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Paper No. 24
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS INC.,
Petitioner,

v.

BARKAN WIRELESS IP HOLDINGS, L.P.,
Patent Owner.

Case IPR2018-01186
Patent No. 8,014,284 B2

Before MEREDITH C. PETRAVICK, WILLIAM V. SAINDON, and
NATHAN A. ENGELS, *Administrative Patent Judges*.

ENGELS, *Administrative Patent Judge*.

DECISION
Instituting *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Unified Patents Inc. (“Petitioner”) filed a Petition under 35 U.S.C. § 311 requesting *inter partes* review of claims 1–21 of U.S. Patent No. 8,014,284 B2 (Ex. 1001, “the ’284 patent”). Paper 1 (“Pet.”). Barkan Wireless IP Holdings, L.P. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

We have authority under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition and the Preliminary Response shows that “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a); *see also* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”). On April 24, 2018, the Supreme Court held that under 35 U.S.C. § 314 we may not institute review of fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

Having considered Petitioner’s Petition and Patent Owner’s Preliminary Response, we conclude that the information presented in the Petition establishes a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. In accordance with the Supreme Court’s decision in *SAS*, we institute an *inter partes* review for all challenged claims, claims 1–21 of the ’284 patent on all grounds alleged in the Petition.

We base our findings and conclusions on the evidentiary record before us at this stage of the proceeding. This is not a final written decision as to the patentability of the challenged claims. We will base our final written decision on the record as fully developed during trial.

II. BACKGROUND

A. Real Party-in-Interest

Among other requirements, a petition for *inter partes* review may be considered only if “the petition identifies all real parties in interest.” 35 U.S.C. § 312(a)(2); *accord* 37 C.F.R. § 42.8(b)(1) (requiring petitioners to “[i]dentify each real party-in-interest for the party” as part of a petitioner’s mandatory notices). The petitioner bears the burden of persuasion to show that it accurately names all real parties-in-interest (“RPIs”). *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1343 (Fed. Cir. 2018) (citing *Zerto, Inc. v. EMC Corp.*, Case IPR2014-01295, slip op. at 6–7 (PTAB Mar. 3, 2015) (Paper 34)). “When a patent owner provides sufficient evidence prior to institution that reasonably brings into question the accuracy of a petitioner’s identification of RPIs, the overall burden remains with the petitioner to establish that it has complied with the statutory requirement to identify all RPIs.” *Id.*

As stated by Petitioner, “[p]ursuant to 37 C.F.R. § 42.8(b)(1), Unified Patents Inc. . . . certifies that [it] is the real party-in-interest, and further certifies that no other party exercised control or could exercise control over Unified’s participation in this proceeding, the filing of this petition, or the conduct of any ensuing trial.” Pet. 1.

Patent Owner alleges that Petitioner has failed to identify all real parties-in-interest under § 312(a)(2). Prelim. Resp. 41; *see generally id.* at 41–55 (setting forth the full analysis).¹ In particular, Patent Owner alleges

¹ We note at the outset that no allegations of a 35 U.S.C. § 315(b) time bar are raised, and that the issue of privity has not been raised. Although the Patent Owner uses the term “proxy,” e.g., Prelim. Resp. 42, which the

that Petitioner is “[a non-practicing entity] filing IPRs on behalf” of two entities Patent Owner sued for patent infringement in district court, Samsung Electronics Co., Ltd. and Cellco Partnership d/b/a Verizon Wireless. *Id.* at 54, 41. Patent Owner argues that Petitioner is a proxy or agent of Samsung and Verizon (*id.* at 42–48); that Samsung and Verizon fund and direct Petitioner’s activities (*id.* at 48–51); that Petitioner “aid[s] [Samsung and Verizon in] avoid[ing] estoppel” (*id.* at 51–53); and that Petitioner has not provided sufficient factual evidence to support its claim that Samsung and Verizon are not RPIs (*id.* at 53–55).

Petitioner was permitted a Reply to the Preliminary Response (Papers 8, 9,² “Reply”) and Patent Owner was permitted a Sur-Reply (Papers 16, 17,³ “Sur-Reply”). Paper 7 (Order authorizing additional briefing on RPI). We have reviewed the arguments set forth in these papers and the evidence cited therein.⁴

Whether an entity that is not named as a participant in a given proceeding constitutes a “real party in interest” is a highly fact-dependent

Federal Circuit has stated may implicate an assertion of privity, we note that § 312(a)(2) is not concerned with privies. *Cf.* § 315(b) (providing a time bar that can apply to a “petitioner, real party in interest, or privy of the petitioner”).

² Paper 8 is a redacted version of Paper 9. Thus, citations herein are effective for both papers.

³ Paper 17 is a redacted version of Paper 16. Thus, citations herein are effective for both papers.

⁴ Both parties cite to evidence not of record. *See, e.g.*, Prelim. Resp. 4; Reply 12 (citations in the form of URLs). Evidence may only be presented in the form of exhibits. 37 C.F.R. § 42.63(a). The citations to documents or things not in the form of exhibits have not been and will not be considered.

question that takes into account how courts generally have used that term to “describe relationships and considerations sufficient to justify applying conventional principles of estoppel and preclusion.” Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012) (“Trial Practice Guide”). According to the Trial Practice Guide,

the spirit of that formulation as to IPR . . . proceedings means that, at a general level, the “real party-in-interest” is the party that desires review of the patent. Thus, the “real party-in-interest” may be the petitioner itself, and/or it may be the real party or parties at whose behest the petition has been filed.

Id. As stated in the Trial Practice Guide, there are “multiple factors relevant to the question of whether a non-party may be recognized as” an RPI. *Id.* (citing *Taylor v. Sturgell*, 553 U.S. 880, 893–895, 893 n.6 (2008)). There is no “bright line test.” *Id.* Considerations may include, for example, whether a non-party exercises control over a petitioner’s participation in a proceeding, or whether a non-party is funding the proceeding or directing the proceeding. *Id.* at 48,759–60.

As our reviewing court in *Applications in Internet Time* (“*AIT*”) recently held, the Board should consider an “expansive formulation” of the RPI test and should focus on:

determining whether the non-party is a clear beneficiary that has a preexisting, established relationship with the petitioner. Indeed, . . . the two questions lying at its heart are whether a non-party “desires review of the patent” and whether a petition has been filed at a nonparty’s “behest.” Trial Practice Guide, 77 Fed. Reg. at 48,759.

AIT, 897 F.3d at 1351. In assessing a petitioner’s alleged failure to identify an RPI, “[t]he point is . . . to probe the extent to which [the non-party] has an interest in and will benefit from [the petitioner’s] actions, and inquire

whether [the petitioner] can be said to be representing that interest after examining its relationship with [the non-party].” *Id.* at 1353; *see also id.* at 1347–1348 (listing various ways parties can be a real party in interest).

As explained below, reviewing the arguments and evidence before us, we determine that Petitioner has satisfied its burden of persuasion to establish that it accurately named itself as the sole RPI. Although Patent Owner would have us weigh the facts differently and determine that Petitioner failed to identify all RPIs, on the record before us, we find that the Petition does not appear to have been controlled or funded by Samsung and Verizon, and the Petition does not appear to have been filed at the behest of Samsung and Verizon.

