UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,
Petitioner,

v.

SEVEN NETWORKS, LLC,
Patent Owner.

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IPR2020-00180
Patent 9,648,557 B2

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Before THU A. DANG, KARL D. EASTHOM, and
JONI Y. CHANG, *Administrative Patent Judges*.

EASTHOM, *Administrative Patent Judge*.

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

Apple Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting an *inter partes* review of claims 1–28 (the "challenged claims") of U.S. Patent No. 9,648,557 B2 (Ex. 1001, "the '557 patent"). Petitioner filed a Declaration of Patrick Traynor, Ph.D. (Ex. 1003) with its Petition. Patent Owner, Seven Networks, LLC ("Patent Owner"), filed a Preliminary Response (Paper 8, "Prelim. Resp."). The parties filed additional briefing to address the Board's discretionary authority to deny a petition based on a parallel district court proceeding under 35 U.S.C. § 314(b). Paper 10 ("Pet. Prelim. Reply"); Paper 11 ("PO Prelim. Sur-reply").

We have authority to determine whether to institute an *inter partes* review ("IPR"). *See* 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), we may not authorize an *inter partes* review unless the information 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." For the reasons that follow, we institute an *inter partes* review as to the challenged claims of the '557 patent on all grounds of unpatentability presented.

I. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies Apple Inc. as the real party-in-interest. Pet. 70.

B. Related Proceedings

The parties identify *SEVEN Networks, LLC v. Apple Inc.*, No. 2:19-cv-00115 (E.D. Tex.) ("District Court Action" or "District Court") as a related matter involving the '557 patent. Pet. 70; Paper 5.

C. The '557 patent

The '557 patent describes "[a] method of selecting a network from a plurality of available access networks." Ex. 1001, code (57). A user device

can execute multiple applications having different respective link metrics, including quality of service (QoS) requirements. *Id.* at 2:46–54; 6:36–63. "[A] profile of applications supported by the [user equipment (UE)] may be used for connectivity and handover decisions, for example latency requirements, [and] bandwidth requirements." *Id.* at 7:4–7. "A radio link selection request/Indicator function based on priority parameters or profiles may be used to query which radio link should be used for a particular application" and "[t]he Indicator can also be event triggered and can signal to the IMS services that a change of domain should be made for a certain application or for all applications." *Id.* at 10:54–67.

The '557 patent provides for "connections to *multiple access networks simultaneously* depending upon handset use cases supported. For example, voice call via cellular services may be provided while email is downloading via WLAN." Ex. 1001, 8:35–39 (emphasis added).

D.   *Illustrative Claim 1*

Of the challenged claims, independent claim 1, recites a "[a] method of operating a mobile device," and independent claim 14 recites "[a] mobile device." Claims 1 and 14 recite materially similar limitations. Remaining challenged claims 2–14 and 15–28 depend or ultimately depend from claim 1 or claim 14.

Claim 1 illustrates the challenged claims at issue:

1. [1.P] A method of operating a mobile device comprising:

[1.1] connecting to a WIFI network and a cellular network;

[1.2] displaying an indication of availability of the WIFI network and the cellular network;

[1.3] accessing data through the WIFI network in response to an application request from an application executing on the mobile device;

[1.4] detecting a first condition indicative of a quality of the WIFI network;

[1.5] detecting, in response to a subsequent application request and before or at a time of receiving a response to the subsequent application request, a second condition indicative of a time responsiveness of the WIFI network;

[1.6] evaluating user settings, wherein the user settings include a roaming rule, a connectivity rule, and an application profile of the application;

[1.7] in response to detecting the first condition and the second condition and evaluating the user settings, determining a time responsiveness of the cellular network; and

[1.8] based on the detected first condition and detected second condition, the evaluated user settings, the time responsiveness of the cellular network, and the application executing on the mobile device, sending the subsequent application request through the cellular network in response to the [subsequent] application request executing on the mobile device,

[1.9] wherein requests from another application executing on the mobile device continue to access data through the WIFI network.

Ex. 1001, 14:1–34.[1]

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[1] *See* Ex. 1001 (Certificate of Correction inserting <u>subsequent</u> before "application" in claims 1 and 14).

E.   The Asserted Grounds

Petitioner challenges claims 1–28 of the '557 patent on the following grounds (Pet. 2):

Claims Challenged	35 U.S.C. §	References
1–27	103[2]	White,[3] Falardeau[4]
6, 19	103	White, Falardeau, Chitrapu[5]
7, 20	103	White, Falardeau, Li[6]
8, 9, 21, 22	103	White, Falardeau, Zehavi[7]
11, 24	103	White, Falardeau, Shell[8]
28	103	White, Falardeau, Konicek[9]

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[2] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. For purposes of institution, the '557 patent contains a claim with an effective filing date before March 16, 2013 (the effective date of the relevant amendment), so the pre-AIA version of § 103 applies.

[3] White et al., US 7,539,175 B2, issued May 26, 2009 (Ex. 1004).

[4] Falardeau, US 7,620,065 B2, issued Nov. 17, 2009 (Ex. 1005).

[5] Chitrapu, US 2003/0223395 A1, published Dec. 4, 2003 (Ex. 1006).

[6] Li et al., US 2004/0192312 A1, published Sept. 30, 2004 (Ex. 1007).

[7] Zehavi et al., US 7,613,171 B2, issued Nov. 3, 2009 (Ex. 1008).

[8] Shell et al., US 6,826,762 B2, issued Nov. 30, 2004 (Ex. 1009).

[9] Konicek et al., US 8,880,047 B2, issued Nov. 4, 2014 (Ex. 1010).

II.   DISCRETION TO DENY INSTITUTION UNDER § 314(a)

Regarding the parallel District Court Action (*supra* Section I.B), Patent Owner argues "[t]he circumstances here present an even clearer case for non-institution under 35 U.S.C. § 314(a) than the circumstances that warranted it in *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 [at] 20 (PTAB Sept. 12, 2018) ('*NHK*') (precedential)." Prelim. Resp. 6.

In *NHK*, the Board declined to institute *inter partes* review, in part, because "under the facts and circumstances," a review "would be an inefficient use of Board resources," given the status of a parallel district court proceeding between the same parties. *NHK*, Paper 8 at 20. The Board considered the following factors in *NHK*: (1) based on the district court's schedule, the district court's trial would conclude "before any trial on the [p]etition concludes"; and (2) the petitioner relied on the "same prior art and arguments" as its district court invalidity contentions, so the Board would "analyze the same issues" as the district court. *Id.* at 19–20.

As with other non-dispositive factors considered for institution under § 314(a), the Board weighs an early trial date as part of a "balanced assessment of all relevant circumstances in the case, including the merits." Patent Trial and Appeal Board Consolidated Trial Practice Guide 58 & n.2 (Nov. 2019), https://www.uspto.gov/TrialPracticeGuideConsolidated ("CTPG") (discussing follow-on petitions and parallel proceedings, citing *NHK* and *General Plastic Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (precedential)); *see Abbott Vascular, Inc. v. FlexStent, LLC*, IPR2019-00882, Paper 11 at 31 (PTAB Oct. 7, 2019)

(declining to adopt a bright-line rule that an early trial date alone requires denial in every case).

Non-dispositive factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 6 (PTAB Mar. 20, 2020) (Order analyzing *NHK* issues) (precedential) ("*Fintiv*"). Overlap among these factors often exists and some facts may be relevant to more than one factor. *See id.* Therefore, in evaluating the factors, the Board holistically views whether denying or instituting review best serves the efficiency and integrity of the system. *See* CTPG at 58 (quoting 35 U.S.C. § 316(b)); *Fintiv*, Paper 11 at 6.

The precedential *Fintiv* order lists the following factors for consideration "when the patent owner raises an argument for discretionary denial under *NHK* due to an earlier trial date": 1) whether a stay exists or is likely to be granted if a proceeding is instituted; 2) proximity of the court's trial date to the Board's projected statutory deadline; 3) investment in the parallel proceeding by the court and 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. *See Fintiv*, Paper 11 at 5–16.

1. Factor 1–Likelihood of Stay

The parties do not present persuasive record evidence or argument that the parties requested a stay or as to the District Court's input regarding the likelihood of a stay. Petitioner cites decisions from the Eastern District of Texas and asserts that institution "greatly increases the likelihood of a

District Court stay." *See* Pet. Prelim. Reply 4. Patent Owner relies on other decisions from the Eastern District of Texas denying stays in an attempt to demonstrate a likelihood of a denial of a motion to stay. *See* PO Prelim. Sur-reply 2–4. The cases cited by the parties show that judges grant stays based on the facts of each specific case as presented in the briefs by the parties. *See* Pet. Prelim. Reply 4; PO Prelim. Sur-reply 2–4. The parties fail to show sufficiently how any of the cited decisions impact any potential stay decision for the instant District Court Action. Accordingly, *Fintiv* factor 1 weighs evenly for each party.

2.   *Factor 2–Trial Date Versus FWD Due Date*

Patent Owner notes that "[t]he trial is scheduled to begin on November 2, 2020, **9½ months before** the August 18, 2021 [final written decision (FWD)] deadline, and that is after the parties **already** pushed back the trial date due to COVID-19." PO Prelim. Sur-Reply 4; *see also* Ex. 1040, 1 (District Court scheduling order granting joint motion to extend due dates by forty-five days because of the "COVID-19" "pandemic," including extending jury trial date to November 2, 2020).

