

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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LG ELECTRONICS, INC.,  
Petitioner,

v.

BELL NORTHERN RESEARCH, LLC,  
Patent Owner.

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IPR2020-00319  
Patent 7,039,435 B2

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Before BRYAN F. MOORE, STACY B. MARGOLIES, and  
SCOTT E. BAIN, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
*35 U.S.C. § 314, 37 C.F.R. § 42.4*

I. INTRODUCTION

A. *Background and Summary*

LG Electronics, Inc. (“Petitioner”) filed a Petition (“Pet.” Paper 2) pursuant to 35 U.S.C. § 311 to institute an *inter partes* review of claims 1–3, 6, and 8 of U.S. Patent No. 7,039,435 B2 (“the ’435 patent,” Ex. 1001). The Petition is supported by the Declaration of Matthew Valenti, Ph.D. (Ex.

1003). Bell Northern Research, LLC (“Patent Owner”) filed a Preliminary Response (“Prelim. Resp.” Paper 7).<sup>1</sup> The Preliminary Response is supported by the Declaration of Mark Horenstein, Ph.D., (Ex. 2003). Petitioner filed an authorized reply to the Preliminary Response. (“Prelim. Reply” Paper 12). Patent Owner filed an authorized sur-reply to the reply. (“Prelim. Sur-Reply” Paper 13).

For the reasons set forth below, we institute an *inter partes* review of claims 1–3, 6, and 8 of the ’435 patent.

*B. Real Parties in Interest*

Petitioner names LG Electronics, Inc., LG Electronics U.S.A. Inc., and LG Mobile Research U.S.A., LLC as the real parties-in-interest. Pet. 2. Patent Owner names Bell Northern Research, LLC (which is a wholly owned subsidiary of Hilco Patent Acquisition 56, LLC, which is owned by both Hilco IP Merchant Capital, LLC, and Hilco, Inc.) as the real party-in-interest. Paper 4, 1.

*C. Related Matters*

The parties advise us that the ’435 patent is asserted against Petitioner in *Bell Northern Research, LLC v. LG Elecs., Inc.*, 3:18-cv-02864 (S.D. Cal. Dec. 20, 2018). Pet. 2; Paper 4, 1. The parties advise us that the ’435 patent was asserted against other parties in *Bell Northern Research, LLC v. Huawei Device (Dongguan) Co., Ltd.*, 3:18-cv-01784 (S.D. Cal. Nov. 13, 2018) and is currently asserted against other parties in *Bell Northern Research, LLC v. ZTE Corp.*, 3:18-cv-01786 (S.D. Cal. Oct. 15, 2018). Pet. 2; Paper 4, 1. The ’435 patent was also the subject of IPR2019-01186, which has been

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<sup>1</sup> Patent Owner file a confidential version of its Preliminary Response. Paper 8. In this Decision, we cite only to the public version of Patent Owner’s Preliminary Response.

terminated due to settlement prior to institution and IPR2019-01365, which was instituted and is currently pending.

*D. The '435 Patent*

The '435 patent generally describes techniques for reducing the transmit power level of a portable cell phone when located near a human body. Ex. 1001, 1:63–67. For example, the '435 patent describes a cell phone device including a “typical power circuit” that provides a transmit power level. *Id.* at 3:31–34. A “proximity regulation system” is coupled to the “power circuit” and determines a “proximity transmit power level” based on “its location proximate the portable cell phone user.” *Id.* at 3:43–47. The '435 patent discloses that a “network adjusted transmit power level may be reduced to a value determined by the proximity transmit power level when the location of the portable cell phone 200 is within the vicinity of the user’s head” or “just within the vicinity of a user’s body.” *Id.* at 5:29–36.

*E. Illustrative Claims*

Challenged claim 1 is an independent claim. Challenged claims 2, 3, 6, and 8 depend directly from claim 1. Claim 1, reproduced below, is illustrative.

1. A portable cell phone, comprising:
  - a power circuit that provides a network adjusted transmit power level as a function of a position to a communications tower; and
  - a proximity regulation system, including:
    - a location sensing subsystem that determines a location of said portable cell phone proximate a user; and
    - a power governing subsystem that determines a proximity transmit power level of said portable cell phone based on said location and determines a transmit power level for said portable cell phone based on said network adjusted transmit power level and said proximity transmit power level.

Ex. 1001, 8:2–15.

*F. Evidence*

Petitioner relies on the following references. Pet. 11–56.

<b>Name</b>	<b>Reference</b>	<b>Exhibit</b>
Luxon	US 6,095,820, filed Oct. 27, 1995, issued Aug. 1, 2000	1004
Irvin	WO 2002/05443 A2, filed June 20, 2001, published Jan. 17, 2002	1005
Myllymäki	US 6,018,646, filed Aug. 22, 1997, issued Jan. 25, 2000	1006
Steer	US 6,845,246, filed June 15, 2000, issued Jan. 18, 2005	1007

*G. Prior Art and Asserted Grounds*

Petitioner asserts that claims 1–3, 6, and 8 would have been unpatentable on the following grounds:

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>
1–3, 8	103	Luxon, Irvin
6	103	Luxon, Irvin, Myllymäki
1–3, 6, 8	103	Irvin, Myllymäki
1–3, 6, 8	103	Steer, Irvin

## II. ANALYSIS

*A. Discretion Under 35 U.S.C. § 314(a)*

We, for the reasons discussed below, do not exercise the discretion available under § 314(a) to deny institution of a trial in this case.

**GENERAL PLASTIC FACTORS**

In the context of follow-on petitions, our exercise of discretion under § 314(a) is guided by a set of non-exclusive factors:

1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;

2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
3. whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition;
4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;
5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;
6. the finite resources of the Board; and
7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

*General Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16 (PTAB Sept. 6, 2017) (precedential as to § II.B.4.i) (“the *General Plastic* factors”). We determine the *General Plastic* factors do not weigh in favor of denying institution.

*1. Whether the same petitioner previously filed a petition directed to the same claims of the same patent*

Petitioner asserts that “[a]n IPR petition (IPR2019-01186) was previously filed against the ’435 patent on June 11, 2019 by a different petitioner, independent of LG, and a second IPR petition (IPR2019-01365), substantively identical to IPR2019-01186 was filed against the ’435 patent on July 24, 2019, again by a different petitioner, independent of LG.” Pet. 63.

The precedential *Valve* decision held that “[w]hen different petitioners challenge the same claims of the same patent, we also consider the nature of

any relationship between those petitioners when weighing the General Plastic factors.” *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, -00063, -00084, Paper 11 at 10 (PTAB Apr. 2, 2019) (precedential). In *Valve*, the Board found that the first *General Plastic* factor favored denying institution in light of the overlap in the challenged claims and the significant relationship between the first and second petitioners:

We determine that the first *General Plastic* factor weighs against institution. As discussed above, the petitions in these cases challenge the same claims of the '934 patent as the previous petition in the 1031 IPR. As also discussed above, Valve and HTC were co-defendants in the District Court litigation and were accused of infringing the '934 patent based on HTC's VIVE devices that incorporate technology licensed from Valve. Thus, there is a significant relationship between Valve and HTC with respect to Patent Owner's assertion of the '934 patent. *The complete overlap in the challenged claims and the significant relationship between Valve and HTC favor denying institution.*

*Id.* at 10 (emphasis added). Thus, *Valve* instructs us to consider the relationship between the petitioners and the overlap in the challenged claims, as between this case and the earlier-filed IPR2019-01186 and IPR2019-01365. We address each of these points in turn.

*a) Relationship between the Petitioner, Huawei, and ZTE*

Petitioner argues that “[n]ot only is there no control or cooperation in the IPRs between LG and distinct petitioners in the previous IPRs, but they remain distinct parties, with ultimately distinct interests, and distinct litigation strategies, and are often competitors in the marketplace.” Pet. 64–65. For example, Petitioner states “unlike its competitor Huawei which is based in China, LG is a separate and different company based in South Korea that has its own personnel, that is facing different potential liability

based on different accused products, and that has different motivations from Huawei.” Prelim. Reply 5.

Patent Owner argues the “relationship between the first filer, Huawei, and the current Petitioner, LG, . . . is relevant to the equities here. Huawei and LG share the same counsel. Fish and Richardson (“Fish”) represents both Huawei and LG in the district court litigation.” Prelim. Resp. 33 (citing Ex. 2012; Ex. 2013, 79).