For context, we first review the nature of Petitioner, Unified Patents, Inc. Petitioner represents itself as a corporation that specializes in deterring non-practicing entity (“NPE”) patent litigation. Ex. 1022 ¶ 3; *see also* Ex. 2014 (Unified’s proposal offering services to a company, listing its services). According to the Declaration of Kevin Jakel, Petitioner’s Chief Executive Officer, Petitioner categorizes different technologies into specific “technology zones,” and companies can become “members” of Unified Patents by contractually subscribing to one or more technology zones. Ex. 1022 ¶¶ 5, 6; *see also* Ex. 1018, 4–6 (explaining zones and subscription fees under [REDACTED] Membership agreement), Ex. 1019, 4–6 (explaining micro-pools⁵ and subscription fees under [REDACTED] Membership agreement). The

⁵ [REDACTED] Membership agreement was signed in 2014, which may explain the use of “micro-pools” rather than “zones” used in [REDACTED] Membership agreement. *Compare* Ex. 1019, 2 (defining “micro-pool”) with Ex. 1018, 2 (defining “zone”).

Jakel Declaration states that [REDACTED]

[REDACTED]. Ex. 1022 ¶¶
12, 17.

The record shows that Petitioner's members pay annual membership fees according to a schedule that sets member fees based on a member's annual gross revenue, with the fees waived for any member with gross revenues below [REDACTED] and fees progressively increasing for any member with gross revenues above [REDACTED]. Ex. 1018, 14; Ex. 1019, 15; *see also* Ex. 1022 ¶ 5 (“[m]any members pay no fee”). Petitioner's Chief Executive Officer states that member fees are kept within a member's chosen technology zone(s), but members do not pay fees for *inter partes* reviews against specific patents. Ex. 1022 ¶¶ 3, 5. The Declaration states that Petitioner alone determines how to spend its money (*id.* ¶ 3) and that member fees are used to fund a number of services, including data analytics, patent licensing, and deterrence activities (Ex. 2009, 20–24).

Petitioner's CEO states that Petitioner has full discretion to allocate member fees within a technology zone. Ex. 1022 ¶ 3. He states that when Petitioner decides to challenge a patent, Petitioner chooses which patents to target based upon its own perceived deterrent value to a particular technology zone. *Id.* The Declaration states that Petitioner is not a law firm and does not have an attorney-client relationship with any of its members. *Id.* ¶ 4 (stating that Unified is not an extension of any member's in-house legal team); *see also id.* ¶¶ 9 (explaining that Unified never communicates with any companies regarding IPR or litigation strategy), 11 (explaining that Unified does not know its members' litigation strategies). He also states that

Petitioner and its members do not share any individuals on their respective boards of directors and that Petitioner does not have corporate relationships with its members beyond its membership agreements. *Id.* at 7. We are not aware of any evidence that contradicts Mr. Jakel's declaration testimony.

We turn now to the relationship between Petitioner and the non-parties cited by Patent Owner, Verizon and Samsung. Patent Owner filed a complaint alleging infringement of the '284 patent against Verizon and Samsung on January 30, 2018. As of the filing date of the Petition (June 1, 2018), [REDACTED]

[REDACTED] According to Petitioner, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

After the filing of this Petition, Verizon filed its own petition (IPR2018-01659, Paper 2), and Samsung later filed its own petition seeking to join as a party to Verizon's proceeding (IPR2019-00100, Paper 3). The record contains no evidence of communications between Petitioner and Verizon or Samsung regarding this proceeding or the preparation of the Petition filed in this proceeding. *Cf. AIT* at 1355 (discussing the communications between the unnamed party and the petitioner prior to the filing of a petition for *inter partes* review).⁷ The record also contains no

[REDACTED]

⁷ We recognize that the court in *AIT* did not find that the unnamed party was an RPI; the court remanded to the Board to re-review the evidence of record in light of the proper legal analysis. *AIT* at 1358 (vacating the Board's

evidence that Samsung or Verizon specifically funded this proceeding. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Patent Owner argues that the business model of Petitioner *per se* makes each of its members (or at least those sued by Patent Owner) an RPI to this proceeding. *See* Prelim. Resp. 41 (“it is highly likely that Samsung and Verizon are members of Unified Patents and should be identified as Real Parties in Interest”); Sur-Reply 1 (arguing “[t]here is no reasonable dispute that United files [*inter partes* reviews] for the benefit of its members, and absent member-provided funding, Unified would not file any IPRs”). Patent Owner points out that Petitioner has filed petitions challenging patents asserted against Samsung and/or Verizon, arguing that Petitioner is a “proxy” or “agent” of these unnamed parties. Prelim. Resp. at 42–45.

Absent some specific evidence linking the actions of Petitioner and Samsung or Verizon, or a more comprehensive analysis of Petitioner’s filing trends, however, the facts of record regarding Petitioner’s filing trends do not implicate, in our view, any particular coordination. As Petitioner points out, Samsung and Verizon have frequently been sued for patent infringement—nearly 400 times in the past 6 years. Reply 10–11 (citing

decision and remanding to “consider[] the full range of relationships under § 315(b) and the common law that could make [the unnamed party] a real party in interest with respect to this IPR”). The issue of whether the unnamed party in *AIT* is an RPI has not been resolved. Thus, any contrast we draw here with *AIT* is merely to show the likeness or unlikeness to the facts analyzed in that decision; we do not use the unnamed party in *AIT* as a yardstick to measure what is an RPI.

Exs. 1016, 1017). Petitioner has filed petitions that overlap with those 400 suits approximately 10–13 times. Prelim. Resp. 43–45. Given that one of Petitioner’s technology “zones” is the “Mobile” zone relating to mobile-phone technologies, for example, it is not surprising that there would be some degree of litigation overlap with Samsung and Verizon because that is a large portion of each company’s business portfolio. *See also, e.g.*, Ex. 2009, 29 (noting a table showing the various zones). Accordingly, Patent Owner’s argument that Petitioner has challenged some patents asserted against Verizon and/or Samsung and that this “cannot be mere coincidence” is conjecture on this record and does not significantly tend to show any particular behavior of Petitioner towards these companies.

Patent Owner also points out that Verizon’s and Samsung’s invalidity contentions specifically incorporate the challenges in this Petition. Prelim. Resp. 46–48. Those invalidity contentions, though, incorporate by reference “all contentions, charts, prior art references, and other statements relating to any ground of invalidity identified by . . . any party in any other past, present, and future litigation involving the Patents-in-Suit.” Ex. 2005, 3–4. In other words, Petitioner’s invalidity contentions were publicly available, and there is nothing special about Verizon and Samsung incorporating the contentions from this IPR; the invalidity contentions purport to incorporate all challenges, wherever found. Again, there is no evidence of communication or cooperation between Petitioner and Verizon or Samsung in preparation of those invalidity contentions or the preparation of this Petition. *Cf. RPX Corp. v. Virnetx Inc.*, IPR2014-00171 (PTAB 2014), Paper 49, 9 (holding that, “based on the record presented, the interactions

between [the petitioner and unnamed party] show an implicit authorization to challenge the . . . Patent.”) (non-precedential).