Petitioner contends "there are eighteen . . . cases scheduled to begin jury selection on November 2" in the Eastern District of Texas, wherein, "given the inevitability of further COVID-19 outbreaks, further scheduling issues cannot be ruled out." Pet. Prelim. Reply 5 (citing Ex. 1050, 1–9; Ex. 1047, 1); *see* Ex. 1047, 1.

When a district court's trial date occurs before the projected statutory deadline, the Board generally weighs this factor in favor of exercising authority to deny institution under § 314(a). *Fintiv*, Paper 11 at 9. However, other variables here contribute to the uncertainty that the jury trial will occur

on November 2, 2020. First, as Petitioner points out, the Eastern District of Texas currently lists eighteen separate trials scheduled to begin on November 2, 2020. Pet. Prelim. Reply 5; Ex. 1050, 1–9. Second, the coronavirus pandemic already has disrupted the trial date once, and the situation continually evolves. *See* Ex. 1040 (District Court scheduling order moving the trial date from September 14, 2020 to November 2, 2020 due to COVID-19, based on a joint motion by the parties); Ex. 2002 (same); Ex. 1047, 1.

This parties' previous agreement to extend scheduling order dates and uncertainty as to whether the trial will actually go forward on the presently scheduled date diminishes the extent to which this factor weighs in favor of exercising discretion to deny institution. *See Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 9–10 (June 16, 2020) (informative) ("because of the number of times the parties have jointly moved for and the district court agreed to extend the scheduling order dates . . . and the uncertainty that continues to surround the scheduled trial date, we find that this factor weighs marginally in favor of not exercising discretion to deny institution under 35 U.S.C. § 314(a)"). Even so, given the substantial gap of approximately nine and a half months between the trial date and the expected final written decision deadline in this proceeding, it is unclear, based on the present record, that the trial date would be delayed to a date after a final written decision in this proceeding as a result of COVID-19.

Therefore, given that the District Court's currently scheduled trial date falls roughly nine and half months prior to the projected statutory deadline for a final written decision, but accounting for the previous agreement to

extend scheduling order dates and uncertainty as to whether the trial actually will start on the currently scheduled date, *Fintiv* factor 2 weighs moderately in favor of Patent Owner.[10]

3. Factor 3–Investment in Proceedings

Patent Owner contends that in the District Court Action, the claim construction hearing order issued on March 31, 2020, the parties filed final claim and validity assertions, and discovery will close and service of pretrial disclosures will be filed before the institution deadline. *See* Prelim. Resp. 6–8, 24–25. According to Patent Owner, "Petitioner's delay in bringing the present petition further weighs against institution." *Id.* at 25. Patent Owner also argues that the prior art references supporting the Petition "were not newly discovered." PO Prelim. Sur-reply 6. Patent Owner also asserts "[t]he parties and district court have . . . invested incredible amounts of time and effort." *Id.* at 6

The District Court's scheduling order shows the following deadlines passed: fact discovery and filing of motions to compel discovery, service of

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[10] *Fintiv* does not necessarily decide whether the length of time between the relative trial dates plays a binary or sliding-scale role in weighing this factor. *See id.* However, a sliding scale for each factor aids the panel's analysis in weighing the factors holistically. Petitioner could have filed the Petition on the statutory deadline of April 11, 2020, instead of December 18, 2019, pushing the relative trial dates almost four months farther apart. *See* Pet. Prelim. Reply 5–7 (discussing reasons for some delay as based on filing twenty-one petitions and analyzing 550 claims across sixteen patents asserted against Petitioner); Prelim. Resp. 22–23 (discussing timing); Ex. 1052, 194 (listing April 10, 2019 on the Complaint); Pet. 69 (referring to "the statutory bar date of April 11, 2020"). Without explicitly considering the Petition's filing date as a fairness consideration under factor 2, considering the filing date relative to potential filing dates helps to analyze factor 2 on a sliding scale based on relative trial dates.

disclosures for expert witnesses by the party with the burden of proof,
service of disclosures for rebuttal expert witnesses, expert discovery, filing
of dispositive motions, and filing of motions to strike expert testimony,
including Daubert motions, and response to dispositive motions and Daubert
motions (August 6, 2020), and service of pretrial disclosures (August 13,
2020). *See* Ex. 1040. Upcoming deadlines include the following: service of
objections to disclosures and rebuttal disclosures (August 24, 2020), service
of objections to rebuttal disclosures (September 3, 2020), filing of motions
in limine (September 3, 2020), filing of a joint pretrial order (September 17,
2020), the pretrial conference (September 24, 2020), and jury trial
(November 2, 2020). *Id.*

   The record shows that the parties and courts invested significant
resources in the parallel district court litigation albeit with respect to ten
patents, with some portion of the work relevant to patent validity of the '557
patent. However, the District Court did not construe any claim terms for the
'557 patent. *See* Ex. 1039. Also, as determined in the next section, based on
Petitioner's stipulation here, no further overlap or investment exists in terms
of the grounds in the IPR here and the invalidity challenges in the District
Court Action. *See* Ex. 1045 (Petitioner stipulating that it will not pursue the
grounds based on White and Falardeau in the District Court).

   Petitioner's timing in filing the Petition also bears on this factor. *See*
supra note 10. If a petitioner, "faced with the prospect of a looming trial
date, waits until the district court trial has progressed significantly before
filing a petition," that decision "may impose unfair costs to a patent owner."
Fintiv, Paper 11 at 11. On the other hand, "[i]f the evidence shows that the
petitioner filed the petition expeditiously, such as promptly after becoming

aware of the claims being asserted, this fact has weighed against exercising the authority to deny institution." *Id.*

Here, the timing of the filing of this Petition mitigates somewhat the investment in the District Court litigation by the parties. Petitioner filed the Petition a week shy of four months before the statutory deadline for filing an *inter partes* review under 35 U.S.C. § 315(b). *See* Prelim Resp. 24 (asserting Petitioner waited "over eight months after the complaint was served on April 11, 2019" to file its Petition) (citing Ex. 2009 (Complaint)); *supra* note 10.

With sixteen patents and over five-hundred fifty claims asserted against Petitioner, and with Petitioner responding with fourteen petitions, including this Petition, filed prior to Patent Owner's initial identification narrowing the number of asserted claims, and six of the remaining seven petitions filed within one month of it, Petitioner filed the instant Petition in a reasonably timely fashion. *See* Pet. Prelim. Reply 6 ("It is no wonder that Apple needed the time taken to prepare its twenty-one petitions, as it was faced with the immense burden of understanding the five-hundred fifty claims contained in these patents and the potential prior art that might be relevant to them."); Ex. 1048, Ex. 1052 (Complaint). In other words, even though the parties invested time and effort in the District Court Action, Petitioner acted diligently and without much delay in exercising its statutory right to file a Petition and other petitions, mitigating against the investment (which a District Court stay otherwise could have diminished). *See Fintiv*, Paper 11 at 11.

Considering the above-noted facts, including the time invested in the by the parties and court in the District Court Action, the extent to which the

investment in the district court proceeding relates to issues of patent validity, and the timing of the filing of the Petition, this factor weighs slightly in favor of Patent Owner.

4. Factor 4–Overlap of Issues

This factor evaluates "concerns of inefficiency and the possibility of conflicting decisions" when substantially identical prior art is submitted in both the district court and the *inter partes* review proceedings. *Fintiv*, Paper 11 at 12.

Patent Owner argues that Petitioner relies upon substantially the same art and arguments in both the Petition and the District Court Action under the same claim construction standard. Prelim. Resp. 5, 8–11. Petitioner "asks the Board to consider the unique challenges raised in the Petition." Pet. Prelim. Reply 8.

Petitioner argues that only two claims overlap between the district court proceeding and the instant IPR proceeding. Pet. Prelim. Reply 8 & n.3. The District Court will not address the validity of the 26 dependent claims challenged in this IPR proceeding, because Patent Owner limited its infringement allegations based on the '557 patent to independent claims 1 and 14. *Id.*; Ex. 2008 (Patent Owner's claim reduction notice); PO Prelim. Sur-reply 9.

Patent Owner counters that the twenty-six additional dependent claims challenged here but not in the District Court do not justify institution because Patent Owner "stipulates that if the Board declines to institute [under *Fintiv*], Patent Owner will not assert any of the IPR-only claims of the '557 patent against [Petitioner] if the asserted '557 claims are finally

adjudicated to be invalid or not infringed in the District Court Action." PO
Prelim. Sur-reply 9.

However, Petitioner asserts that it "will continue to create innovative
new products, and desires Board review of these claims, so as to prevent
their future assertion by [Patent Owner] in potential serial litigation." Pet.
Prelim. Reply 8 n.3. Patent Owner's stipulation does not apply to
Petitioner's customers that may use those new products. *See* PO Prelim.
Sur-reply 9. Therefore, even though Patent Owner's stipulation may weigh
in favor of denial in some instances, it bears little weight here because the
District Court will not address the twenty-six dependent claims challenged
in this IPR proceeding and Petitioner asserts a colorable interest in resolving
these twenty-six claims.

Regarding independent claims 1 and 14, Petitioner argues that it "has
eliminated any risk of duplicated effort by stipulating to counsel for [Patent
Owner] that, if the Board institutes the pending Petition, [Petitioner] will not
pursue district court invalidity challenges based on the pending Petition's
asserted grounds." Pet. Prelim. Reply 8 (citing Ex. 1045, 1). Petitioner's
stipulation states "[Petitioner] hereby stipulates that if the Patent Trial and
Appeal Board (PTAB) institutes one or more IPR petitions on the exact
same grounds presented (a table of which is reproduced below), then
[Petitioner] will not pursue those same instituted grounds in the above-
captioned litigation, 2:19-cv-115." Ex. 1045, 1, 2 (specifying, *inter alia*,
"§103: White and Falardeau" with respect to claims 1–28 as asserted in the
IPR).

