001, 8:45–47 (“validation means in the form of . . . a personal identification number (PIN)”), 19:1–6; Ex. 1005 ¶ 36; Ex. 2001 ¶¶ 76–78). We underscore the point by noting dependent claim 4 does recite a “control device is . . . a keypad for receiving a PIN code,” as does dependent method claim 18. Ex. 1001, 19:50–53, 22:31–36. Thus, on the present record, we decline to limit the independent claims to the preferred embodiment of a control device for activating a security feature, such as a PIN, as urged by Patent Owner.

Similarly, Patent Owner’s complaint, that Suga does not disclose information such as “the messaging to the controller, interaction between the email application and the cell phone’s operating system, or whether the cell phone even has an operating system,” is not commensurate with the scope of the independent claims. Prelim. Resp. 28–29 (citing Ex. 2001 ¶¶ 79–80). The Petition, as stated above, also provides sufficient evidence at this stage of the proceeding that email communication and implementation details were within the skill level of a POSITA. *See* Pet. 26–27 (citing Ex. 1004 ¶ 76; Ex. 1007; Ex. 1008; Ex. 1009), 37–39 (citing Ex. 1004 ¶¶ 82–85; Ex. 1005 ¶¶ 43, 47–52, Figs. 5, 6). Patent Owner’s related argument, that there is “[n]o evidence of an email selecting a network path [] disclosed in any of the references,” is not understood or consistent with the recited claim language. Prelim. Resp. 29–31 (citing Ex. 2001 ¶¶ 80–83).

On the present record, Suga and the Buehrer Declaration adequately support Petitioner’s contention that Suga 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;”

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 Suga discloses Limitations [1(c)] and [(d)] because “Suga discloses a cell phone 1 that transmits data through either a W-LAN network (using a first data transceiver over a first communication link) or a cellular network (using a second data transceiver over a second, distinct communication link).” Pet. 39 (citing Ex. 1004 ¶¶ 86–91; Ex. 1005 57, Fig. 1). The Petition particularly cites Suga Figure 1, discussed above, which depicts a cell phone operatively connected to both a W-LAN access point (“*first external data exchange device*”) over a W-LAN line (“*first communication link*”) and a wireless cellular network base station (“*second external data exchange device*”) over a wireless phone line (“*second communication link*”). *Id.* at 39–40. The Petition asserts that both the W-LAN transceiver and cellular transceiver are connected to the cell phone’s “*electronic circuit*,” as depicted in Suga Figure 2. *Id.* at 40–43 (citing Ex. 1004 ¶¶ 88–91; Ex. 1005 ¶¶ 16, 29–30, 34, 39, 41, Fig. 2). On the present record, Petitioner’s contention is consistent with the cited disclosures in Suga.

Patent Owner contends that “[n]etworking devices, such as access points or cellular base stations, carry data for other devices and are not the endpoint or node for receiving the data.” Prelim. Resp. 32 (citing Ex. 1001, 9:1–11; Ex. 2001 ¶¶ 84–87). Patent Owner again appears to be reading preferred embodiment limitations into the broader language of the

independent claims. For example, dependent claim 8 recites a “wireless data exchange with a first external data exchange device through a direct link representing said first communication link where the cellular phone is conveyed toward a close proximity of the first data exchange device.”

Ex. 19:62–20:2. Independent claim 1, from which claim 8 depends, recites broader language for the recited communication links between a cell phone transceiver and a data exchange device that does not require a direct link. Claim 1 recites only that the data transceivers are “*operatively linked*” to the electronic circuit in the cell phone and are “*for exchanging data between said electronic circuit and a first [second] external data exchange device.*” On the present record, we are not persuaded to limit the independent claims to a preferred embodiment as urged by Patent Owner.

On the present record, Suga and the Buehrer Declaration adequately support Petitioner’s contention that Suga discloses Limitations [1(c)] and [1(d)].