Patent Owner also suggests that because they are being sued for infringement of the '284 patent, Verizon and Samsung “have an interest in this proceeding.” Prelim. Resp. 47–48 (citing *AIT*, 897 F.3d at 1353); *see also AIT* at 1351 (stating that an RPI inquiry must look to “whether the non-party is a clear beneficiary” of the filing), 1353 (stating the Board must “probe the extent to which [the unnamed party] has an interest in and will benefit from [the petitioner’s] actions”). All entities have an interest in eliminating or mitigating the risks of a lawsuits pending against them; that does not make all defendants accused of infringing a patent later challenged in a petition for *inter partes* review a real party in interest to the petitioner. Notably, *AIT* did not end its inquiry with the fact that the petition at issue challenged a patent that was being asserted against the non-party. But the “interest” or “benefit” discussed in *AIT* is not so broad as to mean any interest whatsoever. *See Unified Patents, Inc. v. Realtime Adaptive Streaming, LLC*, IPR2018-00883, Paper 29, 14–15 (PTAB 2018) (“The RPI analysis set out in *AIT* and the common law require more than simply confining the analysis to determining whether a party benefits generally from the filing of this Petition and also has a relationship with the Petitioner.”). The question is whether Petitioner is *specifically representing* the unnamed party’s interest—“whether [the petitioner] can be said to be *representing that interest* after examining its relationship with [non-party].” *AIT*, 897 F.3d at 1351 (emphasis added). So although Samsung and Verizon may ultimately benefit from this Petition (depending on its outcome), we do

not have evidence that Petitioner is representing any particular interest of Samsung or Verizon here.

In significant contrast to the record here, in *AIT* the non-party was time-barred from filing its own petition, such that its main putative benefit from the *AIT* petitioner's filing was an *inter partes* review that could not have otherwise happened—the non-party could not file a petition itself. *Id.* at 1348 (stating that “the ‘right’ being enforced is a petitioner’s right to seek [IPR]” but that “who is entitled to bring an IPR” is limited by § 315(b)), 1353 (finding the fact that any IPR petitions the non-party might have wanted to file would have been time-barred at least suggests that the petitioner may have filed the three IPR petitions, in part, to benefit the non-party.). Here, at the time of Petitioner’s filing, Verizon and Samsung were free to file their own petitions; and they did, presumably advancing what they consider to be the best available prior art and the best available arguments. Unlike the facts of *AIT*, it stands to reason that Verizon and Samsung gain relatively little benefit from Petitioner’s filing compared to non-parties who are time-barred like the non-party in *AIT*. Significantly, the court in *AIT* recognized and discussed the extent of the time-barred non-party’s benefit from a petition that otherwise could not have been filed, but *AIT* did not find that benefit determinative of the RPI issue. Accordingly, we do not see any particular interest of Verizon or Samsung met by Petitioner by filing this Petition.

Patent Owner next argues that Verizon and Samsung “wholly fund [Petitioner’s] IPRs and direct its activities to specific ‘zones,’” arguing that this means they have control over the proceeding. Prelim. Resp. 48–51. However, there is no evidence offered that ties any monies spent by Verizon

or Samsung to this particular proceeding. The record shows that that

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] As

Petitioner's CEO stated, however, "Unified alone determines how to spend its money" and "Unified never communicates with any companies regarding IPR or litigation strategy," and there is no evidence of communication regarding Petitioner and Verizon or Samsung about litigation strategy. Ex. 1022 ¶¶ 3, 8–11. The timing of membership fees is based on a term period—there is no evidence that the timing was modified or based on the Petitioner's filing. Ex. 1019, 9 (referencing the term), 15 (referencing an annual subscription fee); Ex. 1018 (similar); *compare* Ex. 1022 ¶ 5 ("No Unified member made a significant payment shortly before the petition was filed"); *with AIT*, 897 F.3d 1357 (holding that the Board erred by not considering "the timing of [the unnamed party's] substantial payments to [the petitioner]").

Further, Petitioner is not solely an *inter partes* review–filing entity, it provides several services, including monitoring (*see, e.g.*, Ex. 2009, 27), patent licensing (*see, e.g., id.* at 21–32), and various analytics (*see, e.g., id.* at 22–23). Although *inter partes* review filing [REDACTED] that does not mean that *inter partes* review filings constitute nearly all of its business or provide a significant amount of the firm's *value* to its customers. Unlike in *AIT*, we do not have evidence as to the motivations for [REDACTED]. *Cf. AIT*, 897 F.3d at 1341–1342 (noting that the non-

party discussed the litigation with the petitioner after the non-party lost a covered business method challenge, followed by a payment from the non-party to the petitioner shortly thereafter).

Lastly, the fact that members pay into particular technology “zones” does not lead us to find that Unified Patents members exert funding control over proceedings. *Cf.* Prelim. Resp. 50 (arguing that Unified Patents members “ earmark the money they contribute for use only within specific ‘technology zones’”). The record shows that Petitioner’s zones are very broad—e.g., “mobile,” “retail,” “transport.” Ex. 2009, 47. Each of these broad zones would likely cover many thousands of patents. We do not find this to be specific enough, in combination with the general lack of evidence tying Petitioner to Samsung or Verizon, to consider this any meaningful measure of control or direction over this proceeding.

Patent Owner next argues that Petitioner’s business model is “aiding members [to] avoid estoppel.” Prelim. Resp. 51–53, *see also id., passim*. But there is currently no estoppel in this case. To the extent Patent Owner’s arguments address the nature of the relationship between Petitioner and Verizon or Samsung, but in different terms, we have addressed the substance of that argument and the evidence above. While it is certainly true that any potential estoppel would not apply to entities that are not real parties in interest to this litigation, Patent Owner’s “avoiding estoppel” argument is undermined by the fact that Samsung and Verizon have themselves filed petitions and thus subjected themselves to the potential estoppel that can result. Even though the estoppel that might result from Samsung’s and Verizon’s petitions is theoretically different in scope than the estoppel that might result from this Proceeding, we are unpersuaded that avoiding

estoppel would have been a significant interest or benefit to Samsung or Verizon.

In summary, we have considered the evidence of record but we disagree with Patent Owner's suggestion that the evidence requires a conclusion that Petitioner filed this Petition at the behest of the unnamed parties or otherwise did not meet its burden of identifying all real parties in interest. Patent Owner's arguments primarily revolve around the nature of Petitioner's business in the abstract, but the evidence of record persuades us that the nature of Petitioner's business does not establish that Petitioner filed this Petition at the behest of either Verizon or Samsung. Indeed, comparing the number of times Verizon and Samsung have been sued since the enactment of the AIA (appx. 400, Exs. 1016, 1017), the number of petitions filed by Petitioner (appx. 114, Prelim. Resp. 43–45), and the number of times those two may have overlapped (appx. 10–13, *id.*), it does not follow that such large, legally sophisticated companies [REDACTED] [REDACTED] with any implicit understanding that Unified Patents will file a petition on their behest to avoid potential estoppel and resolve their litigation matters. Unlike cases having indicia of a particular motive to file the petition on behalf of someone else, such as in *RPX*, the evidence and arguments advanced by Patent Owner do not establish that Petitioner filed this Petition at the behest of Samsung or Verizon—on balance, the evidence and arguments advanced by Petitioner lead us to determine that Samsung and Verizon are not unnamed real parties in interest to this Proceeding. Weighing the evidence, we determine that neither Samsung nor Verizon had control of, provided funding or direction to, or received a specific benefit (e.g., to purposefully circumvent a § 315(b) bar) from the filing of this

Petition, and we determine that Petitioner carried its burden to establish that it properly identified itself as the sole real party in interest.

B. Related Proceedings

The parties state that the '284 patent is being asserted in *Barkan Wireless IP Holdings, LP v. Samsung Electronics Co., Ltd. et al.*, No. 2:18-cv-28 (E.D. Tex). Pet. 1; Prelim. Resp. 41.

C. The '284 Patent (Ex. 1001)

As characterized by Patent Owner, the '284 patent relates to the expansion of cellular networks in area in which signal coverage is weak or nonexistent by using coordination centers and existing network infrastructure to route communications through “add-on base stations.” Prelim. Resp. 4. The '284 patent describes the “add-on base stations” as part of a system and method for allowing customers to install and use low power base stations that use the Internet to connect to and interface with a cellular carrier’s private network. *Id.*

D. Challenged Claims

Petitioner challenges claims 1–21 of the '284 patent. Claims 1, 2, and 3, reproduced below, are independent claims.