Patent Owner responds that Petitioner's stipulation "actually
increase[s] the overlap between the District Court Action and the IPRs"

because "[a]ny difference, no matter how trivial, falls outside this 'stipulation.'" PO Prelim. Sur-reply 8.

However, Petitioner's stipulation is similar to the stipulation in *Sand Revolution*, which states "if the IPR is instituted, Petitioner will not pursue the same grounds in the district court litigation" *Compare* Ex. 1045, 1–3, *with Sand Revolution*, Paper 24 at 11–12. Like in *Sand Revolution*, Petitioner's stipulation here "mitigates to some degree the concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions." *Sand Revolution*, Paper 24 at 12. In addition, the District Court substantially limited Petitioner's opportunity to increase or add invalidity grounds there by its order requiring the parties to "streamline the issues" and limiting Petitioner to "no more than a total of forty-five (45) references" across the ten asserted patents. Ex. 2007 ("Order Focusing Patent Claims and Prior Art"), 1. Petitioner already reached the limit of forty-five references imposed by the District Court. Ex. 1041. Accordingly, Petitioner cannot simply add another reference to its White and Falardeau ground as an attempted end-around to its clear stipulation abandoning the White and Falardeau ground without deleting another reference from what appears to be a carefully tailored invalidity defense across ten patents-in-suit and thirty-six asserted claims. *See id.* Therefore, Petitioner's stipulation minimizes the chance of potentially conflicting findings in the two proceedings.

Also, as noted in the previous section, the District Court did not construe any claim terms for the '557 patent. Ex. 1039. In addition, Patent Owner raises what amounts to a different claim construction issue here (i.e., based on prosecution history, *see infra* Section III.D.3) that it did not pursue

in the District Court. *See* Ex. 1039, 4 ("The parties note that they submit no disputed terms as to the . . . the '557 Patent."); Prelim. Resp. 35 (essentially arguing prosecution history narrows the scope of challenged claim 1 (citing Ex. 1002 (prosecution history related to challenged claim 1)).[11] Therefore, even though the District Court issued a claim construction order for twelve other patents-in-suit (Ex. 1039), any claim construction for the '557 patent also does not raise a colorable chance of conflicting findings in the two proceedings.

Accordingly, *Fintiv* factor 4 weighs moderately in favor of Petitioner.

5.   *Factor 5–Identity of Parties*

The District Court Action and the trial here involve the same parties. *See* Pet. Prelim. Reply 10–11; PO Prelim. Sur-reply 9–10. "If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact *against exercising discretion* to deny institution under *NHK*." *Fintiv*, Paper 11 at 13–14 (emphasis added).[12]

Accordingly, *Fintiv* factor 5 weighs slightly in favor of Patent Owner.

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[11] Petitioner construes the same two terms ("roaming rule" and "connectivity rule") according to their "plain and ordinary meaning[s]" that Patent Owner initially construed in the District Court but then did not pursue further. *See* Pet. 2–3; Ex. 1014, 12; Ex. 1039, 3.

[12] At least one Board member observed that *Fintiv* "says nothing about situations in which the petitioner is the same as, or is related to, the district court defendant." *Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd.*, IPR2020-00122, Paper 15 at 10 (PTAB May 15, 2020) (APJ Crumbley, dissenting). According to the dissent in *Cisco*, if "the factor weighs in favor of denial if the parties are the same," this could "tip the scales against a petitioner merely for being a defendant in the district court." *Id.* at 11. This "would seem to be contrary to the goal of providing district court litigants an alternative venue to resolve questions of patentability." *Id.*

6. *Factor 6–Other Circumstances*

This final *Fintiv* factor represents a catch-all for any other relevant circumstances. Whether to exercise discretion to deny institution under § 314(a) involves "a balanced assessment of all relevant circumstances in the case, including the merits." CTPG 58.

First, we take into account the fact that the Office already has instituted proceedings challenging other patents in dispute in the co-pending parallel litigation— IPR2020-00156 (instituted June 18, 2020), IPR2020-00157 (instituted June 18, 2020), IPR2020-00188 (instituted June 11, 2020), IPR2020-00235 (instituted July 28, 2020), IPR2020-00255 (instituted July 28, 2020), and IPR2020-00285 (instituted July 28, 2020). It would be inefficient to exercise discretion to deny institution of this Petition, which we determine meets the statutory threshold for institution, after having instituted petitions challenging other patents in dispute in the parallel proceeding.

Second, based on the analysis above, including consideration of the parties' arguments in deciding the merits of the Petition and the Preliminary Response, Petitioner presents a strong showing on the merits here. In summary, on this preliminary record, Petitioner shows that most of the independent claim 1 and 14 limitations read on White's system and include routine network data gathering functions to allow a mobile user to access well-known WiFi and cellular networks depending on network conditions and application requirements. *See infra* Section III.D.3; Pet. 9–38.

To the extent White does not disclose certain limitations, the claims largely involve a "combination of familiar elements according to known methods . . . yield[ing] predictable results." *KSR Int'l Co. v. Teleflex Inc.*,

550 U.S. 398, 416 (2007) ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.").

By way of summary as to the combination, on this preliminary record, Petitioner provides good reasons for implementing the teachings of Falardeau's similar user settings, display features, and WiFi and cellular network teachings, in White's system, including to enhance user experience by allowing the user to trouble shoot, monitor and track changes, control costs, provide smooth data flows without interruption, and manually select desired networks, using known techniques to yield predictable results. *See infra* Section III.D.3; Pet. 8, 10–12, 22–24.

Another circumstance tilts in favor of institution. As indicated above, the District Court ordered the parties to reduce issues, including the number of claims asserted and the number of prior art challenges to the asserted claims. *See* Ex. 2007. The District Court Action initially involved sixteen patents-in-suit and multiple issues, including all twenty-eight claims of the '557 patent. Ex. 1052 (complaint); Ex. 1043 (invalidity contentions). After its complaint, pursuant to the District Court order, Patent Owner narrowed its infringement assertions to seventy-five claims and sixteen patents-in-suit, including three claims of the '557 patent. Ex. 1048. Thereafter, pursuant to the District Court's order, Patent Owner narrowed its infringement assertions further to thirty-six claims and ten patents-in-suit, including two claims of the '557 patent. Ex. 2008. Accordingly, pursuant to the District Court's order, Petitioner narrowed its prior art challenges to forty-five prior art references to challenge the ten patents-in-suit. Ex. 1041.

This narrowing of issues, including the number of patents-in-suit, claims, and prior art invalidity challenges, evidences the complexity of multiple patents and issues in the District Court Action. An IPR trial here avoids potentially complicated and overlapping jury issues of ten patents, while allowing the panel to focus on multiple issues in depth that involve only the '557 patent. Therefore, this *inter partes* trial will provide the parties with an in-depth analysis of the '557 patent, providing a full record that will enhance the integrity of the patent system.

Accordingly, factor 6 weighs strongly in favor of Petitioner.

7. Conclusion on § 314(a) Discretionary Denial

Under *Fintiv*, the Board takes "a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review." *Fintiv*, Paper 11 at 6. As discussed above, factors 2, 3, and 5, respectively, moderately, slightly, and slightly favor exercising our discretion to deny institution. Factors 4 and 6, respectively, moderately and strongly, favor not exercising our discretion to deny institution. Factor 1 favors neither.

Weighing the *Fintiv* factors in this proceeding is a close call. However, the unique circumstance in this proceeding where the Office has already instituted proceedings challenging other patents in dispute in the parallel proceeding combined with the strength of Petitioner's preliminary showing of unpatentability and the lack of overlap in the issues that will be pursued in this proceeding and in the District Court favor institution of *inter partes* review. As such, we determine that under a holistic analysis, these factors outweigh the earlier scheduled trial date in the District Court and the investment in the district court litigation. Accordingly, under the particular circumstances of this case, the interests of efficiency and integrity of the

patent system tilt toward not invoking our discretionary authority under § 314(a) to deny institution of the potentially meritorious Petition.

III. ANALYSIS

Petitioner challenges claims 1–28 as obvious based on the grounds listed above. Patent Owner disagrees.

A. Legal Standards

35 U.S.C. § 103(a) renders a claim unpatentable if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *See KSR*, 550 U.S. at 406. Tribunals resolve obviousness on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). 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) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)).

B. Level of Ordinary Skill in the Art

Dr. Traynor testifies a person having ordinary skill in the art ("POSITA")

> would have had either a Bachelor of Science in computer science, computer engineering, electrical engineering, or a related field, with at least 2–5 years of experience in research, design, or development of wireless communications devices or systems. Additional education might substitute for some of the

experience, and substantial experience might substitute for some
of the educational background.

Ex. 1003 ¶ 27.

Patent Owner does not present a proposed level of ordinary skill. For
purposes of this Decision on Institution, we adopt Petitioner's proposed level
of ordinary skill in the art, which comports with the teachings of the '557
patent and the asserted prior art.

