

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

T-MOBILE USA, INC., AT&T SERVICES, INC.,
CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS,
NOKIA OF AMERICA CORPORATION, and ERICSSON INC.,
Petitioners,

v.

WIRELESS ALLIANCE, LLC,
Patent Owner.

IPR2024-00608
Patent 9,565,662 B2

Before MICHELLE N. WORMMEESTER, AMBER L. HAGY, and
ANDREW L. NALVEN, *Administrative Patent Judges*.

HAGY, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

T-Mobile USA, Inc., AT&T Services, Inc., Cellco Partnership d/b/a Verizon Wireless, Nokia of America Corporation, and Ericsson Inc. (collectively, “Petitioner”) filed a petition requesting *inter partes* review (Paper 1, “Pet.”) of claims 1–4 (“the challenged claims”) of U.S. Patent No. 9,565,662 B2 (Ex. 1001, the “’662 patent”). See 35 U.S.C. § 311. Alliance Wireless LLC (“Patent Owner”) timely filed a Preliminary Response. Paper 13 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2023). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Institution of *inter partes* review is discretionary. See *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

For the reasons that follow, we exercise our discretion to deny institution of *inter partes* review.

B. *Real Parties in Interest*

Petitioner identifies T-Mobile USA, Inc., AT&T Services, Inc., AT&T Corp., AT&T Mobility LLC, Cellco Partnership d/b/a Verizon Wireless, Nokia of America Corporation, and Ericsson Inc. as the real parties in interest. Pet. 4.

Patent Owner identifies itself the real party in interest, as exclusive licensee of the '662 patent. Paper 11 § 1 (Patent Owner's Updated Mandatory Notices). Patent Owner also identifies Golden Wave Partners Co., Ltd., as the parent corporation. *Id.*

C. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), the parties identify three district court proceedings filed by Patent Owner involving the '662 patent, all pending in the Eastern District of Texas: *Wireless Alliance, LLC v. AT&T Mobility LLC, AT&T Services, Inc., and AT&T Corp.*, Case No. 2:23-cv-00095 (hereafter, "the District Court Litigation")¹; *Wireless Alliance, LLC v. T-Mobile US, Inc., and T-Mobile USA, Inc.*, Case No. 2:23-cv-00096; *Wireless Alliance, LLC v. Verizon Communications, Inc., and Cellco Partnership d/b/a Verizon Wireless*, Case No. 2:23-cv-00097. Pet. 4–5; Paper 11, 1. Petitioner also identifies a co-pending petition for *inter partes* review of a related patent (IPR2024-00607). Pet. 5.

D. The '662 patent (Ex. 1001)

The '662 patent, titled "Method for Carrier Management in a Carrier Aggregation Environment of a Mobile Communication System," issued on February 7, 2017. Ex. 1001, codes (43), (54). The '662 patent claims priority by way of continuation to Application No. 13/884.216, filed as application No. PCT/KR2011/008404 on November 7, 2011, and further

¹ A review of the docket sheets for these matters indicates that, as of July 6, 2023, they were consolidated for all pretrial issues, with the lead case being designated as Case No. 2:23-cv-00095. Herein, references to the District Court Litigation are to the consolidated cases.

claims priority via a continuation of application No. 13/208,471, filed on August 12, 2011. *Id.* at (63).

The '662 patent is directed to “a carrier management method of performing a carrier deactivation procedure between a base station and a terminal in a carrier aggregation environment in which communication between the base station and the terminal is performed using a plurality of carriers.” *Id.* at 1:23–31. The '662 patent seeks to provide for base and terminal devices a method for “preventing inconsistency of carrier states that are managed by a base station and the terminal when a secondary carrier, which is configured and operated in a carrier aggregation environment, is deactivated, as a carrier state management method of the terminal.” *Id.* at 2:9–22.

The '662 patent addresses the goal with a method that involves “transmitting a deactivation message for a secondary carrier to a terminal; and changing the secondary carrier to a deactivation state after a predetermined time from the transmission of the deactivation message.” *Id.* at 2:26–33. The “predetermined time may be a value predefined to make state information that is managed by the base station consistent with state information that is managed by the terminal for the secondary carrier.” *Id.* at 2:34–37.

The patent describes modes of operation as follows. “When traffic is low, the terminal communicates with the base station by use of only single carrier,” which is referred to as a “primary carrier.” *Id.* at 6:20–22. “When traffic of the terminal increases, the base station uses the activation procedure to cause the terminal to actually use a plurality of” carriers, where an additionally activated carrier is referred to as a “secondary carrier.” *Id.*

at 6:27–33. After switching to this “multicarrier communication” stage, “a large volume of data is transmitted and received by multiple carriers, and a data transmission rate is increased.” *Id.* at 6:46–48. However, if “traffic with the terminal is decreased, the base station transmits a deactivation message to cause the terminal to make a change for use of only a single carrier.” *Id.* at 6:48–50.

Figure 8, reproduced below, is a flow chart of the method of the ’662 patent.