1. A gateway to a packet-based data network comprising:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a first interface adapted to facilitate data flow between the mobile device and the packet-based data network; and
 - a controller adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a coordination center, which center is connected to the data network through a second interface.

2. A communication system comprising:
 - a coordination center connected to a packet based data network through a first Interface, two or more gateways functionally associated with a packet based data network, wherein each gateway comprises:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a second interface adapted to facilitate data flow between the mobile device and the data network; and
 - a controller adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from said coordination center.
3. A method of providing data to a mobile device comprising:
 - establishing a data link between the mobile device and a radiofrequency transceiver, which transceiver is functionally associated with a packet based data network through a first interface;
 - regulating data flow between the mobile device and the packet based data network based, at least partially, on information received over the data network from a coordination center, which center is connected to the data network through a second interface.

E. Prior Art and Asserted Grounds

Petitioner asserts the following grounds:

Prior Art	Basis	Claims Challenged
Farris ⁸	Anticipation	1–3, 9, 10, 16, 18
Farris	Obviousness	1–3, 9, 10, 16, 18
Farris, Cheng ⁹	Obviousness	5, 12, 13, 17, 20
Farris, Lucidarme ¹⁰	Obviousness	6–8, 14
Farris, Lucidarme, Nelson ¹¹	Obviousness	15
Farris, Nelson	Obviousness	21
Farris, Yeh ¹²	Obviousness	4, 11, 19

III. PATENTABILITY ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends a person of ordinary skill in the art would have a bachelor's degree in computer science, computer engineering, electrical engineering, or a related subject and two to three years of experience in wireless communications. Pet. 7 (citing Ex. 1003 ¶¶ 44–47). Patent Owner does not directly address the level of ordinary skill in the art. At this stage and for the purposes of this Decision, we agree with and adopt Petitioner's statement of the level of ordinary skill in the art.

⁸ Farris et al. (US 6,721,306 B1; filed Mar. 11, 1997; issued Apr. 13, 2004). Ex. 1004.

⁹ Cheng et al. (US 6,806,813 B1; filed June 4, 1999; issued Oct. 19, 2004). Ex. 1005.

¹⁰ Lucidarme (WO 99/27729; filed Nov. 24, 1997; published June 3, 1999). Ex. 1006.

¹¹ Nelson et al. (US 6,760,778 B1; filed May 14, 1999; issued July 6, 2004). Ex. 1007.

¹² Yeh (US 6,690,929 B1; filed Aug. 3, 1998; issued Feb. 10, 2004). Ex. 1008.

B. Claim Construction

The Board interprets claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S.Ct. 2131, 2144–46 (2016) (upholding the Board’s use of the broadest reasonable interpretation standard in *inter partes* review proceedings).

“Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.” *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016); *see also Phillips. v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) (“Claims must always be read in light of the specification.”). Any special definitions for claim terms or phrases must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Although our claim interpretation cannot be divorced from the specification, *see Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (quoting *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011)), we must be careful not to import limitations from the specification that are not part of the claim language, *see SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

1. Consideration-related Policy Database

Petitioner does not advance any explicit claim-construction positions for independent claims 1, 2, or 3, but Petitioner contends a person of ordinary skill would have understood the scope of the phrase “consideration-related policy database” in dependent claims 4, 11, and 19 to include “a collection of policies which take matters into account, which may include

pricing matters.” Pet. 11. Patent Owner states that it disagrees with Petitioner’s construction, but Patent Owner does not substantively address Petitioner’s construction in the Preliminary Response. Prelim. Resp. 11, n. 2 (stating that construction of “consideration-related policy database” is not material to institution and that “Patent Owner reserves the right to address this term later, if necessary”).

Claim 4 recites “[t]he gateway according to claim 1, wherein said controller is further adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a consideration related policy database.” Claims 11 and 19 include similar language and additionally require that the consideration-related policy database is connected to the data network through a third interface.

The ’284 patent does not use the term “consideration-related policy database outside of the claims themselves, but, as cited by Petitioner (Pet. 10), the prosecution history of the ’284 patent uses the term in arguments intended to distinguish the prior art. Ex. 1002 at 187 (addressing claim limitations not found in the current claims; arguing “the consideration related policy database is associated with the data network, rather than with the gateway”) (emphasis omitted), 335 (arguing a reference does not teach a consideration-related policy database because it “makes no mention of consideration of any kind and actually deals only with data security”); *see also id.* at 298–99 (equating “consideration related database” to a “billing database”). The ’284 patent’s specification describes billing procedures that include a “cellular center policy” that provides pricing and billing

information, but it is not clear that those descriptions relate directly to the “consideration-related policy database” limitation.

At this stage, because Patent Owner does not substantively contest Petitioner’s interpretation of this limitation or Petitioner’s arguments comparing this limitation to the prior art, we apply Petitioner’s interpretation for the purposes of this Decision.

2. Packet-based Data Network

Patent Owner then contends each of the following terms from each of claims 1, 2, and 3 requires construction: “packet-based data network,” “coordination center,” and “regulat[e/ing] data flow.” Prelim. Resp. 11–15. According to Patent Owner, the ’284 patent’s specification and prosecution history repeatedly refer to the “packet-based data network” as an IP network such as the Internet. Pet. 12 (citing Ex. 1001 at 3:61–62, 4:10, 4:46–49, 12:47–48, 14:34–35, 15:34–36). Patent Owner argues the “repeated reference throughout the intrinsic record to IP networks, and particularly the Internet, dictates that the appropriate meaning of ‘packet-based data network’ is ‘an IP network, such as the Internet, used to transfer packets of data between a sender and a recipient.’” Prelim. Resp. 12.

Although the prosecution history is always relevant to claim construction, the prosecution history may not be used to narrow of a claim absent an applicant’s clear disavowal of claim coverage. *SuperGuide*, 358 F.3d at 875. Likewise, the specification may not be used to rewrite chosen claim language. *Id.* Here, Patent Owner does not identify any definition or clear disavowal of claim scope in the prosecution history or the specification. As an example of the language cited by Patent Owner, the ’284 patent states that “[t]hroughout the present disclosure, Internet refers to

any IP network, that may be for example the Internet or an Intranet” (Ex. 1001 at 3:61–62), but the claims do not recite the Internet or an IP network. In fact, in contrast to references to an IP network in the specification and file history, the claim language “packet-based data network” reflects a decision to draft claims more broadly than the examples listed in the specification and prosecution history, and Patent Owner’s proposed interpretation would ostensibly rewrite the plain language recited in the claims. *See SuperGuide*, 358 F.3d at 875. Accordingly, at this stage in the proceeding, we disagree with Patent Owner’s suggestion that “packet-based data network” should be limited to an IP network such as the Internet.

3. “Coordination Center”

Patent Owner argues “coordination center” in each of the independent claims 1, 2, and 3 “refers to a center that coordinates a call between two devices for which the claimed gateway is an intermediary” (Prelim. Resp. 13) and “at a minimum, requires a ‘center that provides information over the packet-based data network required for making a call’” (*id.* at 13–14). Patent Owner advocates its interpretation based on the plain language of the claims, examples in the specification, and the purported “context” of the claims. *Id.* at 12–14.