C.   *Claim Construction*

In an *inter partes* review, we construe each claim "in accordance with
the ordinary and customary meaning of such claim as understood by one of
ordinary skill in the art and the prosecution history pertaining to the patent."
37 C.F.R. § 42.100(b). Under the same standard applied by district courts,
claim terms take their plain and ordinary meaning as would have been
understood by a person of ordinary skill in the art at the time of the invention
and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*,
415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). "There are only two
exceptions to this general rule: 1) when a patentee sets out a definition and
acts as his own lexicographer, or 2) when the patentee disavows the full
scope of a claim term either in the specification or during prosecution."
Thorner v. Sony Comput. Entm't Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir.
2012).

To the extent Patent Owner raises a claim construction issue based on
prosecution history, this Institution Decision addresses it below in
conjunction with addressing obviousness. *Infra* Section III.D.3. Based on
the current record, no other terms require explicit construction. *See, e.g.*,
Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co., 868 F.3d 1013,
1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in

controversy, and only to the extent necessary to resolve the controversy'. . . ." (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D.   *Obviousness, White, Falardeau, Claims 1–27*

Petitioner contends the subject matter of claims 1–27 would have been obvious over the combination of White and Falardeau. Pet. 5–54. Patent Owner disputes Petitioner's contentions. Prelim. Resp. 32–50.

1.   *White*

White describes a mobile terminal "configured with multiple radio frequency (RF) transceivers" and programmed for "dynamically establishing and maintaining traffic flow for user applications over multiple communications paths, and for automatically adapting to variations in the networking environment, application traffic flow requirements, end user preferences, or mobility." Ex. 1004, code (57), 1:1–4. Networks for the multiple transceivers include "IEEE 802.11 (WiFi)" and well-known cellular networks such as "GSM." *Id.* at 8:48.
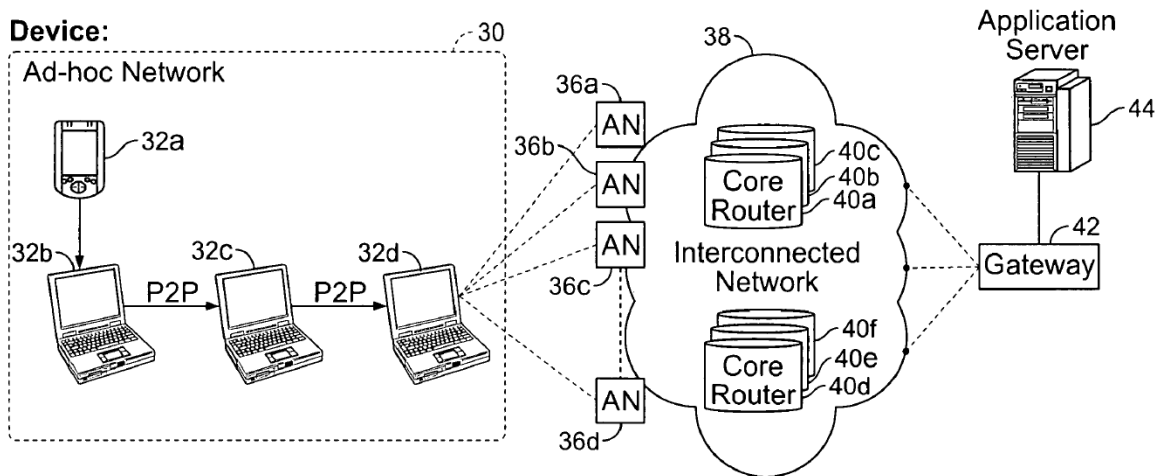
Figure 1B of White follows:

Figure 1B illustrates various wireless devices 32 that include multiple wireless interfaces for communicating with a plurality of access nodes 36a-

36d with each access node operating on a different wireless communication protocol. *See* Ex. 1004, 2:58–67, 3:3–25, 6:51–7:9.

White describes establishing application/traffic flows on an application-by-application basis and selecting a particular communications protocol (and respective access point) based on "requirements of traffic flows used to serve a user application." Ex. 1004, 9:14–10:64. White's system gathers "dynamic information" such as "statistics gathered for a particular access network, or performance of a particular technology under certain conditions." *Id.* at 11:26–40. White's system compares this information to Quality of Service (QoS) information for each application to determine a best path for each application traffic flow and to determine when a communication path for a particular application should be changed. *Id.* at 13:4–14:63.

As a typical example, White explains that "if a network fades, data could be relocated to a network with better performance without the need for user intervention in a way similar to handoffs between base stations for [a] user of wireless cellular networks." Ex. 1004, 22:2–6. Also, using these other networks, "[a]n officer in a remote . . . area could receive the same high quality images of suspects as his/her colleagues that are within range of a police WiFi network." *Id.* at 22:9–12. White's "invention provides broadband anywhere . . . not simply in coffee shops that have 801.11 [WiFi] hot spots." *Id.* at 22:51–53.

2. Falardeau

Similar to White, Falardeau describes a wireless communications system that allows mobile devices to "move seamlessly across different technologies and network domains." Ex. 1005, 3:58–67. Falardeau's

system "ranks the importance of one of the supported interface types (e.g., wireline, WiFi, cellular, etc.) and the current or expected speed of the network." *Id.* at 13:11–15.

Falardeau describes a "roaming client 80" that analyzes "and applies roaming priorities and automatic hand-offs based on such criteria as, for example, speed, cost, and user preferences" to "select[] from the available access points based on the user's preferences." *Id.* at 5:33–49; 4:8–10. Falardeau's "connectivity manager 84 monitors the alternative networks and resources available to the user device 14" to determine "whether the alternative networks are better than the current connection" using "the rule-based candidate selector." *Id.* at 11:7–15.

3.   *Claims 1–27*

Claim 1 begins as follows:

[1.P] A method of operating a mobile device comprising:

[1.1] connecting to a WIFI network and a cellular network;

[1.2] displaying an indication of availability of the WIFI network and the cellular network;
[1.3] accessing data through the WIFI network in response to an application request from an application executing on the mobile device . . . .

Petitioner generally contends that the combination of White and Falardeau teaches connecting to different types of networks, including a WiFi network and a cellular network, displaying the claimed indication of availability of the networks, and accessing data in response to the application request. *See* Pet. 9–14.

In particular, regarding the preamble 1.P, and limitations 1.1 and 1.3, Petitioner explains that "White describes 'a multi-access terminal that automatically and dynamically establishes and maintains *simultaneous*

connections over ***multiple heterogeneous networks*** including '***IEEE
802.11 (WiFi), GSM, CDMA*** networks." Pet. 9 (quoting Ex. 1004, 8:40–
55 (emphasis by Petitioner); citing Ex. 1004, 3:3–25, 4:35–45; Ex. 1003 ¶ 56
(testifying GSM and CDMA were commonly used cellular protocols at the
time)). Petitioner also contends that Falardeau discloses "user devices 14
may wirelessly communicate with a plurality of wireless networks 16, such
as, a ***Wi-Fi network*** 16a [and] a ***cellular network*** 16b." *Id.* at 11 (quoting
Ex. 1005, 4:45–47 (emphasis by Petitioner); citing Ex. 1005, 4:11–49, Fig.
1). Petitioner relies on White's multi-access terminal teachings
implementing application-level traffic flows in response to an application
request, to allow applications to execute on one or more networks, including
a WiFi network. *See id.* at 13–14 (citing Ex. 1004, 3:3–25; 5:4–6; 9:46–62;
10:36–64; 14:37–67, 15:7–28 (; Ex. 1003 ¶¶ 50, 66–68, 71). Petitioner
contends it would have been obvious to combine the similar teachings of
Falardeau with White in order to provide additional functionality for making
connection and roaming decisions. *See id.* at 8.

Regarding limitation 1.2, Petitioner relies partly on White's display 92
to show the status of network interfaces. Pet. 10 (citing Ex. 1004, 8:65–
9:13, 9:23–33, 12:14–20, 13:3–15). Petitioner also relies on Falardeau's
teaching of a "log viewer" and roaming client 80 that allow a user to see all
available network interfaces and connection activities. *See id.* at 11 (citing
Ex. 1005, 5:32–40; 20:11–42). Petitioner contends it would have been
obvious to implement a display in order to yield predictable results,
including improving the user experience with additional control over
conducting wireless communication, providing troubleshooting and tracking
for ongoing changes and activities, and providing a ready means for

preferred network selections and cost control. *See id.* at 11–12 (citing Ex. 1003 ¶¶ 61–63; Ex. 1004, 11:6–40, 12:29–38, 14:50–56; Ex. 1005, 20:35–46).

Claim 1 also recites "[1.4] detecting a first condition indicative of a quality of the WIFI network." Petitioner relies on White's "multi-access terminal, [which] can 'dynamically adapt and react to *network conditions*' and choose networks 'dynamically, *based on the current network state*.'" Pet. 14 (quoting Ex. 1004, 4:35–60) (emphases by Petitioner). "Specifically, White describes 'monitoring available communication paths, **traffic, and congestion**,' and 'dynamically updat[ing]' information on 'the current context in which the mobile terminal is operating;' [wherein] the 'dynamic information could include *statistics gathered for a particular access network.*'" *Id.* (quoting Ex. 1004, 9:23–33 (emphasis by Petitioner), 11:24–31 (emphasis by Petitioner); citing Ex. 1004, 12:5–11, 12:44–49 (describing measuring "bandwidth" of networks)).