We compare the circumstances in the present case to those in *Valve*. In *Valve*, the two petitioners were codefendants in a single patent infringement proceeding and the challenged patent had been asserted against both because one petitioner had licensed the allegedly infringing technology from the other petitioner. *Valve*, Paper 11 at 9–10. The first petitioner, HTC, made accused devices that incorporated technology licensed from the second petitioner, Valve, who had also provided HTC with technical assistance during the development of the accused devices. *Id.* at 10. Consequently, the panel in *Valve* found a “significant relationship” between the petitioners that favored denying institution. *Id.* at 11. Huawei and LG were not and are not currently co-defendants. We do not consider sharing the same counsel to create a significant relationship under the inquiry set forth in *Valve*. Thus, on the record before us, Huawei and LG do not have a significant relationship, nor are they similarly situated, with respect to Patent Owner’s assertion of the ’435 patent. *Valve Corp.*, Paper 11.

*b) Overlapping Claims*

Next we consider the overlap between the claims challenged in this proceeding and the challenged claims in IPR2019-01186, 1365. The Petition seeks *inter partes* review of claims 1–3, 6, and 8. *See* Pet. 1. The

Petition in IPR2019-01186 sought *inter partes* review of claims 1–3, and 6, but terminated due to settlement prior to institution. IPR2019-01186, Paper 2, 5; Paper 15. In IPR2019-01365, we instituted trial on claims 1–3, and 6. IPR2019-01365, Paper 13, 4, 39 (Institution Decision). Thus, there is one claim at issue in this proceeding that is not at issue in IPR2019-01365.

Patent Owner asserts “if [the Board] institute[s] the instant Petition, [the Board] would have to consider the same arguments across two different proceedings, resulting in a substantial loss of efficiency and the risk of inconsistencies.” Prelim. Sur-Reply 4.

Petitioner asserts that because it asserts the additional claim 8, discretionary denial would prejudice LG. Prelim. Reply 4–5. Patent Owner responds “Petitioner fails to tell the Board that claim 8 was dropped from the district court litigation months ago. (*See Ex. 2020.*)” Prelim. Sur-Reply 6. Thus, according to Patent Owner, “there is complete overlap between the claims at issue in the two district court cases. Petitioner’s claims of potential ‘unfair prejudice’ are baseless and rest upon its attempt to mislead the Board on this issue.” *Id.*

Nevertheless, there is not complete overlap of asserted claims which weighs against exercising our discretion to deny institution.

c) “*Factor One Conclusion*”

Accordingly, in light of the lack of a significant relationship between Petitioner and Huawei, and the incomplete overlap between the challenged claims in the Petition and IPR2019-01365, the first *General Plastic* factor weighs against exercising our discretion to deny institution.



2. *Whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it*

IPR2019-01186 and IPR2019-01365 included anticipation grounds by two references Baiker and Irvin and obviousness grounds over: Baiker and Irvin; Irvin and Myllamäki; Bodin and Irvin; and Bodin, Irvin and Myllamäki. The current Petition removes Bodin, Baiker and Werling, and the anticipation by Irvin and adds two references, Luxon and Steer, that were not cited in the previous petitions, i.e. obviousness grounds over Luxon and Irvin; Luxon, Irvin, and Myllamäki; Irvin, and Myllamäki; and Steer and Irvin.

Other than Irvin, and Myllamäki, there is no evidence in the record indicating whether Petitioner should have been able to find the references relied on in the Petition at the time of the filing of the prior petitions by exercising reasonable diligence. Petitioner asserts it “was not aware of” the Luxon and Steer references at the time of the filing of the first Petition, but do not address whether they “should have known” of the references. Pet. 65. Patent Owner asserts this factor does not weigh for or against institution. Prelim. Resp. 34. Accordingly, given there is not sufficient evidence whether or not Petitioner should have known about Luxon and Steer, this factor is neutral.

3. *Whether at the time of filing of the second petition the petitioner already received the patent owner’s preliminary response to the first petition or received the Board’s decision on whether to institute review in the first petition*

Petitioner filed the present Petition on December 19, 2019, before the Board issued its decision on institution in IPR2019-01365 on February 11, 2020. Pet. 31; IPR2019-01365, Paper 13. On the other hand, Petitioner’s

filing occurred after Patent Owner filed its Preliminary Response in IPR2019-01365 on November 12, 2019 and in IPR2019-01186 on October 11, 2019. IPR2019-01365, Paper 8; IPR2018-01186, Paper 8.

Petitioner argues that it did not have access to the Board's decision on institution (Prelim. Reply 6) but this factor relies on *either* the preliminary response *or* the institution decision. *See* Prelim. Sur-Reply 6. Petitioner also argues that it did not delay as a litigation tactic:

Patent Owner first asserted the '435 patent against LG more than three months after it asserted it against petitioners in the earlier IPR proceedings. **Critically**, as noted above, Patent Owner provided its final election of asserted claims against LG only days before patent owner filed its [Patent Owner Preliminary Response (POPR)] in IPR2019-01186 (and the POPR in IPR2019-01365 is substantively identical).

Pet. 66.

**Patent Owner argues that Petitioner uses most of the same references** and arguments as the earlier cases. Prelim. Resp. 34–35. Specifically, Patent Owner argues “[w]hile the grounds asserted in the earlier petitions and the current one are not identical, LG uses Irvin for almost all claim limitations in all three grounds, and Irvin was also the primary reference in the earlier-filed petitions.” *Id.*

Patent Owner also asserts Petitioner **used knowledge gained** from the earlier Patent Owner preliminary responses to improve this Petition. For example, according to Patent Owner, the preliminary response in IPR2019-01186 argued that that petitioner had not cited to the Irvin provisional in its mappings for anticipation and obviousness. *Id.* at 35. Patent Owner argues Petitioner added those citations to this Petition. *Id.*

Patent Owner also argues that the preliminary response in IPR2019-01186 made arguments against Baiker, Bodin, and Irvin. *Id.* Specifically,

Patent Owner argues the prior preliminary response argued that Baiker was antedated, that Bodin was missing the limitation of “position to a communications tower,” and that Irvin (as an anticipating reference) was also missing limitations. *Id.* at 35–36. We are unable to determine if the changes between the two petitions was an attempt to address arguments made in the preliminary response from IPR2019-01186. For example, arguments were made against Irvin and Myllamäki in IPR2019-01186, yet Petitioner still asserts a ground based on Irvin and Myllamäki.

Patent Owner points out that in the current Petition, Petitioner “literally copied Huawei’s entire argument with respect to Irvin’s disclosure of claim limitations, but then added a couple of paragraphs regarding Myllmäki in order to cure the deficiency in Irvin that Patent Owner identified in its Preliminary Response to the first Petition.” *Id.* at 36.

Patent Owner provides Exhibit 2015, which provides a line by line comparison of the Irvin section of the IPR2019-01186 petition and the current Petition to support its assertion. *Id.* (citing Ex. 2015). Although Petitioner did apparently copy some portion of the prior Petition and add some citations, we do not discern specific arguments in the current Petition that are in response to arguments made in a prior preliminary response.

Accordingly, this factor weighs only slightly in favor of denying institution under § 314(a).

4. *The length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition*

Petitioner argues it worked diligently to identify prior art and file the present petition since being served with the Petition in the district court. Pet. 67. Patent Owner asserts “LG cannot deny that it had knowledge of

*Irvin, Myllamäki, and Luxon* at least as of August 9, 2019, when it served its . . . invalidity contentions in the district court litigation. Prelim. Resp. 37–38 (citing Ex. 2014, 28–29.)

Petitioner asserts the '435 patent was “one of eight patents asserted against LG, each citing volumes of prior art, that occupied significant time to review and consider.” *Id.* Petitioner also argues the delay between learning of the prior art and filing the Petition is reasonable because Patent Owner finally elected asserted claims against LG on October 4, 2019. *Id.* Before that time, according to Petitioner, it had “little certainty as to which claims were at issue and could be included in the petition without introducing unnecessary inefficiencies for the Board and patent owner.” *Id.* Specifically, claim 8 was cited against Petitioner but asserted against other parties. Finally, Petitioner asserts it identified Steer in late October and it diligently filed the Petition after discovering Steer. *Id.*

Additionally, according to Patent Owner, given that this petition was filed six months after Huawei’s petition, the delay is significant considering the substantial overlap of between the two petitions. Prelim. Resp. 38; *see Valve*, IPR2019-00062, Paper 11 at 14 (holding that a delay of five months after the filing of a prior petition weighed in favor of a discretionary denial of the later petition).