Citing the plain language of the claims, Patent Owner contends that each claim requires the coordination center to “provide information that is transmitted over the packet-based data network and which is used by the controller to regulate data flow between two devices communicating via the claimed gateway.” *Id.* at 13. According to Patent Owner, consistent with the claim language, the specification indicates that the coordination center “issues information relating to completing a call as required.” *Id.* at 13

(quoting Ex. 1001 at 6:7–8). Further, Patent Owner argues that “[w]hile the specification and prosecution history may impact the ultimate construction of this term, the broadest reasonable construction must, at a minimum, consider the explicit claim context,” and, “[b]ased on the claim context, ‘coordination center,’ at a minimum, requires a ‘center that provides information over the packet-based data network required for making a call.’” *Id.* at 13–14. Also, advancing different language to argue that Farris’s server PC 71 does not teach the claimed coordination center, Patent Owner argues “the server in Farris does not transmit *data regulation information* over a packet-based data network to a controller.” Prelim. Resp. 23 (emphasis added).

We note that each independent claim recites that the coordination center provides “information” that the controller uses to regulate a call. The Specification states that a coordination center “issues information relating to completing a call as required” and that “[t]hese centers only provide information prior to a call, and do not take part in the actual link being formed.” Ex. 1001, 6:7–12; *see id.* at 3:11–14 (stating that a cellular coordination center do not perform call switching, it “just provides the information required for making a call”), 6:51–54 (same).

We are not persuaded, though, that the claims require that the coordination center transmits “data regulation information” over the packet-based network. *Cf.* Prelim. Resp. 23. The ’284 patent does not define, or even use, the term “data regulation information.”

Further, it is not clear that interpretation of “coordination center” beyond the language of the claim will be helpful in this proceeding. Other than the argument regarding “data regulation information,” we do not

understand the Preliminary Response that the other language advanced in the “Claim Construction” discussion of “coordination center” (Prelim. Resp. 13–14) would distinguish the prior art as asserted in the Petition. At this stage in the proceeding, we determine the claim language itself, read in context with the specification, is sufficiently clear for the purposes of this Decision, and we decline to formally interpret “coordination center.” See *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”); see also *Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1326–27 (Fed. Cir. 2006) (declining to construe a disputed limitation where the record lacked context for the parties’ positions). .

3. “Regulat[e/ing] Data Flow”

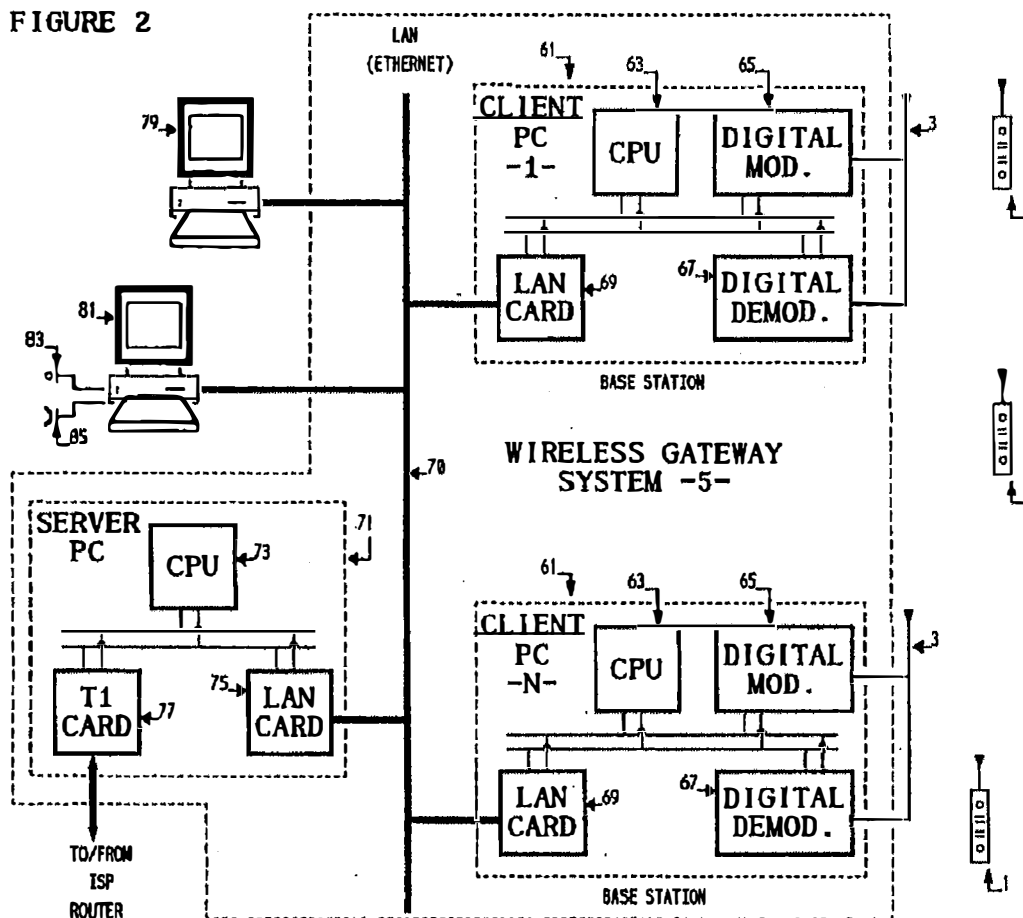
Citing the claim language, prosecution history, and a dictionary definition of “regulate,” Patent Owner argues the proper construction of “regulat[e/ing] data flow” as used in the challenged claims is “control[ling] access to the packet-based network by mobile devices.” Prelim. Resp. 15. Patent Owner contends that according to the explicit claim language, the data flow is regulated based at least in part on information received over the packet-based data network from a “coordination center.” Prelim. Resp. 14. Citing a dictionary definition of the term “regulate,” Patent Owner contends the ordinary meaning of “regulate” is “to control or direct according to rule, principle, or law.” Prelim. Resp. 14. And Patent Owner states that the context of the ’284 patent’s prosecution history provides that the term “regulate” is used to refer to managing access to the packet-based data

network by a mobile device. Prelim. Resp. 15 (citing Ex. 1002 at 298:1–2, 12–14, 335:8–11).

Although we agree with Patent Owner that the plain language of claims 1, 2, and 3 requires that data flow is regulated based at least in part on information received over the packet-based data network from a coordination center (Prelim. Resp. 14), we disagree with Patent Owner’s conclusion that the regulating data flow limitations are limited to regulating “access.” Reading the plain language of claim 1 in light of the intrinsic evidence, we find nothing in the record that warrants importing “regulating access” into the claims as advocated by Patent Owner. *See SuperGuide*, 358 F.3d at 875. For the purposes of this decision, we apply the plain language of the limitations that relate to regulating data flow.

C. Farris

Farris discloses a localized installation of a gateway system for private or limited public wireless telephone communication in which telephone calls go into and come out of the localized wireless gateway system using a public packet switched data network such as the Internet. Ex. 1004 14–19. As described by Patent Owner, Farris discloses using a local area network (“LAN”) of computers as a gateway to place voice calls over the Internet. Prelim. Resp. 5. Farris’s Figure 2, copied below, depicts relevant structures of Farris’s gateway system.



Ex. 1004, Fig. 2

Figure 2 of Farris depicts wireless telephone handsets 1 in wireless communication with client PC/base station 61. Client PC 61 includes LAN card 69 connecting client PC 61 to Ethernet LAN 70, which is also connected to LAN card 75 included with server PC 71. Server PC 71 also includes T1 card 77 that connects server PC 71 to the Internet. *See* Ex. 1004 at 14:40–16:14 (describing Figure 2).