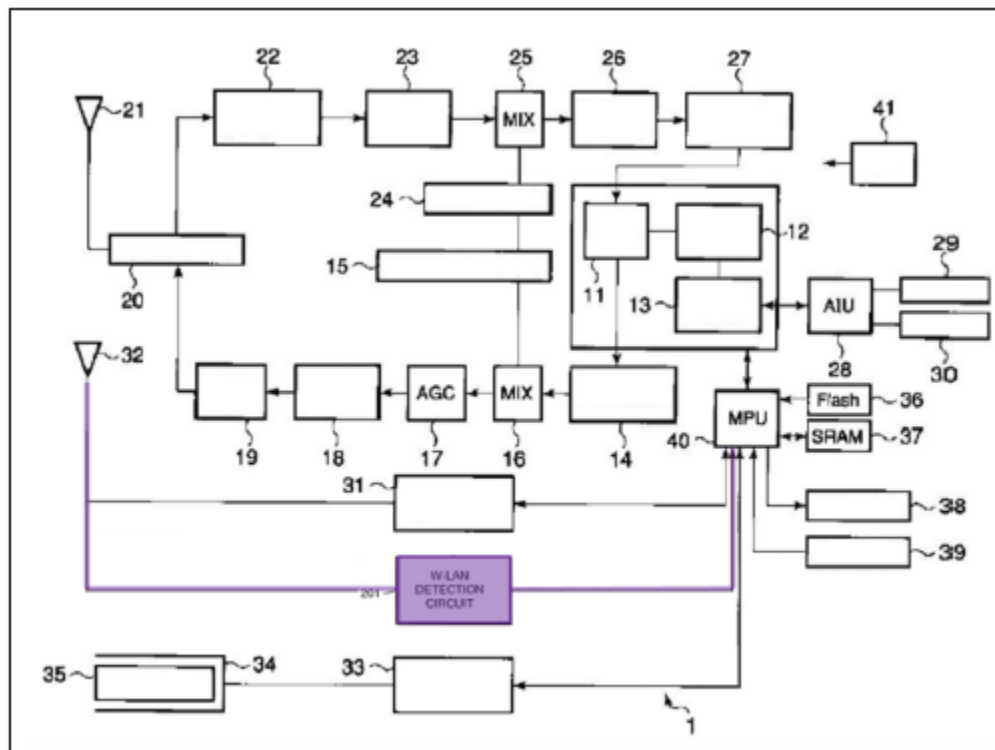
Limitation [1(e)]: “*a cue receiver operatively linked to said electronic circuit for receiving an activation cue from a source external to said cellular phone;*”

Petitioner contends that Suga in combination with Gorsuch discloses Limitation [1(e)] because:

the proposed combination incorporates *Gorsuch’s* W-LAN detection circuit 201 (“cue receiver”) into *Suga’s* cellular phone to provide information on the availability of W-LAN. With this information, *Suga’s* MPU 40 (“electronic circuit”) can choose the proper transceiver for a data communication (*e.g.*, an email transmission).

Pet. 44–45 (citing Ex. 1004 ¶¶ 92–93; Ex. 1005, Fig. 2; Ex. 1006 Abstract, 4:31-5:1, 13:14-22, 14:10-14, 16:1-12, Fig. 6). The Petition illustrates the proposed combination with “*Gorsuch’s* W-LAN detection circuit 201

inserted in parallel to *Suga's* W-LAN transceiver circuitry and connected to MPU 40,” in annotated Figure 2 from *Suga* reproduced below:



Id. (citing Ex. 1004 ¶ 92; Ex. 1005, Fig. 2). The Petition explains that:

Gorsuch's W-LAN detection circuit 201 [] receives a beacon frame or beacon signal (“activation cue”) from a W-LAN base station 611, which is “a source external to said cellular phone[.]” “IEEE 802.11 specifies that a beacon frame should be transmitted at regular intervals” by a W-LAN hub. A POSITA would have understood that *Suga's* access point 6, like *Gorsuch's* W-LAN base station 611, also emits a beacon signal. Further, access point 6 is external to cell phone 1, as the two are linked via a “wireless LAN line” (*i.e.*, a wireless connection).

Pet. 45–46 (citing Ex. 1004 ¶ 93 (discussing Ex. 1005 ¶¶ 39–41 and explaining that *Suga's* access point would emit beacon frames in order to remain compliant with the IEEE 802.11 standard) (internal citations omitted); Ex. 1006, Abstract, 4:31–5:1, 13:14–22, 14:10–14, 16:1–12, Fig. 6). Dr. Buehrer explains that, because *Suga's* W-LAN transmitter is

compliant with the referenced IEEE standard, “access point 6 of *Suga* emits a beacon signal.”