Because there is a significant length of time between the first filed petition asserting the *Irvin* and *Myllamäki* references, among others, and the current Petition asserting the *Irvin* and *Myllamäki* references, among others, this factor weighs slightly in favor of invoking our discretion to deny institution.

5. *Whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent*

Petitioner argues that this factor weighs against denying institution because this is the first petition filed by LG, it worked diligently to file after Patent Owner elected claims in district court, and this *inter partes* review advances different “primary” references and an additional claim as compared to the prior *inter partes* review petition. Pet. 67–68.

Patent Owner argues that Petitioner shares the same counsel with a party that was aware Irvin and Myllamäki months prior to the filing of this Petition. Prelim. Resp. 38. Specifically, Patent Owner asserts “on February 25, 2019, [Counsel for Petitioner in its district court litigation] had signed invalidity contentions against the ’435 Patent on behalf of another client asserting *Irvin* and *Myllamaki* as prior art against the ’435 Patent,” eight months before it filed the current Petition. *Id.* Patent Owner also argues there are only nine claims--only one of which is independent--in the challenged patent, so waiting for Patent Owner’s election of claims would not result in a significant reduction in the complexity of the Petition versus addressing all nine claims. Prelim. Sur-Reply 6.

Nevertheless, Petitioner asserts adequately that it waited until after Patent Owner’s election of claims to file the current petition and that it found the asserted reference Steer in October. Accordingly, this factor weighs against denying institution under § 314(a).

6. *The finite resources of the Board*

“The sixth and seventh factors are efficiency considerations.” *Valve*, IPR2019-00062, Paper 11 at 15. “In general, having multiple petitions

challenging the same patent, especially when not filed at or around the same time as in this case, is inefficient and tends to waste resources.” *Id.*

This proceeding presents the same arguments as to the Irvin and Myllamäki references asserted in IPR2019-01365 so resolving the present petition on its merits would result in some duplication of the work already undertaken on the earlier proceeding. Petitioner argues that, because there is allegedly no evidence of road-mapping or gamesmanship, instituting this proceeding would promote efficiency in the event IPR2019-01365 was terminated. Pet. 68. Petitioner also argues that “[t]here is no prejudice to the [Patent Owner] here, because the multiple earlier petitions filed against the ’435 patent are ‘a directed result of its own litigation activity.’” *Id.* at 68–69 (citing *Samsung Electronics America, Inc. et al v. Uniloc 2017 LLC*, IPR2017-01797, Paper 8 at 33 (PTAB Feb. 6, 2018) (Institution Decision)).

Having two petitions challenging the ’435 patent, not filed at the same time, is indeed inefficient from the perspective of the Board, and given that the IPR2019-01365 was instituted a few months ago, coordination of the two cases would be difficult. The two petitions challenge substantially similar sets of claims based on overlapping prior art, with the instant Petition challenging one additional claim that is not challenged in IPR2019-01365. Additionally, although this is the third Petition filed against the ’435 patent, it is one of only two that will be pending against the ’435 patent. There is a risk that IPR2019-01365 will terminate due to settlement, as did IPR2019-01186, and leave Petitioner without the ability to timely file a petition. We therefore determine that the sixth *General Plastic* factor weighs slightly for denying the Petition.

7. *The requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review*

Any trial in the present proceeding could be resolved within the one-year statutory timeframe. Accordingly, this factor weighs against denying institution under § 314(a).

8. *Conclusion*

The seven *General Plastic* factors weigh in both directions; however, the fact that this is an unrelated Petitioner presenting some new references and non-overlapping claims weighs against denying institution under § 314(a) quite heavily. Upon consideration of all the factors, we conclude that we should not exercise discretion under § 314(a) and deny institution of trial.

#### **ADVANCED STAGE OF DISTRICT COURT LITIGATION**

Patent Owner argues that we also should exercise our discretion under 35 U.S.C. § 314(a) to deny institution because the related district court litigation is in advanced stages. Prelim. Resp. 23–29; Prelim. Sur-Reply 1–3. Patent Owner asserts that the district court has issued its Claim Construction order, fact discovery will be completed before our institution deadline, the final pretrial conference is scheduled for November 30, 2020, and trial is scheduled to commence December 14, 2020. Prelim. Resp. 24. Thus, Patent Owner asserts that the district court trial will have concluded several months before we issue our final written decision. *Id.* at 25. Patent Owner also asserts that Petitioner relies on nearly the same prior art and arguments in the district court action. *Id.* at 28.

As explained above, the Director has discretion to institute an inter partes review under 35 U.S.C. § 314(a). *Gen. Plastic Indus. Co.*, Paper 19 at

15 (precedential). We consider the advanced state of a district court proceeding as a “factor that weighs in favor of denying the Petition under § 314(a).” *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential). Specifically, we consider an early trial date as part of a “balanced assessment of all relevant circumstances of the case, including the merits.” Consolidated Trial Practice Guide November 2019, available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>. As part of this balanced assessment, we consider the following: (1) whether the district court granted a stay or evidence exists that one may be granted if this proceeding is instituted; (2) proximity of the district court’s trial date to the Board’s projected statutory deadline for a final written decision; (3) investment in the parallel proceeding by the court and the parties; (4) overlap between issues raised in the petition and in the parallel proceeding; (5) whether the petitioner and the defendant in the parallel proceeding are the same party; and (6) other circumstances that impact the Board’s exercise of discretion, including the merits. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11, 5–6 (Mar. 20, 2020) (precedential).

We agree with Petitioner that our exercise of discretion to deny institution under Section 314(a) is not warranted here. Prelim. Reply 1–3. Factor (5) weighs in favor of denying the Petition under § 314(a) because the parallel proceeding—the LG district court litigation—involves the same parties and factor (4) weighs slightly in favor of denying because the parallel proceeding involves the same patent and potentially some of the same prior art. *See* Ex. 2010, 13–18 (listing Luxon, Irvin, Myllymäki, and Steer among many references). However, we determine the remaining factors weigh against exercising our discretion to deny institution.



We determine that factors (1) and (2) weigh in favor of institution because we find it likely that that district court will stay the litigation, which will affect the trial date. Although the trial is currently scheduled for December 14, 2020, it is not clear that trial will proceed as scheduled. For example, other deadlines, including the close of fact and expert discovery, were recently continued to later dates. *See* Order Granting in Part Joint Motion to Continue Discovery Dates and Mandatory Settlement Conference, *Bell Northern Research, LLC v. LG Elecs. Co.*, Case No. 3:18-cv-02864 (S.D. Cal. Mar. 24, 2020), ECF No. 117. And, significantly, shortly after the Board instituted IPRs in other proceedings involving challenged patents of Patent Owner (IPR2019-01319, -01320, and -01365), the same district court judge presiding over the LG district court litigation related to this case stayed the actions involving the patents challenged in those proceedings. *See* Ex. 1033; Ex. 1034. The district court reasoned that “[t]he PTAB’s decision to institute on the two remaining patents will substantially impact the scope of this case and streamline this litigation” and that “[d]espite the advanced nature of this case, this step [to stay] will resolve an important aspect of the case and narrow the issues for a jury trial, and may avoid disparate invalidity findings in the co-pending cases.” Ex. 1033, 2–3. In those proceedings, the district court previously requested the parties to keep it informed if any IPRs were instituted because it is “rather loathe to go on parallel tracks with the Patent Office.” Ex. 1032, 120:20–121:12. Therefore, under factor (1), we determine there is strong evidence that indicates a stay may be granted if this proceeding is instituted.

**Patent Owner** argues that the circumstances are different here because the LG district court litigation also involves a patent that is not the subject of a pending IPR petition. *See* Prelim. Sur-Reply, 2–3. However, it is not clear

that trial will proceed as scheduled on issues relating to patents that are the subject of an instituted IPR. *See* Ex. 1035, 77:6–22 (district court requesting to be made “aware of what’s going on in the Patent Office”). Thus, under factor (2), it is not clear that the district court litigation will have concluded as to the patent challenged here by the time our final decision is due. Rather, our decision here has the potential to impact the efficiencies of the district court litigation. Because there is a strong likelihood that a stay may be granted, we accord less weight to the fact that the current trial date is scheduled to occur prior to the deadline for a final decision this proceeding.