Petitioner also notes that White's "[m]easured conditions include 'connection availability, *packet error rate*, . . . *congestion*, latency, Round Trip Time (RTT), [and] *signal quality*.'" Pet. 14 (quoting Ex. 1004, 13:34–44 (emphases by Petitioner); citing Ex. 1004, 13:60-64 ("signal strength"), 13:3–20, 8:7–12, 15:42–61 ("throughput"), 17:3–7, 18:64–67). Citing other teachings in White, including those about determining changes in the underlying network such as QoS (quality of service), Petitioner reasons that "[t]hese conditions are indicative of a quality of the WiFi network in instances in which an application of the multi-access terminal is communicating over the WiFi network, as discussed for elements [1.1]–[1.3], *supra*." *Id.* at 14–15 (citing Ex. 1003 ¶¶ 69–70; Ex. 1004, 4:35–60,

13:3–33 (determining that "overall bandwidth is not enough to support the QoS required"), 13:34–64 ("detects that the signal strength for a wireless interface is dropping below a certain threshold"), 14:50–56 (determining QoS and other changes in the underlying network), 23:65–67 (claim 8 drawn to determining status changes such as link failures and QoS).

Claim 1 recites "[1.5] detecting, in response to a subsequent application request and before or at a time of receiving a response to the subsequent application request, a second condition indicative of a time responsiveness of the WIFI network." Petitioner quotes White's description of "determin[ing] the QoS requirements *for each requested traffic flow initiated by an application*" and establishing "new application flows" for each user application that initiates the flows. *See* Pet. 15 (quoting Ex. 1004, 10:11–18 (emphasis and alteration by Petitioner); citing Ex. 1004, 14:37–67, 3:10–20). Petitioner also point to White's teaching that DE (Decision Engine) 204 "polls the Connection Manager 136 for an *updated view of the network situation*[,] including *results of current scanning*" and subsequently "an updated flow mapping is computed in step 230 for all active application flows." *Id.* at 16 (quoting Ex. 1004, 15:7–37) (alteration and emphasis by Petitioner). Finally, Petitioner contends that White describes various network situations as "including at least latency, delay, and RTT, all of which are indicative of a time responsiveness of the WiFi network." *Id.* at 16 (citing Ex. 1003 ¶¶ 72–73; Ex. 1004, 13:34–44, 18:59–67. Petitioner also relies on White's teaching regarding trigger events, including the introduction of new application flows, and then re-applying new logic functions to map the set of active communication paths based on a

number of different parameters including network state and performance. *Id.* at 17 (citing Ex. 1004, 13:67–14:13).

Claim 1 further recites "[1.6] evaluating user settings, wherein the user settings include a roaming rule, a connectivity rule, and an application profile of the application." Petitioner relies on various teachings in White and Falardeau regarding user parameters, profiles, and policies entered by a user to set connectivity rules, including rules regarding bit and frame error rates, application 112 profiles and policies, hand-over rules for roaming decisions, network strategies, and other teachings. Pet. 18–24 (citations omitted). Petitioner contends using the user settings would have been obvious for the purpose of implementing smooth hand-offs, preserving data flows without interruption, and increasing provider revenues and efficiency. *Id.* at 21–24 (citations omitted). Petitioner also contends the combination would have involved "merely the application of a known technique to a known system to yield predictable results." *Id.* at 24 (citing Ex. 1003 ¶¶ 95–96; *KSR*, 550 U.S. at 417).

Claim 1 further recites "[1.7] in response to detecting the first condition and the second condition and evaluating the user settings, determining a time responsiveness of the cellular network." Petitioner relies on its showing for limitations 1.5, 1.6, and 1.7, as summarized above. Petitioner contends that in response to determining that one or more of the first condition (WiFi quality, limitation 1.4) and second condition (WiFi time responsiveness, limitation 1.5) compares disfavorably to the user preferences/settings (limitation 1.6) such as Quality of Service (QoS), White teaches "evaluating metrics of other available networks, including evaluating a time responsiveness of the cellular network." Pet. 25 (citing Ex. 1003

¶ 97). Petitioner explains that

> the multi-access terminal detects a trigger event based on the first and second conditions/metrics and the user settings and, in response to detecting the trigger condition, reapplies routing logic functions that include measuring metrics for available networks (including time responsiveness of available cellular networks).

Id. (citing Ex. 1003 ¶¶ 98–101; Ex. 1004, 11:31–40, 12:39–49, 13:45–63, 14:46–63, 15:42–54).

Petitioner relies on White's explanation "that the multi-access terminal 'dynamically adapt[s] and *react[s]* to network conditions . . . ***based on the current network state and the characteristics of the services required***.'" *Id.* (quoting Ex. 1004, 4:35–56) (emphasis and alterations by Petitioner). Here, Petitioner explains that the "current network state" includes the claimed first and second conditions while the "characteristics of the services required" includes the claimed "user settings (including roaming rules, connectivity rules, and application profiles)" as suggested by the combined teachings of White and Falardeau. *See id.* (citing Ex. 1003 ¶ 93).

Based on these teachings and other citied teachings, Petitioner contends "it would have been obvious to a POSITA that the resulting device detects trigger events using the above-identified first and second conditions and user settings, and then reevaluates metrics (such as time responsiveness) of other available networks (e.g., cellular) responsive to a detected trigger event." *Id.* at 25–26 (citing Ex. 1003 ¶¶ 98–100; Ex. 1004, 12:39-49), 26–29 (citing other teachings and providing further rationale).

White assigns and differentiates flows per application request and if existing network context (vlinks) cannot support the flows (i.e., "compares disfavorably," Pet. 25), DE 124 "poll[s] the Connection Manager 136 for an

updated view of the network situation[,] including results of current scanning" and subsequently "an updated flow mapping is computed in step 230 for all active application flows." *See* Pet. 15–16 (quoting Ex. 1004, 15:7–37; citing 5:4–6, 9:46–62, 10:36–64), 24–26 (describing White's triggers as causing logic re-application to determine time responsiveness of a cellular network in response to unfavorable network conditions on the WiFi network). Connection manager 136 includes monitoring daemon 138 and trigger management daemon 137. Ex. 1004, Fig. 4, 13:34–47 (Trigger management daemon "listens" to "[m]onitoring daemon 138 of the CM 136[, which] is . . . responsible for gathering [real-time] measurements for all network interfaces.").

Petitioner explains further as follows: White's "'[m]onitoring daemon 138 . . . gather[s] measurements for all network interfaces' including first and second conditions of the WiFi network such as 'congestion, latency, Round Trip Time (RTT), [and] signal quality' and uses this information to 'build[] a network state profile for the multi-access terminal.'" Pet. 26. (quoting Ex. 1004, 13:34–64) (alterations by Petitioner). "Subsequently, the 'Trigger Management daemon 137 listens to the information retrieved by the Monitoring daemon 138.'" *Id.* (quoting Ex. 1004, 13:34–64). "This allows the multi-access terminal to 'respond[] to triggers' including: '***changes in the underlying network (QoS characteristics, attributes, connectivity***), changes in the availability of access networks, changes in the user or service context/preferences, internal decisions of the DE 124 (operation policy, timer-based policy updates, threshold-based policy updates) and the introduction of new application flows.'" *Id.* at 26–27 (quoting Ex. 14:46–63

(emphasis by Petitioner); citing Ex. 11:31–40 (examples of QoS characteristics)).

Quoting White, Petitioner reasons that "[w]hen any of these triggers [based on comparing the first and second conditions for the WiFi network to the user settings] is received, the routing logic module 126 in the DE 124 is called and ***the routing logic functions are re-applied***." Pet. 27 (quoting Ex. 1004, 14:50–64) (alteration and emphasis by Petitioner). "White's 'routing logic functions' include 'gathering measurements for all network interfaces' as part of the process of updating routing assignments for application traffic flows." *Id.* (quoting Ex. 1004, 13:34–36; citing Ex. 1004, 8:1–7 ("reroute from one set of active connection paths (with a minimum of one active connection) to another set of active connection paths"), 13:34–14:63).

Petitioner summarizes as follows:

> Therefore, White discloses determining a triggering event based on comparing the first and second conditions (e.g., link metrics) for the WiFi network to user settings (e.g., QoS requirements/thresholds) to initiate reapplication of routing logic functions including "gathering measurements" for the cellular network in instances where the cellular network is one of the available networks.

Id. at 28 (citing Ex. 1003 ¶¶ 99–109). "Further, the gathered measurements include 'congestion, ***latency***, [and] ***Round Trip Time (RTT)***, signal quality.'" *Id.* (quoting Ex. 1004, 13:34–44 (alteration and emphasis by Petitioner)).

Further regarding triggers to indicate existing WiFi network quality and instigate a new measurement for a cellular network, Petitioner provides an example wherein "White discloses that 'triggering events' such as $link_metric_poor' are 'sent to the [Handover Decision Engine] 130 of the

DE 124 for processing' which includes 'updat[ing] its view of the active flows mapping' and determining the '***quality of the actual networking environment***.'" *Id.* (citing Ex. 1004, 15:47–16:15) (emphasis by Petitioner). Petitioner relates White's network quality link metrics to the claimed first and second conditions wherein White's system compares those quality and time responsiveness metrics to user settings including QoS requirements/thresholds for the WiFi network "to determine a trigger event and in response determine a time responsiveness of available networks (including cellular networks)." *See id.* at 28–29. In other words, White's "trigger events caus[e] reevaluation of network status for available networks." *Id.* at 29.

> Claim 1 also recites
>
> [1.8] based on the detected first condition and detected second condition, the evaluated user settings, the time responsiveness of the cellular network, and the application executing on the mobile device, sending the subsequent application request through the cellular network in response to the [subsequent] application request executing on the mobile device, wherein requests from another application executing on the mobile device continue to access data through the WIFI network.