D. Claim 1

Comparing Farris to claim 1 on a limitation-by-limitation basis and citing the Declaration of Dr. Vijay K. Madiseti, PhD (Ex. 1003) in support,

Petitioner asserts that Farris anticipates claim 1 or renders claim 1 obvious. Pet. 12–27. Patent Owner argues Farris fails to disclose the following recitations of claim 1: (i) “packet-based data network” and the required first and second interfaces to that data network, (ii) “coordination center,” and (3) “regulat[e/ing] data flow.” Prelim. Resp. 16–17. We address the claim limitations in turn.

1. A gateway to a packet-based data network comprising:

Comparing Farris to the preamble of claim 1, Petitioner states that Farris discloses a “client PC 61 serving as a base station” (the claimed “gateway”) that connects mobile devices on a first channel to a second channel such as LAN 70 (the claimed “packet-based data network”). Pet. 12–14. Patent Owner acknowledges that Petitioner cites Farris’s client PC 61 as the claimed gateway (Prelim. Resp. 18), but Patent Owner does not directly contest Petitioner’s position that Farris’s client PC discloses the claimed gateway.

Patent Owner argues Farris does not disclose the “packet-based data network” recited in both the preamble and the body of claim 1. Prelim. Resp. 14, 18–19. We address the recited “packet-based data network” with the discussion of the “first interface” limitation in subsection 3, below.

2. a transceiver adapted to establish a radio-frequency link with a mobile device

Petitioner contends Farris discloses the claimed “transceiver adapted to establish a radio-frequency link with a mobile device” with Farris’s disclosures of transceivers that provide two-way wireless voice frequency communications between client PC 61 and wireless handsets. Pet. 15–18 (citing Ex. 1004 at 5:22–30, 41–44, 19:12–16, abstract; Ex. 1003 § 72).

Among other things, the cited portions of Farris disclose that the transceivers include a digital modulator and a digital demodulator for two-way voice channel transmission via an RF channel. Ex. 1004 at 5:41–44, 23:33–37. Patent Owner does not rebut the evidence cited by Petitioner for this limitation.

3. a first interface adapted to facilitate data flow between the mobile device and the packet-based data network; and

Petitioner contends Farris discloses the claimed first interface with Farris’s disclosures of a LAN interface card 69 in the client PC/base station 61. Pet. 18–20. As cited by Petitioner, Farris discloses that client PC 61 and LAN interface card 69 provide a two-way data connection interface compatible with LAN 70. Pet. 18–19 (citing Ex. 1004 at 14:65–67). Further, Petitioner cites Farris’s disclosures that client PC 61 encapsulates information received from a wireless handset in “Ethernet packets” and sends the packets over LAN 70 to server PC 71. Pet. 19 (citing Ex. 1004 at 20:23–26).

Patent Owner argues that the recited “packet-based data network” should be construed as “an IP network such as the Internet used to transfer packets of data between a sender and a recipient” (Prelim. Resp. 11–12, 18), but we disagree with Patent Owner’s proposed narrowing of the claim, as discussed above. In addition, Patent Owner argues a LAN such as that disclosed in Farris “transfers frames of data within the local network; it does not exchange packets of data.” Prelim. Resp. 18–19 (citing Ex. 2002 at 1–4). As such, Patent Owner argues that Petitioner has failed to satisfy its burden to show that Farris discloses that “LAN 70 is a packet-based data

network at all, much less an IP network as required for the ‘packet-based data network’ limitation.” *Id.* at 19.

As noted above, we disagree with Patent Owner’s arguments that “packet-based data network” should be narrowed to require an IP network such as the Internet. Regarding Farris’s LAN 70, Farris discloses that its LAN may use “any appropriate local data communication network technology” (15:47), citing as examples Ethernet and Asynchronous Transfer Mode protocols. Ex. 1004 at 5:5–6, 15:47–58. Farris also describes that information received from wireless handset 1 is encapsulated by client PC 61 in Ethernet packets and set over LAN 70 to server PC 71. Ex. 1004 at 14:65–67, 20:23–26; *accord* Ex. 1003 ¶¶ 67, 78–79.

For its argument that a LAN transfers frames of data and does not exchange packets of data, Patent Owner cites an article from the website networkworld.com. Prelim. Resp. 18–19 (citing Ex. 2002). As an initial matter, the article is dated September 18, 2017, many years after the ’284 patent’s critical date. Ex. 2002 at 1. Also, the article states on its face that it reflects the opinion of its author (*id.*), but the author’s qualifications are not part of the record. Notably, too, the author provides the following context for the article: “[t]he differences between frames and packets are important when choosing Ethernet test equipment for data and performance testing” (Ex. 2002 at 4); the article does not purport to address whether Farris’s LAN 71 (or LANs in general) fall within what a person of ordinary skill would have understood “packet-based data network” to be in the context of the ’284 patent at the time of its invention. Moreover, in some ways the article seems to suggest that Ethernet networks use packets.

The article states, for example, that “[w]hen discussing Ethernet data, the terms frame and packet are often used interchangeably” (Ex. 2002 at 1), and the article notes that frames are generated at layer 2 of the TCP/IP stack and packets are generated at layer 3 (*id.* at 2–3). *Cf. Advanced Media Networks, LLC v. AT&T Mobility LLC*, 2018 WL 4440462 at *3–4 (Fed. Cir. Sept. 17, 2018) (unpublished) (discussing IEEE standards related to Ethernet and construing “ethernet packet switching protocol” to include, for example, a device that uses IP at OSI layer 3 and IEEE 802.11 at OSI layer 2). Further, the article describes encapsulating an Ethernet frame to create an IP packet (Ex. 2002 at 3) similarly to Farris’s description of encapsulating information received from a wireless handset in Ethernet packets to send over LAN 70 to server PC 71 (Ex. 1004 at 20:23–26).

Although we do not make any final determinations at this stage in the proceeding, we note that, on balance, the evidence currently of record supports Petitioner’s arguments that Farris’s Ethernet LAN falls within the scope of “packet-based data network” as recited in claim 1. In what we understand to be Petitioner’s obviousness arguments, Petitioner argues that “to the extent it is argued or found that the packet-based data network must be the Internet of an IP network, Farris teaches such a packet-based network” with Farris’s disclosures of embodiments in which a base station that may connect directly to the Internet. Pet. 20 (citing Ex. 1004 at 15:51–53, 25:34–36, Ex. 1003 ¶ 80) (emphasis omitted); *accord* Pet. 14. Petitioner additionally states that modifying Farris to use the Internet instead of a LAN would have been no more than substitution of one known disclosed element (the Internet) for another (the LAN of Farris) to obtain predictable results consistent with the claimed invention. *Id.* at 14–15.

Patent Owner argues that to the extent that Petitioner relies on Farris's embodiments that disclose using the Internet in place of LAN 71, Petitioner's reliance on LAN card 69 as one of the recited interfaces and server PC 71 as the recited "coordination center" would be insufficient because those structures would be eliminated in an embodiment that uses the Internet instead of LAN 71. Prelim. Resp. 27–28 (citing Ex. 25:34–38). Further, Patent Owner argues that even if Petitioner had asserted that the client PC would handle the function of each of the eliminated structures, such an embodiment would not satisfy the claim recitations that require sending and receiving information over the packet-based data network, as the client PC cannot receive information over the network from itself. Prelim. Resp. 29.