Further, under factor (3), we note that significant investment and effort is still required in the district court proceeding because expert discovery has not started and Petitioner’s litigation invalidity grounds are not finalized. *See* Prelim. Reply 3; Ex. 2017, 3–5; Order Granting in Part Joint Motion to Continue Discovery Dates and Mandatory Settlement Conference, *Bell Northern Research, LLC v. LG Elecs. Co.*, Case No. 3:18-cv-02864 (S.D. Cal. Mar. 24, 2020), ECF No. 117, 2. Finally, under factor (6), for the reasons discussed below, we determine there are strong merits to Petitioner’s challenges, which weighs against exercising discretion to deny institution.

In view of the foregoing, we decline to exercise our discretion to deny under 35 U.S.C. § 314(a).

*B. Level of Ordinary Skill in the Art*

In an obviousness analysis, prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (quoting *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). Moreover, “it is proper to take into account not only specific teachings of the reference but also the inferences which one

skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826 (CCPA 1968). That is because an obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418 (Fed. Cir. 2007); *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259 (Fed. Cir. 2007).

Petitioner asserts:

A person of ordinary skill in the art at the time of invention [] would have had at least a bachelor’s degree in electrical engineering, computer science, or a related technical field, and at least 1-2 years of experience in the field of wireless communication devices, or an equivalent advanced education in the field of wireless communication devices.

Pet. 7 (citing Ex. 1003 ¶¶ 22–23). Patent Owner does not dispute this assertion. Prelim. Resp. 4. We adopt Petitioner’s articulation of the level of skill and determine that the level of ordinary skill in the art is also reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

### C. Claim Construction

Because the Petition was filed after November 13, 2018, we construe the challenged claims by applying “the standard used in federal courts, in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), which is articulated in *Phillips [v. AWH Corp.]*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc)].”<sup>2</sup> Under

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<sup>2</sup> *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg.

*Phillips*, the words of a claim are generally given their “ordinary and customary meaning,” which is the meaning they would have to a person of ordinary skill in the art at the time of the invention, in light of the specification and prosecution history. *See Phillips*, 415 F.3d at 1312–13.

Petitioner proposes two alternative constructions for the term “position to a communications tower,” which appears in the phrase “a power circuit that provides a network adjusted transmit power level as a function of a position to a communications tower” in claim 1 of the ’435 patent. Pet. 7–11. Petitioner states that the district court “declin[ed] to construe, or explain, the claim term.” *Id.* at 8. Petitioner first proposes the term means “transmit signal strength of a communications path between the communications tower and the portable cell phone.” *Id.* at 9 (citing Ex. 1010, 63–71; Ex. 1008, 63, 129 (citing Ex. 1001, 3:39-42 and “Mobile Communications Engineering: Theory and Applications”); Ex. 1003, ¶¶ 48–49). Petitioner asserts that this interpretation “incorporates the embodiment described” in the ’435 patent specification that “network adjusted transmit power level is based on a transmit signal strength of a communications path between the communications tower 110 and the portable cell phone 120.” *Id.* at 9–10. (quoting Ex. 1001, 3:39–42).

Patent Owner asserts the signal strength along the path “takes into account, for example, whether there are natural or man-made obstructions in the communications path” based on a reference allegedly incorporated into the specification. Prelim. Resp. 7–8 (citing Ex. 2005 (William Lee, *Mobile Communications Engineering – Theory and Applications* 21-22, McGraw

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51,340, 51,343 (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b) (2019)).

Hill (2d ed. 1997)). In regard to claim construction, Patent Owner does not assert or explain that the claims are limited to taking into account natural or man made obstructions as opposed to other obstructions. *Id.* We decline to so limit the claims.

Petitioner asserts that grounds 1A–2 of the Petition are based on this first alternative construction. *Id.* at 10. Patent Owner asserts that this first alternative construction mirrors the one it proposed in related district court litigation and it is correct. Prelim. Resp. 5–12. We adopted this construction in IPR2019-01365. IPR2019-01365, Paper 13, 17–18.

Petitioner’s second alternative construction is that “position” retains its alleged plain meaning of location or distance to another object and that “position to a communications tower” describes a location or distance to a communications tower. Pet. 10. Petitioner asserts that “[t]his interpretation is consistent with the intrinsic evidence, as the ’435 patent includes use of this phrase in the specification, without any lexicographic definition or disclaimer that equates the term ‘position’ to ‘a transmit signal strength.’” *Id.* When Petitioner applies this construction to the Steer reference, Petitioner relies on distance to a base station/communication tower. *Id.* at 58–59. Petitioner asserts that ground 3 of the Petition is supported under this second alternative construction. *Id.* at 11. Patent Owner asserts that this second alternative construction mirrors Petitioner’s proposed construction in related litigation, that it is “over-simplified,” and has a “lack of clarity” and “undue fluidity” because it does not distinguish between location and position. Prelim. Resp. 15.

Additionally, although the District Court in the related case construed this term to have its plain meaning, the District Court interpreted the plain meaning as broader than distance, including “the relationship to the phone to

the tower *in all its aspects*, whether it's distance or obstructions or whatever." Ex. 2007, 57 (emphasis added).

Petitioner cites to places in the specification that use the words "positioned" and "position indicator" without being tethered to "signal strength." Pet. 11 (citing Ex. 1001, 3:4–6, 6:33–37). Nevertheless, Petitioner does not point to disclosures in the specification that equate position with distance. *Id.* Petitioner relies on some dictionary definitions, i.e. "a place or location" and "the place where a person or thing is, esp. in relation to others") which also do not mention distance. *Id.* at 13.

As stated above and as is relevant to the larger claim phrase, the '435 patent describes that the network adjusted power level is based on "a transmit signal strength of a communications path between the communications tower 110 and the portable cell phone 120." Ex. 1001, 3:39–42. Thus, when viewed in the larger claim phrase, the patent describes an embodiment in which the network adjusted transmit power level is a function of the transmit signal strength of a communication path between the tower and the cell phone.

On the current record, we determine that the phrase "position to a communications tower" encompasses "transmit signal strength of a communications path between the communications tower and the portable cell phone" (Petitioner's first construction which we adopted in IPR2019-01365). *See* Ex. 1001, 3:39–42 (describing an embodiment in which the "network adjusted transmit power level is based on a transmit signal strength of a communications path"). The phrase may also encompass how Petitioner applies it in support of grounds 3, namely distance between the cell phone and the communications tower, which appears to fall within the words of the claim. *See* Pet. 11 ("The Steer reference describes adjusting

transmit power based on geographic location relative to a base station/communication tower.”), 57–59. We will further consider the scope of this phrase during the institution phase of this proceeding.

For purposes of institution, and after review of the current record, we conclude that no express claim construction of any other claim term is necessary to determine whether to institute review of the challenged claims. *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”).

*D. Obviousness of Claims over Luxon and Irvin – Ground 1A*

Petitioner contends that claims 1–3, and 8 are unpatentable under 35 U.S.C. § 103 as obvious over Luxon and Irvin. Pet. 11. To support its contentions, Petitioner provides explanations as to how the prior art allegedly teaches each claim limitation. Pet. 11–32. Petitioner supports this assertion with testimony from its expert, Dr. Valenti. Ex. 1003 ¶¶ 33–86. Irvin and Luxon are summarized below.

*1. Luxon (Ex. 1004)*

Luxon (Ex. 1004) describes a “hand-held radio telephone . . . for communication via a remote receiver, such as a ground-based cell site.” Ex. 1004, 6:40–43. The radio telephone includes “an antenna assembly capable of preventing unwanted exposure of the user to potentially harmful radiation, while providing an enhanced and extended transmission signal to enable improved communication.” *Id.* at 7:8–13.

2. *Irvin (Ex. 1005)*

Irvin (Ex. 1005) describes a “mobile terminal” for a “wireless communication system” that is “operable to limit transmitter power if proximate a human body.” Ex. 1005, 1. The mobile terminal includes a “transmitter” having a “power control loop,” and a “processor” that operates in accordance with a “control program” to “limit or cap transmitter power output if the antenna 12 is proximate a human body.” *Id.* at 6, Figs. 1, 2. The mobile terminal also includes a “proximity detector” for detecting proximity to a human body. *Id.* at 6.