The Preliminary Response contends that the activation cue must be received from a data exchange device transceiver, a preferred embodiment not commensurate with the broader language of claim 1 (“*receiving an activation cue from a source external to said cellular phone*”). Prelim. Resp. 36 (citing Ex. 1001, 12:60–62; Ex. 2001 ¶¶ 84–85, 91). Patent Owner further contends that *Suga* in view of *Gorsuch* does not disclose an “*activation cue*”

because: (1) the activation cue must originate at a data exchange device and identify that a data exchange device is ready to receive data, (2) a POSITA would understand that connection to a network does not mean a data exchange device is connected to the network, and (3) a POSITA would understand that a network ready to receive data is different than a network receiving data for a device connected to the network.

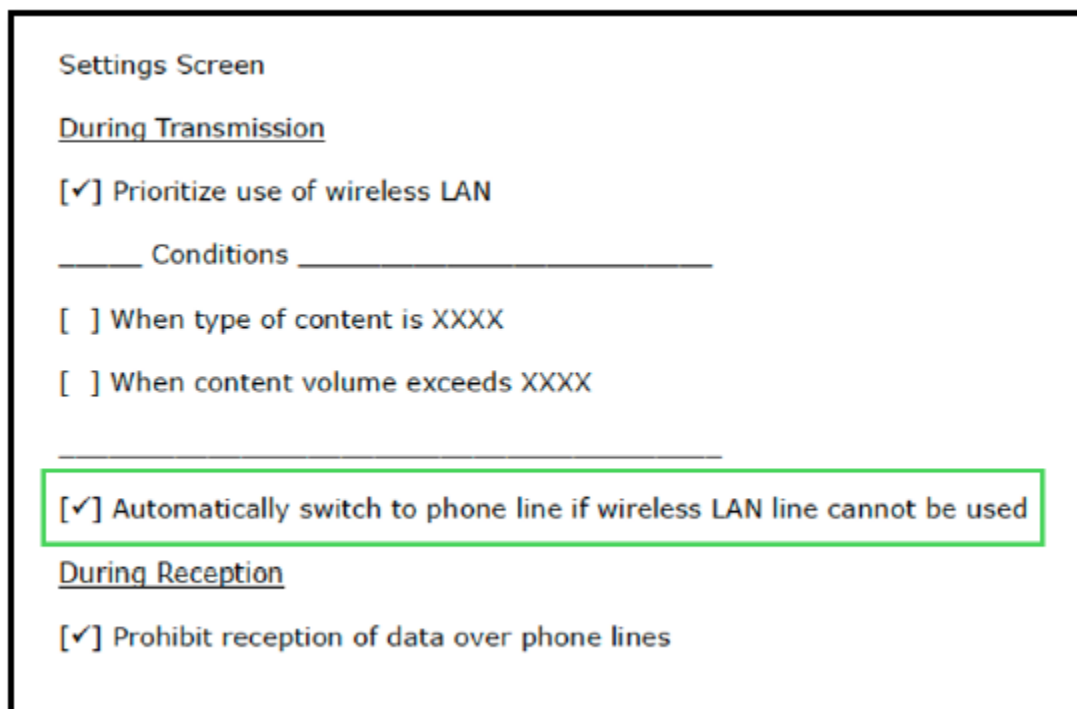
Prelim. Resp. 36 (citing Ex. 2001 ¶¶ 92–93). The Preliminary Response arguments do not address Petitioner’s annotated Figure 2 from *Suga* depicting a cue receiver for receiving an activation cue from an external source. Patent Owner again reads limitations from preferred embodiments described in the ’294 patent into broader claim language in an effort to distinguish the combination of *Suga* and *Gorsuch* presented in the Petition. For example, claim 1 recites receiving an activation cue from “*a source external to said cellular phone*,” not from a data exchange device. On the present record, we decline to limit the independent claims to a preferred embodiment as urged by Patent Owner.

At this stage of the proceeding based on the present record, the Petition adequately supports Petitioner’s assertion that a POSITA would have had sufficient reason to incorporate *Gorsuch*’s W-LAN detection

circuit—a “*cue receiver*” for receiving an “*activation cue*” from an external source—into Suga’s cell phone circuitry with a reasonable expectation of success.