Petitioner relies on White's hand-off and trigger teachings and Falardeau's roaming teachings to address limitation 1.8. *See* Pet. 30–37. Related to and building on its showing regarding limitation 1.7, Petitioner contends "White further discloses that a 'hand-off situation occurs when a new network connection has better characteristics than an existing network connection,' for example, 'a new available network connection may have better characteristics in the current environment.'" *Id.* at 32 (quoting Ex. 1004, 8:2–23). Petitioner also points out that "White's 'handover decision

engine (HO/DE)' . . . 'decides an optimal hand-off strategy for transferring communications from one communications path to another.'" *Id.* at 31 (quoting Ex. 1004, 13:15–33, 15:61–66 ("[T]riggering events are classified . . . . [T]he triggering events are then sent to the HO/DE 130 of the DE 124 for processing.").

Based on the combined teachings, Patent Owner argues as follows:

> [A] POSITA would have found it obvious and beneficial to use all available information regarding the "characteristics" for each available network (including the WiFi and cellular network) to determine which network has the better characteristics based on both the current network environment and the "characteristics of the services required" for the specific application making the application request.

Id. at 36 (citing Ex. 1003 ¶ 107.

Finally, claim 1 also recites "[1.9] wherein requests from another application executing on the mobile device continue to access data through the WIFI network." Petitioner contends "White's entire disclosure is directed toward "a multi-access terminal that automatically and dynamically ***establishes and maintains simultaneous connections over multiple heterogeneous networks***." Pet. 37 (quoting Ex. 1004, 3:3–25 (emphasis by Petitioner); citing Ex. 1004, 7:47–67, 4:31–49). Petitioner also contends that

> White's "mobile terminal is configured with multiple radio frequency (RF) transceivers" and is programmed for "dynamically establishing and maintaining traffic flow for user applications over multiple communications paths, and for automatically adapting to variations in the networking environment, ***application traffic flow requirements, end user preferences***, or mobility."

Id. at 37–38 (quoting Ex. 1004, code (57)) (emphasis by Petitioner).

According to Petitioner, based on White's teachings,

> a POSITA would have recognized that when the characteristics of the cellular network are best for the traffic flow for a first application (as defined by its application profile) while the characteristics of the WiFi network are best for the traffic flow for a second application (as defined by its application profile), based on White's disclosure, the multi-access terminal will communicate over the cellular network for the first application and over the WiFi network for the second, different application.

Pet. 38 (citing Ex. 1003 ¶ 109; Ex. 1004, 3:3–25, 7:47–67, 4:31–49) (internal quotation marks omitted).

In other words, Petitioner argues "it is obvious that in the combination of White and Falardeau, 'requests are evaluated on an application-by-application basis to determine for each application flow requested if the request should be sent to the cellular network, the [WiFi] network, or another available network.'" *Id.* (citing Ex. 1003 ¶¶ 108–109) (internal quotation marks omitted); *see* Ex. 1003 ¶ 108 ("A POSITA reading these disclosures of White would have recognized that in instances where a traffic flow for one application having a certain set of requirements switches from the WIFI network to the cellular network (as described with respect to element [1.8], *supra*) other applications with different requirements would continue to simultaneously communicate over the WIFI network."). In other words, Petitioner contends it would have been obvious to continue to access WiFi when the WiFi conditions best match the specific application requirements.

Addressing White and claim 1 in general, Patent Owner responds that White discloses load sharing of traffic packets from the same application across the set of active paths simultaneously. Prelim. Resp. 33 (citing Ex. 1004, 7:54–61). According to Patent Owner, this renders "White . . .

fundamentally different from the invention recited in Claim 1." *Id.*; *see also* Prelim. Resp. 36–40 (similar arguments about White versus claim 1).[13] On this preliminary record, these arguments lack sufficient merit to undermine Petitioner's showing.

First, claim 1 does not preclude simultaneous use of cellular and WiFi networks. Second, the '557 patent specification states that "[s]ome UEs [(user equipments)] may be adapted to connect, in some instances, *concurrently*, with multiple access networks" (as claim 1, limitation 1.1 covers). *See* Ex. 1001, 3:34–35 (emphasis added). Although this refers to a concurrent *connection*, at another instance, the specification indicates that it contemplates "operator and user customizable rules for connectivity and roaming, voice call continuity (e.g., handover) *and data session continuity*." *Id.* at 9:44–49. Similar to White, therefore, the '557 patent indicates that data packets travel simultaneously over two connections to ensure "data session continuity" at least during a handover. *See id.*; *supra* Section III.D.1 (describing White); Ex. 1001, 8:35–39 (describing "connections to multiple access networks simultaneously" including the "example" of providing "voice call via cellular services . . . while email is downloading via WLAN.").

Third, Petitioner points to White's network connections with "one or more networks." *See, e.g.*, Pet. 13 (citing Ex. 1004, 3:10–20). At the cited passage, White describes "select[ing] a combination of optimum network

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[13] Patent Owner's arguments regarding the prosecution history of White, including *the reasons for allowance of claim 1 of White*, unpersuasively shift attention away from White's broader disclosure upon which Petitioner relies. *See* Prelim. Resp. 38–39.

transceivers from the plurality of network transceivers." Ex. 1004, 3:16–18.
The passage does not necessarily restrict White's disclosed invention to
selecting more than one transceiver. Indeed, at another passage quoted by
Petitioner, White specifically describes "a minimum of one active
connection" for a hand-off or re-routing situation. Pet. 27–28 (quoting Ex.
1004, 8:1–7). Similarly, White also specifically states that its invention
"include[s] allowing a plurality of user applications to communicate using
one or more of the communication paths established by the network
interfaces." *Id.* at 9:28–33; *see* Pet. 27 (citing Ex. 1004, 9:3–33).

Therefore, even if claim 1 somehow precludes simultaneous packet or
other data delivery over WiFi and cellular networks, White contemplates
such delivery over any *available* communication path, including to "manage
handovers as the terminal roams between networks." Ex. 1004, 3:28–29; *see
also* Pet. 15–16 (citing, *inter alia*, Ex. 1004: 22:40–43), 32 (quoting Ex.
1004, 8:2–23 (describing a hand-off situation to a new available network
connection with "better characteristics")); Ex. 1004: 22:36–49 (disclosing
automatic transfer from "802.11 hot spots" (i.e., WiFi) to another access
point or to "all [in-range] access points . . . *if their performance can
accommodate*" the requirements of VoIP applications "as the user moves out
of range of an access point"); Ex. 1004, 8:48 (disclosing "IEEE 802.11
(WiFi), GSM, CDMA, TDMA, 1XRTT, etc.").

In a related argument, Patent Owner contends that claim 1 requires
primarily using WiFi and only using cellular for limited times, and contrasts
that with White. *See* Prelim. Resp. 39 (White "may, under undisclosed,
unique conditions, just **happen** to, by accident or circumstance, route

particular application requests through the WIFI network and particular application requests through the cellular network.").

Building on its theme of an accidental disclosure in White, Patent Owner contends "White does not even have an embodiment that resembles . . . [c]laim [1] by routing the 'first,' 'subsequent' and 'other' application requests through WIFI network, cellular network and WIFI network, respectively." *Id.* at 41. To support these arguments, Patent Owner relies on "the prosecution history" for the '557 patent and contends that it shows "the applicant explained that the claimed method would maintain a user specifically on the WIFI network in 'most instances.'" *Id.* at 40 (citing Ex. 1002, 178–79 (Prosecution History, Response to Office Action dated May 20, 2016) ("May 2016 Response")).

First, Patent Owner's arguments ignore breadth of claim 1 and the WiFi handover or routing teachings cited by Petitioner and discussed above. *See* Pet. 15–16 (citing, *inter alia*, Ex. 1004: 22:40–43), 27–28 (quoting Ex. 1004, 8:1–7 ("reroute from one set of active connection paths (with a minimum of one active connection) to another set of active connection paths"), 28–34 (discussing White's Handover Decision Engine 130 and other hand-off teachings); Ex. 1004: 22:36–56 (disclosing automatic transfer from "802.11 hot spots" (i.e., WiFi) to "all in-range access points . . . *if their performance can accommodate*" the requirements of VoIP applications "as the user moves out of range of an access point" and also contemplating "broadband" not limited to WiFi hot spots); Ex. 1004, 8:48 (disclosing "IEEE 802.11 (WiFi), GSM, CDMA, TDMA, 1XRTT, etc."). In addition, Petitioner points to specific WiFi and cellular teachings in White (Pet. 9),

and notes Falardeau specifically teaches "a Wi-Fi network 16a [and] a cellular network 16b" (Pet. 11 (quoting Ex. 1005, 4:11–49)).

Petitioner also explains, for example, that White teaches that "when 'new active application flows' are requested, the multi-access terminal 'makes the necessary routing adjustments to support the new flow streams.'" Pet. 16 (quoting Ex. 1004, 15:7–37), 27–28 (a hand-off includes "re-rout[ing] from one set of active connection paths (*with a minimum of one active connection*) to another set of active connection paths") (quoting Ex. 1004, 8:1–7)). So on this preliminary record, Petitioner shows that White in view of Falardeau contemplates or suggests a user on a WiFi network subsequently requesting further access to the same WiFi network from the same or different (via a hand-off) WiFi access point while in range of the WiFi network's hot spot(s), and contemplates an application accessing another network, including cellular, for example "as the user moves out of range of an access point" or the network fades or becomes faulty and so on. *See* Ex. 1004, 22:46, 8:48 ("IEEE 802.11 (WiFi)"); 8:1–12 (discussing a fading network as "momentarily unavailable" with a "minimum of one active connection" and handing off "when a new available network connection has better characteristics than an existing network condition"); Pet. 27–28, 32 (citing Ex. 1004, 8:1–7), 23 (discussing "smooth hand-offs" and roaming). Petitioner also to points to examples of networks "in the process of dissociating [and] approaching loss of coverage" as part of White's trigger teachings. *See* Pet. 26 (quoting Ex. 1004, 12:39–49).