Irvin discloses a system that “checks proximity using the proximity detector 38,” and “determines if the antenna 12 is proximate a user.” *Id.* at 7, Fig. 3. Irvin describes that “the base station which the mobile terminal 10 is communicating transmits a mobile attenuation code (MAC) identifying one of eight power levels.” *Id.* at 6. Irvin adds that “[t]he processor 22 controls the power control loop 40 so that power output satisfies the MAC.” *Id.* The processor adjusts the MAC based on input from the proximity detector indicating that the device is close to a user’s body. *Id.* at 6–7 (disclosing that MACs “000, 001, 010 and 011 could be reset to 100 if the antenna 12 is near the user,” and other MACs “would be processed unaltered, regardless of proximity to the user, as the power output amounts generated from these codes are less than the cap”).

3. *Analysis of Claim 1*

Petitioner’s element-by-element analysis of independent claim 1 in relation to Luxon and Irvin appears at pages 21–30 of the Petition. Petitioner supports its analysis with testimony from Dr. Valenti. Ex. 1003 ¶¶ 33–79.



*a. Rationale to Combine*

Petitioner argues that a person of ordinary skill would have been motivated to combine Luxon and Irvin. Pet. 15–21. Petitioner contends that a person of ordinary skill in the art “would have been motivated to implement transmit power regulation based on proximity of the device to a user, in accordance with Irvin’s teachings, in Luxon’s cell phone to more precisely manage potential radiation exposure of a user and to enhance transmission quality.” Pet. 15 (citing Ex. 1003 ¶ 53). Petitioner contends “Luxon describes the risk of exposure of ‘potentially harmful radiation to the user of the hand-held radio telephone,’ and limits the maximum transmit power based on antenna position (e.g., stowed vs. deployed) to reduce this risk. Pet. 15 (citing Ex. 1004, 1:28–35; 1:40–2:28; 3:16–54; 40:62–42:20). Petitioner contends Irvin provides details of how to determine proximity of the mobile device to a user, and to selectively limit transmit power based on proximity to a user. *Id.* (citing Ex. 1003 ¶ 54; Ex. 1005, 5–7; Ex. 1020, 7–10). Thus, according to Petitioner, “Luxon’s telephone that manages radiation exposure of the user would have been enhanced by Irvin’s proximity detection and proximity regulation features.” *Id.* (citing Ex. 1003 ¶¶ 55–57).

Luxon teaches that the phone antenna may be placed in a stowed (retracted close to the phone) or deployed position (extending from the phone). *Id.* at 15. Patent Owner asserts Luxon “prefers its antenna assembly not to transmit at all when in a stowed position—and that Luxon instead prefers to transmit when its antenna is in its deployed position.” Prelim. Resp. 43 (citing Ex. 1004, 42:21–31.). Based on this disclosure, Patent Owner argues that a person of ordinary skill would prefer to deploy Luxon’s antenna rather than employ Irvin’s system to adjust the signal strength in the

stowed position bases on the proximity to the user. *Id.* at 43–44. Nevertheless, Luxon at least suggests transmitting in the stowed position. Pet. 12 (citing Ex. 1004, 41:15–42:4), 15; Ex. 1004, 41:15–42:4 (at a time when the antenna is stowed, “to prevent the user of the radio signal transmitting device 602 from being exposed to unnecessary radiation, the maximum transmit table power can be set at a predetermined relatively low value). Thus, Luxon suggests controlling the maximum transmit power in the stowed position.

Patent Owner also argues “a POSITA would understand that Luxon’s antenna assembly, when used in its preferred deployed position, already addressed and solved concerns regarding user proximity, radiation exposure and transmission strength.” Prelim. Resp. 45 (citing Ex. 1004, 41:46-54; Ex. 2003, ¶48) (when in its deployed “position, a higher transmittable power level can be utilized since the energy is directed away from the user, and the user will not be exposed to the harmful effects of the radiation.”)). Thus, according to Patent Owner, a POSITA “would find the proximity system and potential further lowered transmission levels from Irvin to be irrelevant and unnecessary given Luxon’s antenna assembly. *Id.* (citing Ex. 1004, 26:31–37; 41:46–54; Ex. 2003, ¶ 48.).

Patent Owner’s declarant essentially repeats the assertions of the Petition and provides no persuasive facts or data to support his opinion of the problem was “solved.” Therefore, we give such conclusory, unsupported assertions by Patent Owner’s declarant little weight. *See In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) (“[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations.”); *see also* 37 C.F.R. § 42.65(a) (“Expert testimony that does

not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”). We do not agree on the current record that a person of ordinary skill would determine that Luxon solved the problem of exposure to radiation such that the person would not explore other options to reduce such radiation such as the system of Irvin.

In summary, based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded that Petitioner has demonstrated sufficiently both the motivation to combine these references and the reasonable expectation of success as to its ground based on Luxon and Irvin.

*a) “portable cell phone”*

Petitioner relies on Luxon to teach the limitation of “[a]portable cell phone,” as recited in the preamble of claim 1. Pet. 21–22. For example, Petitioner relies on Luxon’s disclosure of “hand-held radio telephone . . . for communication via a remote receiver, such as a ground-based cell site.” *Id.* (citing Ex. 1004, 6:40–43; 1:18–19, 35:8–14, 35:15–40:61, Figs. 54(a)–(b); Ex. 1003 ¶ 68).

*b) a power circuit that provides a network adjusted transmit power level as a function of a position to a communications tower*

Petitioner relies on Luxon to teach the limitation of “a power circuit that provides a network adjusted transmit power level as a function of a position to a communications tower,” recited in claim 1. For example, Petitioner relies on Luxon’s disclosure of a “controlling means 638 [which] controls the maximum signal power that can be transmitted from the antenna member” and “controls the signal generation circuit 644.” *Id.* at 22–23 (citing Ex. 1004, 41:55–42:20, 41:33–54, 35:14–25). Petitioner further relies on Luxon’s disclosure that a “‘power level signal’ sent from and

received from a terrestrial cell site for providing a network adjusted transmit power level. *Id.* at 23 (citing Ex. 1004, 40:65–41:3; 41:28–31). Petitioner also relies on Luxon’s disclosure that the “power level signal” varies depending on distance and radio interference, which is, according to Petitioner, interference “from obstacles, topography, etc.,” to teach the limitation of “power level as a function of a position to a communications tower” under the first alternative claim construction. *Id.* at 23–24 (citing Ex. 1004, 41:19–24, 41:31–33, 41:42–45; Ex. 1003 ¶ 71).

Patent Owner asserts:

*Luxon* uses the term “interference” to refer to radio interference between mobile phones and hearing aides and pacemakers (Ex. 1004, 5:9-14); signals originating from unwanted directions that interfere with a base station’s reception of desired signals (Ex. 1004, 31:57–60); interference resulting from too many mobile phone users within a given cell or PCS field/area (Ex. 1004, 34:31–33); and externally generated circuit noise interfering with the radio signal transmitting device (Ex. 1004, 39:15–19). None of *Luxon*’s above uses of “interference” refer or relate to e.g., obstacles or topography, as alleged by Petitioner. (Ex. 2004, ¶44.)

Prelim. Resp. 46.

In other words, according to Patent Owner interference from competing or undesired radio signals between the mobile device and the cell tower does not relate to “transmit signal strength of a communications path between the communications tower and the portable cell phone” as we should construe this claim term. We disagree. On the current record, our construction of this term does not specify physical obstacles or topography nor does it specifically exclude radio interference. Additionally, Patent Owner does not cite to anything in the specification of the ’435 patent that

*limits* the claim to physical obstructions as opposed to radio interference obstructions. Thus, we are not persuaded by this argument.

c) “*a proximity regulation system*”

Petitioner relies primarily on disclosures of Irvin combined with Luxon’s “controlling means” to teach “a proximity regulation system,” as recited in claim 1. Pet. 24–25; Ex. 1003 ¶ 73. For example, Petitioner relies on Irvin’s proximity detector 38 and mobile attenuation code (MAC). *Id.* at 24–25, 28–29.