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 Suga in combination with Gorsuch discloses Limitation [1(f)] because “[i]n this combination, the MPU 40 itself is a ‘data conveyance switching element[.]’” Pet. 46–47 (citing Ex. 1004 ¶¶ 94–98). The Petition explains that the MPU “decides which transceiver is used for a data transmission and is responsible for routing the data to the selected transceiver.” *Id.* Suga annotated Figure 5 is reproduced below from the Petition:



Pet. 47 (citing Ex. 1005, Fig. 5 (annotated); Ex. 1004 ¶ 95). The Petition further explains that Suga’s cell phone can be configured to prioritize W-LAN and to “automatically switch” to a cellular network when a W-LAN connection is unavailable, i.e., when no beacon frame (“*activation cue*”) is received by the W-LAN detection circuit. *Id.* Thus, the Petition proposes a combination of Suga and Gorsuch where Gorsuch’s W-LAN detection circuit is operatively connected to and under the control of Suga’s MPU that acts as a “*data conveyance switching element.*” *Id.*

Patent Owner contends that “[r]ather than relying on the state of the switching element of the ’294 Patent, *Suga* relies on processing its priorities set in the graphical user interface.” Prelim. Resp. 37–38 (citing Ex. 1005 ¶¶ 47–52, Fig. 6; Ex. 2001 ¶¶ 95–96). Patent Owner further contends that “[i]f states were assigned, then the flowchart of Fig. 6 would not need to be run every time a transmission occurs.” *Id.* at 38 (citing Ex. 1001, 19:23–28; Ex. 2001 ¶ 97). Patent Owner, however, does not undermine Petitioner’s showing that, in the modified Suga-Gorsuch cell phone, the MPU is operatively connected to a W-LAN detection circuit and acts as a data conveyance switch depending on whether or not a beacon frame has been received from the access point.

At this stage of the proceeding based on the present record, the Petition adequately supports Petitioner’s assertion that a POSITA would have had sufficient reason to incorporate Gorsuch’s W-LAN detection circuit in Suga, operatively connected to and under the control of Suga’s MPU that acts as a “*data conveyance switching element,*” with a reasonable expectation of success.

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

Petitioner contends that Suga discloses Limitation [1(g)] because a “power supply 41 provides power to the components in the cell phone 1.” Pet. 51 (citing Ex. 1005 ¶ 37, Fig. 2; Ex. 1004 ¶ 99).

Patent Owner does not address this limitation. Prelim. Resp. 26–39.

On the present record, Suga and the Buehrer Declaration adequately support Petitioner’s contention that Suga discloses Limitation [1(g)].

Limitation [1(h)(i)]: *“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(h)(ii)]: *“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 Suga in combination with Gorsuch discloses Limitations [1(h)(i)] and [1(h)(ii)]:

The proposed *Suga-Gorsuch* combination uses the W-LAN detection circuit of *Gorsuch* to determine if W-LAN is available, allowing the cell phone of *Suga* to efficiently transmit data through W-LAN when available. If W-LAN is not available, the cellular network is used to transmit the user data (e.g., the user’s email). Specifically, a user inputs a command on the keyboard 39 of cell phone 1 to authorize sending an email, triggering an invariable activation command to be issued. The user selection to send the email is processed by MPU 40 (part of the “electronic circuit” in *Suga*), which initiates the sending of the email data to

an external device via either the W-LAN line or wireless phone line.

Pet. 52–53 (citing Ex. 1004 ¶¶ 100–104) (internal citation omitted).

Petitioner further provides annotated versions of Suga Figures 1 and 2 to support its contention that the Suga-Gorsuch combination discloses Limitations [1(h)(i)] and [1(h)(ii)]. *Id.* at 54–56 (citing Ex. 1004 ¶¶ 102–104).

Patent Owner generally repeats arguments previously made that the proposed Suga-Gorsuch combination does not disclose “the claim elements associated with an activation cue, invariable activation command, data exchange device, and other elements as discussed above.” Prelim. Resp. 39 (citing Ex. 2001 ¶¶ 84–85, 89–101).

At this stage of the proceeding based on the present record, Suga, Gorsuch, and the Buehrer Declaration adequately support Petitioner’s contention that Suga in combination with Gorsuch discloses Limitations [1(h)(i)] and [1(h)(ii)].

4. Conclusion for Ground 1

For the reasons given above, the Petition adequately supports the assertion that Suga in combination with Gorsuch 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 Suga in view of Gorsuch.⁹

⁹ The Board need not address the dependent claims on the merits at this stage of the proceeding. *See SAS Inst.*, 584 U.S. at 365 (“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*, 584 U.S. at 365.

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.

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;

FURTHER ORDERED that Petitioner shall have 10 business days from the date of this Decision to file a translation affidavit or sworn declaration pursuant to 37 C.F.R. §§ 1.68, 42.63(b); 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.

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