And Petitioner generally reasons that claim 1 covers routine situations involving connecting to networks based on application requirements and conditions:

> [A] POSITA would have recognized that "when the characteristics of the cellular network are best for the traffic flow for a first application (as defined by its application profile) while the characteristics of the WiFi network are best for the traffic flow for a second application (as defined by its application profile), based on White's disclosure, the multi-access terminal will communicate over the cellular network for the first application and over the WiFi network for the second, different application."

Pet. 38 (quoting Ex. 1003 ¶ 109; Ex. 1004, 3:3–25, 7:74–67, 4:31–40); Ex. 1003 ¶ 109 ("[R]equests are evaluated on an application-by-application basis to determine for each application flow requested if the request should be sent to the cellular network, the [WiFi] network, or another available network."). In other words, the "another application" recited in the last limitation of claim 1 continues to access data through the same WiFi network (via one or more access points) and also possibly a cellular network in White based on the "another" application's requirements and existing WiFi and cellular network conditions, even if the WiFi network appears faulty or begins to fade or otherwise fail for the first "application request" recited in claim 1.

Second, on this preliminary record, nothing in the '557 patent specification attributes any significant importance to WiFi versus cellular. During trial, Patent Owner will have an opportunity to point out how the '557 patent specification describes or signals the importance of WiFi over cellular, and if so, how claim 1 requires WiFi in most instances.

Third, the prosecution history record does not show that the '557 patent applicant clearly and unequivocally narrowed claim 1 by its prosecution history statements or that the Examiner agreed with Patent Owner's current argument that statements during prosecution narrowed claim 1 to using WiFi "in most instances." *See* Prelim. Resp. 40 (quoting

Ex. 1002, 178–79, May 2016 Response). To be sure, prosecution history plays an important role in understanding the claims and can serve to narrow the plain meaning of the claim with a clear disavowal. Under *Phillips*,

> [l]ike the specification, *the prosecution history provides evidence of how the PTO and the inventor understood the patent.* . . . Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, *it often lacks the clarity of the specification and thus is less useful for claim construction purposes*.

Phillips, 415 F.3d at 1317 (emphases added).

> The relied-upon prosecution history statement follows:

> New claim 37 provides for a method of accessing data through a WIFI and a cellular network on an application-by-application basis, where requests are sent to the cellular network only after certain conditions are met. In this manner, *the method maintains a user on the WIFI network in most instances*, while limiting the occurrences of sent requests to the more costly and power consuming cellular network. Claim 57 recites generally similar limitations.

Ex. 1002, 178–79 (May 2020 Response).

The May 2020 Response begins by noting the standing rejections "over Jagadessan in view of Kim." *Id.* at 178. But the prosecution history statement quoted above does not allege that using a WiFi network "in most instances" patentably distinguishes the claims over the prior art (e.g., the statement does not allege that the prior art lacks that feature or any feature). The first sentence generally summarizes claim limitations in challenged claim 1 (i.e., then application claim 37), whereas the Examiner recited and relied upon specific limitations in allowing the claims (as discussed further below). In any event, nothing in claim 1's generic "conditions" or otherwise necessarily requires using WiFi in "most instances."

The second sentence quoted above from the prosecution history, i.e., "the method maintains a user on the WIFI network in most instances, while limiting the occurrences of sent requests to the more costly and power consuming cellular network," does not clearly and unequivocally narrow claim 1. Rather, it describes a situation that claim 1 appears to *cover*. Claim 1 does not specify, imply, or otherwise refer to using WiFi in "most instances" or "limiting the occurrences of sent requests to the more costly and power consuming cellular network."

The term "most instances" lacks clarity as to what "instances" it refers—instances of practicing the method? Or perhaps it refers implicitly to the number of "occurrences of sent requests" to the WiFi network as compared to the number of "sent requests" for the cellular network. But claim 1 simply does not limit or even mention the number of "subsequent application requests" to the cellular network. Therefore, this imprecise and incorrect statement does not limit the claim. *See Rambus, Inc. v. Infineon Tech. AG*, 318 F.3d 1081, 1090 (Fed. Cir. 2003) ("This general introductory statement . . . is not correct *in suggesting that these features appear in each of the new claims. This incorrect statement in the prosecution history does not govern the meaning of the claims*.") (emphases added).

The May 2020 Response does not mention specifically the final claim 1, limitation 1.9—"wherein requests from another application executing on the mobile device continue to access data through the WIFI network." In any event, this clause simply requires the "another application" to continue to access data through the WiFi network, but it does not preclude the "another application" from also accessing data in the cellular network (depending on network conditions and the application requirements), as

White's multi-access terminal provides. *See* Pet. 37–38 (citing Ex. 1003 ¶¶ 108–109). Nor does the limitation specify how long the application must continue to access requests or the relative point that "continue" begins, and it does not preclude the "another application" from also sending application requests to a cellular network. In other words, it does not limit claim 1 to WiFi in "most instances." *See Rambus,* 318 F.3d at 1090.

Also, during the "ongoing negotiation" of prosecution history, *see Phillips,* 415 F.3d at 1317, the Examiner first signified "[n]o agreement was reached" on the claims notwithstanding applicant's remarks in its May 2020 Response (Ex. 1002, 151 (Interview Summary of Sept. 16, 2016 interview)). Ultimately, the Examiner agreed the claims "would be allowable" (after canceling some claims) without documenting what if any remarks Applicant made during a subsequent interview. *See* Ex. 1002, 58 (Interview Summary of December 27, 2016 interview). However, the Examiner stated the reasons for allowance by simply quoting much of the claim language, as follows:

> The prior art of record fails to anticipate or render, singly or in combination, obvious the claimed limitations, especially "detecting, in response to a subsequent application request and before or at a time of receiving a response to the subsequent application request, a second condition indicative of a time responsiveness of the WiFi Network; evaluating user settings, wherein the user settings include a roaming rule, a connectivity rule, and an application profile of the application; in response to detecting the first condition and the second condition, the evaluated user settings, the time responsiveness of the cellular network, and the application executing on the mobile device, sending the subsequent application request through the cellular network in response to the application request executing on the mobile device" within the context of the claim as a whole.

Id. at 55–56 (December 30, 2016 Notice of Allowability). In other words, the "evidence of how the PTO and the inventor understood the patent," *Phillips,* 415 F.3d at 1317, indicates that the Examiner did not rely on the '557 patent applicant's characterization of the method of claim 1 as using WiFi in "most instances."

Finally, application claim 57, now challenged claim 14, covers a "mobile device." As a device claim, it recites "a network interface operable to" perform detecting and evaluating limitations that are similar to those recited in claim 1. But Patent Owner's prosecution history statement that "the *method* maintains a user on the WIFI network in most instances" does not apply to device claim 14. *See* Ex. 1002, 178–79 (emphasis added). For example, a mobile device miles away from a WiFi hot spot simply cannot access the WiFi "in most instances" even if the mobile devices' network interface is "operable" to do that at some other location. On this preliminary record, Patent Owner does explain sufficiently whether or not, or how, its arguments during prosecution history narrow claims 1 or 14.

Primarily focusing on limitation 1.7, Patent Owner also argues that White fails to teach or suggest "determining a time responsiveness of the cellular network" that is "in response to detecting the first condition and the second condition and evaluating the user settings." Prelim. Resp. 44–45. According to Patent Owner, "[t]o the extent that White does 'determine a time responsiveness of the cellular network,' that determination simply is not 'in response to' detecting the first condition or the second condition, or evaluating the user settings." *Id.* at 45.

Patent Owner explains that "*White* does not disclose performing any measurements (of time responsiveness or otherwise) 'in response to' its trigger events." Prelim. Resp. 45. According to Patent Owner, White's system "responds to trigger events based on *the periodic network measurements that it has already performed*, some which have resulted in the trigger events to which it responds." *Id.* at 45–46 (emphasis added). Patent Owner similarly contends White's "network conditions are monitored by the Monitoring Daemon 138 as a matter of course, not in response to a particular event." *Id.* at 46. In other words, the thrust of Patent Owner's arguments centers on the idea that Monitoring Daemon 138 operates periodically as opposed to in response to anything. *See id.* at 44–50.

These arguments do not undermine Petitioner's showing that "it would have been obvious . . . that the resulting device detects trigger events using the above-identified first and second conditions and user settings, and then reevaluates metrics (such as time responsiveness) of other available networks (e.g., cellular) responsive to a detected trigger event." Pet. 25–26 (citing Ex. 1003 ¶¶ 98–100). Petitioner cites White's disclosure that "the multi-access terminal 'dynamically adapt[s] and react[s] to network conditions . . . **based on the current network state and the characteristics of the services required**." *Id.* (quoting Ex. 1004, 4:35–56) (emphasis by Petitioner). Petitioner's rationale, supported by White, shows that White's system dynamically responds to network conditions (including after the WiFi network fades, becomes faulty, or is unable to handle the specific application request) after determining the current network state and characteristics of the services required. So even if monitoring daemon 138 always or periodically monitors network conditions as Patent Owner argues,

Petitioner shows sufficiently on this preliminary record that White teaches that it also starts monitoring new network connections as they become available, for example during hand-off, roaming, or other similar situations. *See* Ex. 1004, 13:3–63; Pet. 24–29.