The claimed “proximity regulation system” includes a “location sensing subsystem” and a “power governing subsystem.” Consistent with this, as discussed below, Petitioner relies on Irvin’s proximity detector 38 for the “location sensing subsystem” and the “MACs” for the “power governing subsystem.”

d) “*a location sensing subsystem that determines a location of said portable cell phone proximate a user*”

Petitioner relies on the combination of Irvin and Luxon to teach the limitation of “a location sensing subsystem that determines a location of said portable cell phone proximate a user,” as recited in claim 1. Pet. 25–27. For example, Petitioner relies on Irvin’s disclosure that the “mobile terminal 10 includes a proximity detector 38 for detecting if the housing 11, and thus antenna 12, is proximate a human body” combined with Luxon’s disclosure of a controlling means. *Id.* at 25 (citing Ex. 1005, 2, 3, 6<sup>3</sup>; Ex. 1004, 41:37–41; Ex. 1003 ¶ 74–76).

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<sup>3</sup> Here and elsewhere in the Petition, Petitioner provides parallel citations to the Irvin provisional (Ex. 1020). Because the effective date of Irvin is not challenged at this stage, we refer only to the Irvin citations, not the citations to the Irvin provisional.

- e) *“a power governing subsystem, coupled to said location sensing subsystem, that determines a proximity transmit power level of said portable cell phone based on said location and determines a transmit power level for said portable cell phone based on said network adjusted transmit power level and said proximity transmit power level”*

Petitioner relies on the combination of Irvin and Luxon to teach the limitation of “a location sensing subsystem that determines a location of said portable cell phone proximate a user,” as recited in claim 1. Pet. 28–30.

For example, Petitioner relies on Irvin’s disclosure that MACs “000, 001, 010 and 011” (which are set based on position to the cell tower) — corresponding to power levels greater than the “power level cap” (which is set based on distance to the user) — “could be reset to 100 (milliwatts which corresponds to MAC 100) if the antenna 12 is near the user.” Pet. 29 (citing Ex. 1005, 7). Additionally, Petitioner relies on Luxon’s disclosure of a “controlling means” and Irvin’s disclosure of a “processor” including a “control program” used to “limit or cap transmitter power output” based on proximity of the cell phone to a user.” *Id.* at 30.

f) *Objective Evidence of Nonobviousness*

Patent Owner also argues “the existence of licenses under the patented invention” precludes a finding of non-obviousness because Petitioner has not rebutted evidence of licenses. *See* Prelim. Resp. 63–64. The question of obviousness is resolved on the basis of underlying factual determinations including the following: (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. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). “A determination of whether a patent claim is invalid as obvious under § 103 requires

consideration of all four Graham factors, and it is error to reach a conclusion of obviousness until all those factors are considered.” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc) (citations omitted). “This requirement is in recognition of the fact that each of the Graham factors helps inform the ultimate obviousness determination.” *Id.*

The issue of objective indicia of nonobviousness is highly fact-specific. At this stage of the proceeding, the record regarding licensing is incomplete, inconclusive, and therefore not persuasive. Petitioner has not had an opportunity to respond to Patent Owner’s contentions. Thus, at this stage of the proceeding and on the current record, there is insufficient persuasive evidence of secondary considerations to preclude trial.

*g) Summary Claim 1*

As detailed above, Petitioner has presented sufficient contentions as to each limitation of claim 1. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded at this stage that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge to claim 1.

*4. Analysis of Claim 2*

Claim 2 depends from claim 1 and further recites a “portable cell phone as recited in claim 1 wherein said location sensing subsystem determines said location with respect to a portion of a body of said user.” Pet. 30–31. For the limitations of claim 2, Petitioner relies on, for example, Irvin’s disclosure that the “proximity detector” detects when the device housing/antenna is “proximate a human body,” thereby indicating that the “proximity detector” determines said location with respect to a portion of a body of said user. Pet. 30 (citing Ex. 1005, 2–3).

Patent Owner’s preliminary response does not provide a rebuttal to Petitioner’s analysis of this dependent claim in light of the disclosures of Irvin, other than the arguments regarding claim 1 above. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded, at this stage, that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge.

*5. Analysis of Claim 3*

Claim 3 depends from claim 1 and further recites a “portable cell phone as recited in claim 1 wherein said proximity transmit power level is limited to a predetermined maximum level.” Pet. 30–31. For the limitations of claim 3, Petitioner relies on, for example, Irvin’s disclosure of a “power level cap” that provides a power level “that the power amplifier 46 is **not permitted to exceed.**” Pet. 31 (citing Ex. 1005, 6).

Patent Owner’s preliminary response does not provide a rebuttal to Petitioner’s analysis of this dependent claim in light of the disclosures of Luxon and Irvin, other than the arguments regarding claim 1 above. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded, at this stage, that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge.

*6. Analysis of Claim 8*

Claim 8 depends from claim 1 and further recites a “portable cell phone as recited in claim 1 wherein said location sensing subsystem determines said location by employing a sensor selected from the group consisting of: a designated sensor, a contact sensor, a belt clip sensor, and a cradle sensor.” Pet. 32. For the limitations of claim 8, Petitioner relies on, for example, Irvin’s disclosure of “touch-sensitive detection circuit” including a “conductive element” designed to be “in contact with the user’s



head” if “a device is in a ‘talk’ position next to a user’s head” or Irvin’s “metallic ring” which comes into contact with the user’s ear when the device is in a “talk” position next to the user’s head. Pet. 32 (citing Ex. 1005, 3, 10, claims 7, 8, 17, 18; Ex. 1003 ¶ 84).

Patent Owner’s preliminary response does not provide a rebuttal to Petitioner’s analysis of this dependent claim in light of the disclosures of Luxon and Irvin, other than the arguments regarding claim 1 above. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded, at this stage, that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge.

*E. Obviousness of Claim 6 over Luxon, Irvin, and Myllymäki – Ground 1B*

Petitioner asserts that claim 6 is unpatentable under 35 U.S.C. § 103(a) as obvious over Luxon, Irvin, and Myllymäki. Pet. 4. To support its contentions, Petitioner provides explanations as to how the prior art allegedly teaches each claim limitation. Pet. 33–37. Petitioner supports this assertion with testimony from its expert, Dr. Valenti. Ex. 1003 ¶¶ 88–96.

For this ground, Petitioner relies on a construction of “position to a communications tower” of “position of the portable cell phone relative to a communications tower.” *See* Pet. 10.

Petitioner presents the following reasons for combining the teachings of Irvin, Luxon, and Myllymäki. *Id.* at 33–35. For example, Petitioner asserts the following:

First, a [person of ordinary skill in the art] would have recognized that doing so would avail the Luxon/Irvin mobile device to the known benefits of a space-efficient configuration of electronic components within its device, because a “microprocessor” provides appropriate control for mobile device components in a small, light form factor that facilitates a smaller, lighter cell

phone. EX1003, ¶92. This known advantage was directly suggested by the term itself—“microprocessor.” *Id.* (emphasis added). Second, a [person of ordinary skill in the art] would have recognized that a “microprocessor” provides for control of device components without unduly limiting battery life. EX1003, ¶93. Luxon, Irvin, and Myllymäki describe similar cell phone devices, and a [person of ordinary skill in the art] would have predictably expected the “microprocessor” to exhibit adequate power usage in such similar applications. *Id.*(citing EX1017). Third, a [person of ordinary skill in the art] would have been prompted to implement the “controlling means”/“processor” as a “microprocessor” in accordance with Myllymäki’s suggestion with a reasonable expectation of success, because doing so would have been merely the application of a known technique (e.g., use of a “microprocessor”) to a known system (Luxon-Irvin’s cell phone) ready for improvement to yield predictable results. KSR, 550 U.S. at 417; EX1003, ¶94.

*Id.* at 35. Patent Owner relies on its arguments regarding the combination of Luxon and Irvin for this ground. Prelim. Resp. 44–45. As explained above, on the current record, we are not persuaded by Patent Owner’s arguments. We determine that Petitioner’s contentions quoted above articulate sufficient reasons for combining Luxon, Irvin, and Myllymäki.

Myllymäki is summarized below.

1. *Myllymäki (Ex. 1006)*

Myllymäki (Ex. 1006) describes a mobile communications device, which includes a “microprocessor” that controls operation of the device, including power regulation operations for control of its “transmitter,” “receiver,” and “antenna.” Ex. 1007, claim 1; *see also id.* at 3:12–30 (“These signal processing devices may conveniently be realized as programmes of the control circuit 26.”); 3:7–12 (“The outputs of the detectors 8, 10 in the system . . . are connected to a control circuit 26, which

may for convenience be the microprocessor 26 controlling the operation of the mobile communication means.”).