As suggested by Patent Owner, Petitioner's obviousness arguments appear to address this limitation in isolation, without fully explaining how Petitioner's alternative arguments would affect the other limitations of claim 1. Stated differently, Petitioner does not appear to address with particularity how the alternative arguments would apply in the context of claim 1 as a whole, including any affects replacing LAN 71 with an Internet connection might have on Petitioner's comparisons of Farris to other limitations of claim 1. Further, we note that it is not clear on this record whether Petitioner's obviousness arguments rely on Farris's disclosures of alternative embodiments or hypothetical modifications to embodiment cited throughout Petitioner's anticipation arguments. We also note that Petitioner's alternative argument appears to be conditioned on an interpretation of "packet-based data network" that we do not adopt. *See* Pet. 20 (stating that Petitioner's alternative arguments are provided "to the extent it is argued that

the *packet-based data network* must be the Internet or an IP network”).

Regardless, though, at this stage in the proceeding, we do not make any determinations or conclusions regarding the asserted obviousness of claim 1 at this stage.

4. *a controller adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a coordination center,*

Petitioner contends Farris discloses a controller as claimed with its disclosures of CPU 63 in client PC 61, and Petitioner cites Farris’s server PC 71 as the recited coordination center. Pet. 20–26. Petitioner additionally cites Farris’s disclosures that server PC 71 allocates a channel through base station transceiver 61 to the handset 1 and instructs the respective client PCs to make the connection via the LAN between the channels assigned to the called and calling parties’ handsets. Pet. 21–22 (citing Ex 1004 at 19:4–7, 8–16; 23:33–37). According to Petitioner, the client PC/base station regulates data flow between the mobile device and the data network through its use of a particular channel, the assignment of which was received over the data network from the server PC (the recited “coordination center”). *Id.*

Patent Owner argues Farris’s server PC cannot be the recited “coordination center” because, according to Patent Owner, “the server in Farris does not transmit *data regulation information* over a packet-based data network to a controller.” Prelim. Resp. 23 (emphasis added). We note that claim 1 recites that the coordination center provides “information” that the controller uses to regulate a call, but for the reasons explained above, we are not persuaded that claim 1 requires that the coordination center sends “data regulation information” over the packet-based network.

Patent Owner also advances arguments premised on Patent Owner's position that a LAN is not a packet-based network, arguing "because Petitioner has not established that the LAN is a packet-based data network, it follows that the transmission from the server PC to the base station cannot suffice to meet the claimed functionality of the '284 claims." Prelim. Resp. 23. For the reasons explained above in our claim construction section, we disagree with Petitioner's interpretation and arguments regarding the recited "packet-based data network."

5. which center is connected to the data network through a second interface.

Petitioner cites Farris's disclosures of LAN card 75 as the recited second interface through which server PC 71 (the recited "coordination center") is connected to the data network. Pet. 27–28 (citing Ex. 1003 ¶¶ 96–98). Beyond the arguments addressed above regarding the interpretation of "coordination center" and "packet-based data network," Patent Owner does not substantively rebut the evidence cited for this limitation.

6. Summary

At this stage of the proceeding, we have not made a final determination with respect to the patentability of claim 1 or the construction of any claim term. However, having considered each of the parties' arguments and the evidence currently of record, for the foregoing reasons, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging at least claim 1.

E. Claims 2, 3, 9, 10, 16, and 18

Independent claim 2 recites a communication system with limitations similar to those of independent claim 1 and additionally requiring “two or more gateways,” among other differences. Independent claim 3 is a method claim that recites steps similar to those of independent claim 1. Dependent claims 9, 10, 16, and 18 recite additional functional language relating to the controller recited in their base claim.

Comparing Farris to each of claims 2, 3, 9, 10, 16, and 18 on a limitation-by-limitation basis, Petitioner advances substantially the same evidence and substantially the same arguments as those advanced for similar limitations of claim 1. For the additional recitations of claims 9 and 16, Petitioner cites Farris’s disclosures that CPU 63 in client PC/base station 61 provides an appropriate status message over the LAN to the server PC. Pet. 43 (citing Ex. 1004 at 23:37–39, 24:35–37; Ex. 1003 ¶ 133), 45. For the additional recitations of claims 10 and 18, Petitioner cites Farris’s disclosures that client PC 61 forwards the digits and identification of handset 1 through LAN 70 to server PC 71 as a service request. Pet. 44 (citing Ex. 1004 at 18:53–67, 19:8–17; Ex. 1003 ¶¶ 136–138), 45.

Patent Owner does not substantively address these claims beyond the arguments addressed above regarding claim 1.

F. Claims 5, 12, 13, 17, and 20

Claims 5 and 12 add to independent claims 1 and 2, respectively, the recitation that the controller(s) is/are further adapted to report the gateway’s physical location to the coordination center. Claim 17 ultimately depends from claim 2 and additionally recites “wherein said coordination center is further adapted to maintain a record of the gateways’ operational status.”

Claim 13 depends from claim 12 and additionally recites “wherein said coordination center is further adapted to maintain a record of the gateways’ physical location.” Claim 20 depends from claim 3 and additionally recites “further comprising reporting to the coordination center the transceiver’s physical location.”

Petitioner asserts that claims 5, 12, 13, 17, and 20 would have been obvious in view of the combined teachings of Farris and Cheng. Pet. 46–48. In addition to the teachings of Farris, Petitioner cites Cheng as teaching a system in which a plurality of base stations that have a GPS position receiver provide location information to a network management center. Pet. 46 (citing Ex. 1005 at 2:66–3:1, 3:4–6, 5:54–56; Ex. 1003 ¶ 145).

Patent Owner argues the Petition fails to present a motivation to combine Farris and Cheng. Prelim. Resp. 30. Patent Owner argues that, unlike Cheng’s teachings that relate to management of a large public wireless communication network, Farris’s teachings relate to a localized wireless communication system and “Farris has no operational need for location-based information of its gateway components because they are localized, and each gateway is located based on IP address and/or domain name information.” Prelim. Resp. 30; *accord id.* at 30–33. Because, according to Patent Owner, “Farris’s operation has no need for geographic location information, . . . a person of skill in the art would not be motivated to implement Cheng’s asset management solution with Farris.” Prelim. Resp. 32.

Petitioner argues Farris and Cheng are analogous art in the same field of endeavor, as both relate to communications networks that use base stations like the ’284 patent. Pet. 47. Petitioner argues that because Farris

discloses that its system may be operated in public places, a person of ordinary skill would have been motivated to consider Cheng's asset tracking system in order to keep track of expensive network equipment, quoting Cheng's teaching that "in a network service environment, it is beneficial to track assets, such as various pieces of equipment, that are installed to support the network." Pet. 47 (quoting Ex. 1005 at 1:15–18). Further, Petitioner argues that combining the teachings of Cheng and Farris would have been no more than the combination of prior art elements according to known methods and that a person of ordinary skill would have had a reasonable expectation of success in such a combination. Pet. 48.

At this stage, we generally agree with Petitioner that Farris and Cheng are analogous art to the '284 patent, but we do not make any final determinations regarding the patentability of 5, 12, 13, 17, and 20.

G. Claims 6–8 and 14

Claims 6 recites "[t]he gateway according to claim 1, further comprising a unique identity achieved by a unique number or digital document." Claim 7 depends from claim 6 and further recites "wherein said unique number or digital document contains an encryption key." Claim 8 depends from claim 7 and further recites "wherein said controller is further adapted to conduct encrypted communications." Claim 14 recites "[t]he system according to claim 2, wherein said gateways further comprise a unique identity achieved by a unique number or digital document."