For example, as Petitioner notes, White states "triggers include" "**changes in the underlying network (*QoS characteristics*, attributes, *connectivity*)**, changes in the availability of access networks, . . . and the introduction of new application flows." Ex. 1004, 14:50–56 (emphases added); *see* Pet. 26–27 (quoting Ex. 1004, 14:46–63). White also describes "cop[ing] with changing conditions" by "adapt[ing] the routing and strategy selection," "respond[ing] to triggers," and "re-apply[ing]" "the routing functions." Ex. 1004, 14:50–58. White also states "if the existing network context *cannot support the new flows*, step 222 is executed, wherein the DE 124 polls the Connection Manager 136 for an updated view of the network situation (including results of current scanning and inactive interfaces which could be used). *Id.* at 15:25–27 (emphasis added). Petitioner also points to trigger examples including insufficient "aggregated bandwidth" and "approaching loss of coverage" and "changes in the availability of access networks." Pet. 26 (quoting Ex. 1004, 12:39–49; Ex. 1004, 14:46–63).

As Petitioner shows on this limited record, these triggers cause Handover Decision Engine (HO/DE) 130 of DE 124 to "update[] its view of the active flows mapping" and determine the "quality of the actual networking environment." Ex. 1004, 16:4–11; *see* Pet. 28 (quoting same passage, citing Ex. 1004, 15:47–16:15), 27–28 ("reroute from one set of active connection paths (with a minimum of one active connection) to another set of active connection paths") (quoting Ex. 1004, 8:1–7)).

Nevertheless, Patent Owner contends that "[w]hat White actually discloses is that the 'quality of the actual network environment' is 'used,' not 'determined' as the Petition asserts." Prelim. Resp. 50 (citing Ex. 15:47–16:15). Patent Owner repeats the language in White as involving "the decision making part of White's algorithm," *id.*, as follows:

> The HO/DE 130 outputs a set of decisions calculated by suitable algorithms which use trigger priority, trigger type (type of handover), velocity, quality of the actual networking environment, severity of the impact, and handover timing as inputs.

Id. (quoting Ex. 1004, 16:8–13). Patent Owner also argues that White's system "utilizes actual network information" via "Monitoring Daemon 138." *Id.* (citing Ex. 1004, 13:34–36; 12, 5–7).

Patent Owner's arguments do not address Petitioner's reliance on evaluating metrics during "changes in the availability of access networks," which includes previously inactive (cellular) networks and smooth handoffs employed in the decision making process of White. *See* Pet. 26 (availability contentions), 30 ("White further describes leveraging determination of these trigger events when making handover decisions."). Petitioner also contends "in response to requests for new traffic flows," the multi-access terminal "makes the necessary routing adjustments to support the new flow streams." Pet. 16 (quoting Ex. 1004, 15:7–37). According to Petitioner, "[t]his is achieved by 'poll[ing] the Connection Manager 136 for an ***updated view of the network situation***[,] ***including results of current scanning***' and subsequently 'an updated flow mapping is computed in step 230 for all active application flows.'" *Id.* (quoting Ex. 1004, 15:7–37). Petitioner reasons that "in response to determining that one or more metrics compares disfavorably," White's multi-access terminal "dynamically adapt[s] and

react[s] to network conditions . . . ***based on the current network state and
the characteristics of the services required***" and reapplies logic rules for
available networks using network statistics (first and second conditions) and
other metrics. *See id.* at 25 (quoting Ex. 1004, 4:35–56). As White
describes this situation, "if the existing network context *cannot support the
new flows*," then DE 124 "polls Connection Manager 136 for *an updated
view* of the network situation (including results of *current scanning* and
inactive interfaces)." Ex. 1004, 15:25–28 (emphases added); *see* Pet. 16
(citing White's polling feature). Connection Manager 136 includes
Monitoring Daemon 138. *See* Ex. 1004, Fig. 4.

On this preliminary record, this polling, including activation of a
previously inactive interface, and using current scanning of the network
situation, represents or suggests a responsive determination or reaction,
based in part on disfavorable network conditions as Petitioner argues. *See*
Ex. 1004, 15:25–28; Pet. 24–29. The polling action shows that White as
combined with Falardeau contemplates determining (as part of updating) the
time responsiveness for previously inactive newly available cellular
networks, for example, as a user moves out of WiFi range, fading occurs, or
the WiFi network connection otherwise begins to fail for BER or other QoS
reasons for the first claimed "application request" (while staying on the same
WiFi network for the claimed "another application"), and then moves into
cellular network range or otherwise meets cellular QoS requirements for the
claimed "subsequent application request." *See id.* at 15:23–38 (polling);
8:1–20 (hand-off scenario) 22:36–49 (WiFi hotspot scenarios); Pet. 24–29.

As Patent Owner argues, HO/DE 130 outputs a set of decisions using
the "quality of the actual network environment" as an input. *See* Prelim.

Resp. 50 (citing Ex. 1004, 16:8–13). The parties agree that Monitoring Daemon 138 "gather[s] measurements . . . including congestion, latency, Round Trip Time (RTT), signal quality, and various statistics about usage." Ex. 1004, 13:34–42; *see* Prelim. Resp. 50; Pet. 26–27.

Nevertheless, at least for the roaming and/or hand-off scenarios described above, as a new cellular network becomes available for a subsequent application request, Petitioner shows it would have been obvious to determine latency or round trip time (responsiveness) anew via HO/DE 130 using Monitoring Daemon 138 and polling Connection Manager 136 for an updated network situation, where Monitoring Daemon 138 determines updated latency and round trip time even if it otherwise "gather[s] measurements for all network interfaces." *See* Ex. 1004, 13:35–36. Stated another way, by polling Connection Manager 136 pursuant to an application request while the system "monitor[s] active connections" on the WiFi network, including by listening for triggering events such as ""$link_metric_poor," the system "gather[s] measurements for all network interfaces" including gathering new data for new interface connections that it activates. *See id.* at 13:35–36; 14:50–58, 15:23–66; Pet. 28–29. Stated another way, on this preliminary record, prior to the White's polling based on application requests and triggers, White logically implies that Monitoring Daemon 138 will not have current data for "inactive networks"—even if it otherwise periodically monitors active interfaces. *See* Ex. 1004, 15:25–28 (describing "inactive interfaces which could be used"); 22:2–49 (describing relocating to a new network "if a network fades" and the similar WiFi hotspot scenario); Pet. 24–29.

Underlining his preliminary finding, the '557 patent does not describe a specific embodiment that sheds light on a direct or even indirect "response" related to the conditions specified in limitation 1.7. Petitioner points out that, similar to the handover technique of White, the '557 patent specification generally states "[c]onnection management and handover decisions may be based on periodic and/or event driven decision" and "change of domain" decisions are "event triggered." *See* Pet. 29 (citing Ex. 1001, 9:29–33, 10:62–64, 11:1–4). These clear broad teachings in the '557 patent specification and lack of a more particular description further undercuts any alleged narrowing by prosecution history. *See Phillips*, 415 F.3d at 1317 ("Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.").

Based on the foregoing discussion, Petitioner sufficiently establishes for purposes of institution that the combination of White and Falardeau renders claim 1 obvious. Relying partly on its showing with respect to claim 1, Petitioner provides a similar showing for independent device claim 14, which largely tracks the limitations recited in claim 1. *See* Pet. 49–51. Petitioner also presents a sufficient showing supported by the record with respect to dependent claims 2–13 and 15–27. *See* Pet. 39–54. Patent Owner does not address independent claim 14 or dependent claims 2–13 and 15–27 separately.

Accordingly, we determine that Petitioner establishes a reasonable likelihood of prevailing with respect to claims 1–27.

E.   *Obviousness, Dependent Claims 6–9, 11, 20, 22, 24, and 28*

Petitioner contends 1) claims 6 and 19 would have been obvious over the combination of White, Falardeau, and Chitrapu; 2) claims 7 and 20 would have been obvious over the combination of White, Falardeau, Chitrapu, and Li; 3) claims 8, 9, 20, and 22 would have been obvious over the combination of White, Falardeau, and Zehavi; 4) claims 11 and 24 would have been obvious over the combination of White, Falardeau, and Shell; and 5) claim 28 would have been obvious the combination of White, Falardeau, and Konicek. *See* Pet. 54–67.

Based on a review of the record, for purposes of institution, Petitioner sufficiently shows that the combination of references listed in the previous paragraph renders obvious the subject matter of claims 6–9, 11, 20, 22, 24, and 28. Patent Owner does not separately address the grounds at issue here.

Accordingly, we determine that Petitioner establishes a reasonable likelihood of prevailing with respect to claims 6–9, 11, 20, 22, 24, and 28.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition and the Preliminary Response, we determine that Petitioner has demonstrated a reasonable likelihood that it would prevail with respect to its unpatentability challenges. Accordingly, we institute an *inter partes* review on all of the challenged claims and all of the grounds presented in the Petition. At this stage of the proceeding, we have not made a final determination as to the patentability of these challenged claims.

IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to the challenged claims of the '557 patent with respect to all grounds of unpatentability presented in the Petition; and

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

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