*2. Analysis of Claim 6*

Claim 6 depends from claim 1 and further recites a “portable cell phone as recited in claim 1 wherein said location sensing subsystem or said power governing subsystem is embodied in an integrated circuit.” Pet. 36–37. Petitioner relies on, for example, its contention that a person of ordinary skill in the art “would have found it obvious to use an integrated circuit, as use of integrated circuits in such applications was known in the prior art, as evidenced by Myllymäki.” Pet. 36 (citing Ex. 1003 ¶ 96).

Patent Owner’s response does not provide a rebuttal to Petitioner’s analysis of this dependent claim in light of the disclosures of Luxon, Irvin, and Myllymäki other than the arguments regarding claim 1 above. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded, at this stage, that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge.

*F. Obviousness of Claims 1–3, 6, and 8 over Irvin and Myllymäki – Ground 2*

Petitioner asserts that claims 1–3, 6, and 8 are unpatentable under 35 U.S.C. § 103(a) as obvious over Irvin and Myllymäki. Pet. 4. To support its contentions, Petitioner provides explanations as to how the prior art allegedly teaches each claim limitation. *Id.* at 37–52. Petitioner supports this assertion with testimony from its expert, Dr. Valenti. Ex. 1003 ¶¶ 98–123.

For this ground, Petitioner relies on a construction of “position to a communications tower” as a “a power circuit that provides a network

adjusted transmit power level as a function of a position to a communications tower.” *See* Pet. 10.

As to motivation to combine, Petitioner asserts, for example, that “even if Irvin was considered to not expressly disclose the power circuit recited in claim 1 . . . Myllymäki plainly suggests using such a feature.” *Id.* at 37 (citing Ex. 1006, 1:9–17 (“the base station controls the transmitted power of the mobile communication means on the basis of the received signal level.”); Ex. 1003 ¶¶ 98–99). Specifically as to claim 6, Petitioner asserts, for example, a person of ordinary skill in the art “would have found it obvious to implement Irvin’s ‘processor’ as a ‘microprocessor,’ in accordance with Myllymäki’s teachings.” *Id.* at 38.

Patent Owner asserts Petitioner impermissibly relies on hindsight and lacks any proper rationale to combine Irvin and Myllymäki. Prelim. Resp. 48–49. Specifically, Patent Owner argues Petitioner’s declarant does not provide support for Petitioner’s statement “it was predictable in cell phones to use a power circuit that provided a ‘network adjusted power level as a function of a position to a communications tower.’” *Id.* Even if Patent Owner is correct as explained below, we are persuaded that Irvin alone teaches or suggests a “power circuit,” as recited in claim 1.

Patent Owner also asserts the cited portion of Myllymäki describes prior art systems in which power is controlled by the base station not the mobile phone so it does not support using power circuits in cell phones to control transmit power. Prelim. Resp. 49, 56. On the current record, we are persuaded by Petitioner’s contention because the claim does not require that the power circuit on the cell phone generate or create the network adjusted power level but rather the circuit “provide” the network adjusted power level.

In summary, based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded that Petitioner has demonstrated sufficiently both the motivation to combine these references and the reasonable expectation of success as to its ground based on Irvin and Myllymäki.

*1. Analysis of Claim 1*

*a) “portable cell phone”*

Petitioner relies on Irvin to teach the limitation of “[a]portable cell phone,” as recited in the preamble of claim 1. Pet. 38. For example, Petitioner relies on Irvin’s teaching of “mobile terminal” for a “wireless communication system.” *Id.* (citing Ex. 1003 ¶ 101; Ex. 1005, Abstract, 1, 2–3, Figs. 1–10).

*b) a power circuit that provides a network adjusted transmit power level as a function of a position to a communications tower*

Petitioner relies on Irvin to teach the limitation of “a power circuit that provides a network adjusted transmit power level as a function of a position to a communications tower,” as recited in claim 1. Pet. 39–44.

For example, as to the limitation of “power circuit,” Petitioner relies on Irvin’s disclosure of a transmitter that is used to process and broadcast radio signals via the antenna, and includes a “power control loop 40 for controlling transmitter power output.” *Id.* at 39 (citing Ex. 1005, 6). Petitioner also relies on Irvin’s disclosure that “processor 22 conventionally controls operation of the driver stage 44 and power amplifier 46 to control transmitter power output,” indicating, according to Petitioner, that the “transmitter” produces a transmit power level of the outgoing transmissions to be emitted by the “antenna.” *Id.* at 40 (citing Ex. 1005, 6).

As to the limitation of “provides a network adjusted transmit power level as a function of a position to a communications tower,” Petitioner relies on Irvin’s disclosure that “[i]n an advanced mobile phone system (AMPS), for example, the base station which the mobile terminal 10 is communicating transmits a [MAC] identifying one of eight power levels” and that “[t]he processor 22 controls the power control loop 40 so that power output satisfies the MAC.” *Id.* at 41 (citing Ex. 1005, 6). Petitioner further relies on Irvin’s disclosure that typically the base station “measure[s] signal strength and return[s] instructions to the mobile terminal to modify transmitter power output.” *Id.* (citing Ex. 1005, 1).

Patent Owner asserts that Irvin discloses that the above MACs are provided by the base station and not the power circuit and thus cannot provide the network adjusted transmit power as claimed. Prelim. Resp. 50, 52 (“[the] quote relied on by Petitioner concerns the base station measuring signal strength, *not the mobile phone . . .*”). Nevertheless, Petitioner relies on the transmitter and power control loop to “provide” the network adjusted transmit power level. Pet. 38. Irvin discloses that the base station provides a MAC to the mobile terminal and the mobile terminal provides the level of power indicated by the MAC. Ex. 1005, 6. On the current record, the claim does not require that the power circuit on the cell phone generate or create the network adjusted power level but rather the circuit “provide” the network adjusted power level.<sup>4</sup> Patent Owner suggests the claim is limited to the

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<sup>4</sup> Patent Owner also asserts because “Petitioner does not argue that the ‘Power Circuit that Provides a Network Adjusted Transmit Power Level...’ limitation is disclosed by Myllymäki, Ground 2 is fatally flawed and cannot support institution.” Prelim. Resp. 50. Because on the current record we are persuaded that Irvin teaches this limitation, we do not address this argument.

mobile phone producing the network adjusted transmit power. Prelim. Resp. 53 n.5. Specifically, Patent Owner suggests the term “provides” in the claim term means “produces” as recited in the specification, i.e. the power circuit “produces” a transmit power level. *Id.* On the current record, we disagree. Patent Owner does not explain sufficiently why the term “produces” from the specification should be read into the claims.

Patent Owner also asserts that Petitioner has not identified any disclosure in Irvin showing that the MAC is based on the characteristics of the communication path, as required by the claim construction. Prelim. Resp. 52, 54–55. Specifically, Patent Owner asserts “there is no disclosure on how the eight MAC levels are set, whether the levels are fixed or not, whether objects between the base station and the mobile device influence or impact MAC levels, whether the distance between the base station and the mobile device influence or impact MAC levels, etc.” Prelim. Resp. 55. Nevertheless, there is a suggestion in Irvin that they are set by “measuring signal strength and return[s] instructions to the mobile terminal to modify transmitter power output.” Pet. 41 (citing Ex. 1005, 1). Also, at this preliminary stage, our claim construction does not require objects or distance specifically to influence the network adjusted transmit power.

Patent Owner also asserts that, in order to relate the MAC to signal strength, Petitioner improperly “stitch[es] together disparate parts of a reference,” i.e., a statement from the Background of the Invention section of the Irvin specification combined with a statement in the Detailed Description of the Invention section of the Irvin specification rather than a single description pertaining to the claimed feature. Prelim. Resp. at 53. Patent Owner also argues “the Background section of Irvin does not describe a generic implementation of Irvin’s invention, which involves using sensors to

‘limit transmitter power if proximate to a human body’ in a different manner than disclosed by the ‘435 Patent.’ *Id.* at 53 n.6.