For these limitations, in addition to the teachings of Farris, Petitioner cites Lucidarme's disclosures of a SIM card and a private authentication key used for authentication and encryption in a mobile telephone network. Pet. 51–52 (citing Ex. 1006 at 3:26–27, 9:3–4, 8–12, 15–16; Ex. 1003 ¶¶ 163–

64). Petitioner argues that Lucidarme's private key is used for identification purposes and a person of ordinary skill would have understood the private key to correspond to a unique identity for a particular device and for a base station associated with the device. Pet. 52–53 (citing Ex. 1003 ¶ 64). According to Petitioner, a person of ordinary skill would have recognized the advantages of encrypting communications between the base station and mobile device and that incorporating Lucidarme's teachings to facilitate encryption into Farris's system would have required no more than the combination of prior art elements according to known methods with a reasonable expectation of success. Pet. 55.

Patent Owner argues that Farris discloses a non-cellular, "localized" wireless system that is unlike Lucidarme's system that is designed to work as a component of the public cellular network, and Patent Owner argues that based the differences between Farris and Lucidarme, a person of ordinary skill would not have a reason to combine the references' teachings. Prelim. Reps. 33–35. Patent Owner also argues that adding SIM cards to Farris's system would change its basis of operation, as Farris "relies on the use of IP and domain name translation to enable communication between its wireless devices," and Patent Owner argues that Petitioner presents no evidence of a reason to make such a modification to Farris's system. Prelim. Resp. 35. Moreover, Patent Owner also argues that Lucidarme's private authentication key does not disclose the recited "unique identity." Prelim. Resp. 35. According to Patent Owner, Lucidarme's SIM card and private authentication key relate to a particular user and the user's subscription to a cellular network; the private authentication key is not a unique identity of the base station. Prelim. Resp. 37.

Petitioner argues Farris and Lucidarme are analogous art in the same field of endeavor as the '284 patent, as both relate to base station devices for private use. Pet. 54 (citing Ex. 1004 at 7:11–12; Ex. 1006 at 3:19–20). Petitioner argues that it would have been obvious to incorporate the teachings of Lucidarme with the system of Farris to facilitate the use and implementation of the client PCs as base stations and assign parameters to the client PCs. *Id.* (citing Ex. 1003 ¶¶ 166–167). Further, Petitioner argues that a person of ordinary skill would have recognized the benefits to encryption of communications between the base station and the mobile device to prevent an unauthorized third from intercepting the communications, for example. Pet. 54–55 (citing Ex. 1009 at 8:15–19; Ex. 1003 ¶ 168). Further, Petitioner argues that combining the teachings of Lucidarme and Farris would have been no more than the combination of prior art elements according to known methods and that a person of ordinary skill would have had a reasonable expectation of success in such a combination. Pet. 55.

We note that neither parties expressly advances an interpretation of “unique identity” as recited in the claims. Among other disclosures, we note that the '284 patent’s specification broadly describes unique identifiers, cryptographic keys, and encryption, stating, for example, that each phone, base station, and the cellular center may have its own digital certificate which binds a cryptographic public key with an identifier and that communications can be encrypted between the base stations, cellular centers, and/or phones. Ex. 1001 at 8:9–29. We do not make any final determinations at this stage of the proceeding, but we are not currently persuaded by Patent Owner’s arguments that Lucidarme fails to teach or

suggest a unique identifier as recited, that adding a SIM card to Farris's implementation would change its basis of operation, or that a person of ordinary skill would not have had a reason to combine the teachings of Lucidarme and Farris.

H. Claims 15 and 21

Claim 15 depends from claim 14, which depends from claim 2, and further recites "wherein said unique number or digital document contains an encryption key; and said controllers are further adapted to conduct encrypted communications with said center." Claim 21 recites "[t]he method according to claim 3, further comprising encrypting communications between said transceiver and said coordination center."

In addition to the citations addressed above regarding the claims from which claims 15 and 21 depend, Petitioner cites Nelson's teachings regarding encrypted communications. Pet. 57–60. As cited by Petitioner, Nelson teaches a gateway that connects telephones within an aircraft to terrestrial devices through a ground data gateway. Pet. 57. Petitioner argues the gateway on the aircraft is analogous to the client PC of Farris and the ground data gateway is analogous server PC of Farris. Pet. 57–60.

Among other things, Petitioner argues that Nelson explicitly states the security benefits to protect voice or data information, and Petitioner contends that combining the teachings of Nelson with those of Farris would have been no more than the combination of prior art elements according to known methods with a reasonable expectation of success. Pet. 59–60 (citing Ex. 1007 at 3:45–48, 4:43–51; Ex. 1003 ¶¶ 180–183).

Patent Owner argues that Petitioner failed to establish that a person of ordinary skill would have looked to combine Nelson, which describes

communications between aircraft and ground devices, “to modify a cellular telephone network.” Prelim. Resp. 38. Patent Owner also argues that, contrary to Petitioner’s proposed combination of Farris and Nelson, it would not have made sense to use encryption between Farris’s client PC and server PC because those devices communicate via a local area network, which a person of ordinary skill would have understood to be a trusted network. Prelim. Resp. 39.

At this stage in the proceeding and based on the record before us, we note that Patent Owner does not present sufficient technical analysis or evidence to support its argument that it would not have made sense to use encryption in Farris’s system as proposed by Petitioner.

I. Claims 4, 11, and 19

Claims 4, 11, and 19 depend from claims 1, 2, and 3, respectively, and add recitations relating to a “consideration-related policy database.” As noted above, Petitioner contends the phrase “consideration-related policy database” includes “a collection of policies which take matters into account, which may include pricing matters.” Pet. 9–10. Petitioner argues Yeh teaches or suggests the limitations of claims 4, 11, and 19 with its disclosures of a system that includes a menu of Quality-of-Service levels offered by a service provider and communicated to a base station where a service level can be selected by a user. Pet. 61–63 (citing Ex. 1008 at 3:15–21, 4:15–33, 5:50–62, 6:51–74, 719–22, 61–63, 8:37–42, Abstract; Ex. 1003 ¶¶ 190–193).

Among other things, Petitioner argues that a person of ordinary skill would have found it obvious to incorporate the teachings of Yeh of a menu of services for cellular communications and regulating system usage based

on various pricing policies to achieve real-time negotiation of billing rates in the Farris system. Petitioner also argues that Yeh and Farris are analogous art to the '284 patent and that combining the teachings of Yeh with those of Farris would have been no more than the combination of prior art elements according to known methods with a reasonable expectation of success. Pet. 63–64.

Patent Owner disagrees with Petitioner's interpretation (Prelim. Resp. 11 n. 2), although Patent Owner does not further address the scope of the recited "consideration-related policy database." Further, Patent Owner argues that Petitioner failed to explain why or how Farris and Yeh would be combined. Prelim. Resp. 40.

At this stage in the proceeding, we disagree with Patent Owner's characterization of Petitioner's arguments as failing to explain how or why Farris and Yeh would be combined. Although Petitioner's arguments could be more clear and more specific, we understand Petitioner's arguments as they apply to dependent claims 4, 11, and 19. We do not, however, make any final determination regarding the patentability of claims 4, 11, and 19.

IV. CONCLUSION

We have determined that Petitioner has shown a reasonable likelihood of success in challenging at least one of claims 1–21. Accordingly, we institute an *inter partes* review of all challenged claims on all grounds in the Petition.

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual and legal issues.

V. ORDER

In view of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–21 of the '284 patent is instituted with respect to all ground set forth in the Petition;

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of trial commencing on the entry date of this Decision; and

FURTHER ORDERED that the parties shall jointly email a proposed redacted version of this paper no later than 14 days from the entry of this Decision to Trials@uspto.gov.

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