Patent Owner is correct that Petitioner relies on two different sections of the Irvin specification. *Id.* at 52. Specifically, Patent Owner asserts Petitioner relies on the “Background” section of Irvin that applies to “prior art cellular systems in general”; however, Petitioner’s contention is based on obviousness and Petitioner can rely on what Irvin reasonably discloses to one of ordinary skill in the art. This includes knowledge generally available to a person having ordinary skill in the art, and facts admittedly well known in the art. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (“[A] prior art reference must be ‘considered together with the knowledge of one of ordinary skill in the pertinent art.’”); *In re Nomiya*, 509 F.2d 566, 570-71 (CCPA 1975) (The admittedly known prior art disclosed in an appellant's specification may be used in determining the patentability of a claimed invention.). Additionally, it does not appear that the two descriptions Petitioner relies on are disparate disclosures because the background is describing a generic implementation of prior art cellular systems that is relevant to the more specific implementation later in the specification. For the reasons above, on the current record, we are not persuaded by Patent Owner’s argument.

*c) “a proximity regulation system”*

Petitioner relies on Irvin to teach the limitation of “a proximity regulation system,” as recited in claim 1. Pet. 44–45. For example, Petitioner relies on proximity detector 38. *Id.*

The claimed “proximity regulation system” includes a “location sensing subsystem” and a “power governing subsystem.” Consistent with this, as discussed below, Petitioner relies on Irvin’s proximity detector 38 for



the “location sensing subsystem” and “MACs” for the “power governing subsystem.”

- d) *“a location sensing subsystem that determines a location of said portable cell phone proximate a user”*

Petitioner relies on Irvin to teach the limitation of “a location sensing subsystem that determines a location of said portable cell phone proximate a user,” as recited in claim 1. Pet. 45–46. For example, Petitioner relies on Irvin’s disclosure that the “mobile terminal 10 includes a proximity detector 38 for detecting if the housing 11, and thus antenna 12, is proximate a human body.” Pet. 45 (citing Ex. 1005, 2–3, 6, 7, Figs. 2, 3; Ex. 1003 ¶ 110).

- e) *“a power governing subsystem, coupled to said location sensing subsystem, that determines a proximity transmit power level of said portable cell phone based on said location and determines a transmit power level for said portable cell phone based on said network adjusted transmit power level and said proximity transmit power level”*

Petitioner relies on Irvin to teach the limitation of “a power governing subsystem, coupled to said location sensing subsystem, that determines a proximity transmit power level of said portable cell phone based on said location and determines a transmit power level for said portable cell phone based on said network adjusted transmit power level and said proximity transmit power level,” as recited in claim 1. Pet. 47–48.

For example, Petitioner relies on Irvin’s disclosure that MACs “000, 001, 010 and 011” (which are set based on position to the cell tower) — corresponding to power levels greater than the “power level cap” (which is set based on distance to the user) — “could be reset to 100 (milliwatts which corresponds to MAC 100) if the antenna 12 is near the user.” Pet. 47–48 (citing Ex. 1005, 7).

Patent Owner asserts that Irvin does not disclose determining a transmit power level for said portable cell phone based on *both* said network adjusted transmit power level and said proximity transmit power level because, “the ‘MACs’ are not ‘network adjusted transmit power levels’ produced by a power circuit in the phone.” Prelim. Resp. 56. As explained above, Petitioner *has* shown sufficiently that the MACs are “network adjusted transmit power level.” Thus, on the current record, we are not persuaded by this argument.

Patent Owner also argues Petitioner cannot “rel[y] on “MACs” for both the network adjusted power level limitation as well as the ‘level’ part of the ultimate transmit power level . . . because the claim language clearly differentiates between the two different kinds of power levels.” *Id.* at 57. On the current record, we disagree. Irvin discloses that, by using a capping system, the ultimate power level is determined by either capping or not capping the MAC power level. *See* Ex. 1005, 7. This results in two different levels, i.e., the MAC level and the capped MAC level. We are persuaded for this Decision that Irvin’s disclosure of capping the MAC power level is sufficient to teach or suggest the limitation of determining a transmit power level. Thus, on the current record, we are not persuaded by Patent Owner’s argument.

In sum, as detailed above, Petitioner has presented sufficient contentions as to each limitation of claim 1.

## 2. *Analysis of Claim 2*

Claim 2 depends from claim 1 and further recites a “portable cell phone as recited in claim 1 wherein said location sensing subsystem determines said location with respect to a portion of a body of said user.” Pet. 48–49. For the limitations of claim 2, Petitioner relies on its contention

in ground 1A, for example, Irvin’s teaching or suggestion that the “proximity detector” detects when the device housing/antenna is “proximate a human body,” thereby indicating that the “proximity detector” determines said location with respect to a portion of a body of said user. Pet. 30 (citing Ex. 1005, 2–3), 48–49.

Patent Owner’s response does not provide a rebuttal to Petitioner’s analysis of this dependent claim in light of the disclosures of Irvin, other than the arguments regarding claim 1 above. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded, at this stage, that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge.

### *3. Analysis of Claim 3*

Claim 3 depends from claim 1 and further recites a “portable cell phone as recited in claim 1 wherein said proximity transmit power level is limited to a predetermined maximum level.” Pet. 49. For the limitations of claim 3, Petitioner relies on its contention in ground 1A, for example, Irvin teaching or suggestion of a “power level cap” that provides a power level “that the power amplifier 46 is not permitted to exceed.” Pet. 31 (citing Ex. 1005, 6), 49.

Patent Owner’s response does not provide a rebuttal to Petitioner’s analysis of this dependent claim in light of the disclosures of Luxon and Irvin, other than the arguments regarding claim 1 above. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded, at this stage, that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge.

*4. Analysis of Claim 6*

Claim 6 depends from claim 1 and further recites a “portable cell phone as recited in claim 1 wherein said location sensing subsystem or said power governing subsystem is embodied in an integrated circuit.” Pet. 49–51. Petitioner relies on its contention that person of ordinary skill in the art “would have prompted by Myllymäki’s suggestions to predictably implement Irvin’s ‘proximity detection’ functions at least partially into the ‘microprocessor.’” Pet. 51 (citing Ex. 1003 ¶ 122).

Patent Owner’s response does not provide a rebuttal to Petitioner’s analysis of this dependent claim in light of the disclosures of Irvin, and Myllymäki other than the arguments regarding claim 1 above. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded, at this stage, that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge.

*5. Analysis of Claim 8*

Claim 8 depends from claim 1 and further recites a “portable cell phone as recited in claim 1 wherein said location sensing subsystem determines said location by employing a sensor selected from the group consisting of: a designated sensor, a contact sensor, a belt clip sensor, and a cradle sensor.” Pet. 52. For the limitations of claim 8, Petitioner relies on its contention in ground 1A regarding Irvin. Pet. 32, 52.

Patent Owner’s response does not provide a rebuttal to Petitioner’s analysis of this dependent claim in light of the disclosures of Irvin, other than the arguments regarding claim 1 above. Based on the information set forth in the Petition and the testimony of Dr. Valenti, we are persuaded, at this stage, that Petitioner has demonstrated sufficiently a reasonable likelihood of prevailing on this challenge.

*G. Obviousness of Claims over Steer and Irvin – Ground 3*

Petitioner asserts that claims 1–3, 6, and 8 are unpatentable under 35 U.S.C. § 103(a) as obvious over Steer and Irvin. Pet. 4. To support its contentions, Petitioner provides explanations as to how the prior art allegedly teaches each claim limitation. *Id.* at 56–66. Petitioner supports this assertion with testimony from its expert, Dr. Valenti. Ex. 1003 ¶¶ 124–143.

For this ground, Petitioner relies on both constructions of “position to a communications tower,” i.e. “position of the portable cell phone relative to a communications tower” and “a power circuit that provides a network adjusted transmit power level as a function of a position to a communications tower.” *See* Pet. 11.

Patent Owner asserts that the alternative construction is wrong, that Steer does not cure any deficiency of Irvin, and that the alleged motivation to combine is insufficient. Pet. 57–63. These arguments should be addressed in briefing during the proceeding.

We find that Petitioner has shown a reasonable likelihood of success on three of the four grounds and on all challenged claims. We therefore institute on all grounds raised in the Petition. *SAS Institute Inc. v. Iancu*, 138 S. Ct. 1348 (2018).

### III. CONCLUSION

For the foregoing reasons, we determine Petitioner has demonstrated there is a reasonable likelihood it would prevail in establishing the unpatentability of claims 1–3, 6, and 8 of the ’435 patent. At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim.

#### IV. ORDER

For the reasons given, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted as to all claims and all grounds in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, *inter partes* review of the '435 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

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