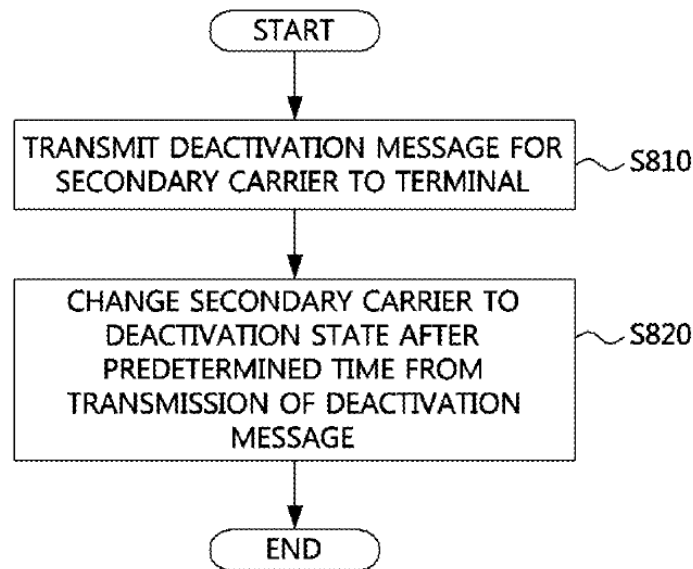
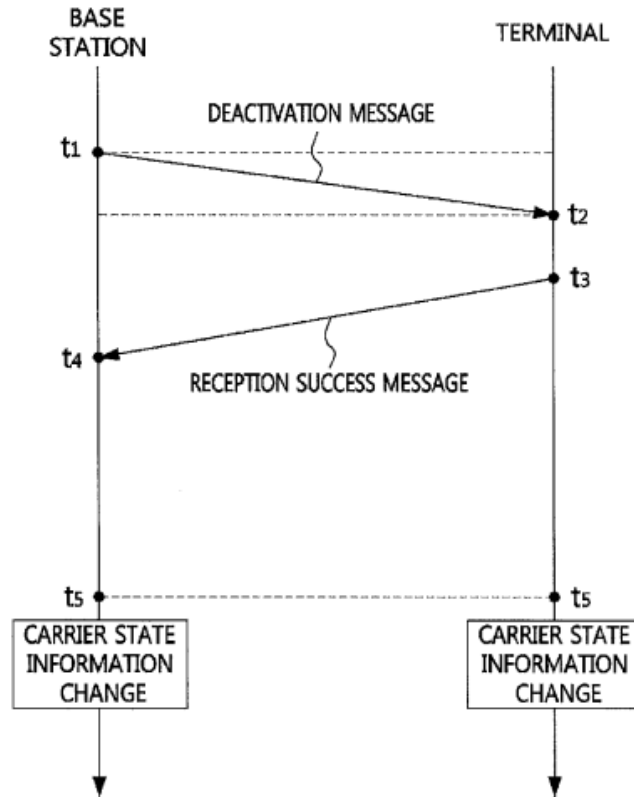


Figure 8 is a flowchart illustrating an example of a carrier state management method of the base station. Ex. 1001 at 4:43–45.

In step S810, the base station sends a deactivation message for a secondary carrier to the terminal. *Id.* at 13:34–40. In step S820, the base station changes the state of the secondary carrier to a deactivation state after a predetermined time from the transmission of the deactivation message. *Id.*

To illustrate the timing of these steps, Figure 10 is reproduced below.

FIG. 10



**Figure 10 is a diagram of a carrier state management method.
Ex. 1001, 4:49–50.**

As illustrated in Figure 10, the base station sends the deactivation message (step S810) at time t1. *Id.* at 13:50–52. After sending the deactivation message, the base station may stop data transmission and retransmission by the secondary carrier. *Id.* at 13:52–55. The base station may also stop DL (downlink) transmission of the secondary carrier and initialize UL (uplink) and DL retransmission buffers. *Id.* at 13:55–59. Next, the base station changes the state of the secondary carrier to a deactivation state (step S820) at time t5 after the lapse of predetermined time t5–t1 from time t1 when the deactivation message is sent. *Id.* at 13:60–63, Fig. 10.

Alternatively, the base station may be configured to receive a reception success message for the deactivation message from the terminal after performing step S810 (sending the deactivation message). Ex. 1001, 13:64–14:1. In this case, the base station would perform step S820 (changing the secondary carrier's state to a deactivation state) after predetermined time $t_5 - t_4$ from time t_4 when the reception success message is received. *Id.* at 14:1–5.

According to the '662 patent:

The carrier state management method of the base station according to the present invention is used to solve inconsistency of state information and state change times for secondary carriers that are managed by the base station and the terminal in consideration of the occurrence of time delay for deactivation message reception and demodulation until the terminal performs a carrier state change procedure by receiving and demodulating a deactivation message when the base station has transmitted the deactivation message.

Ex. 1001, 13:41–49.

E. Illustrative Claims

Of the challenged claims, claim 1 is independent. Challenged claims 2–4 depend from claim 1. Claim 1, reproduced below, illustrates the claimed subject matter:

1. A carrier management method of a base station for use in a carrier aggregation environment, comprising:
transmitting a deactivation message for a secondary carrier to a terminal;
changing the secondary carrier to a deactivation state based on a predetermined time from the transmission of the deactivation message; and

stopping downlink (DL) data transmission of the secondary carrier and initializing uplink (UL) and DL buffers associated with the secondary carrier after transmitting the deactivation message.

Ex. 1001, 16:61–17:4.

F. Prior Art and Asserted Grounds

Petitioner asserts claims 1–4 are unpatentable on the following ground:

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

In support of its challenges, Petitioner relies on a Declaration of Joseph Camp, Ph.D. Ex. 1009.

II. DISCRETIONARY DENIAL

Before we turn to the merits, we first address Patent Owner’s request for discretionary denial of the Petition.

A. Discretionary Denial Under 35 U.S.C. § 314(a) – Fintiv

As noted above, the ’662 patent is the subject of three related district court proceedings. Pet. 4–5; Paper 11, 1. Patent Owner argues that we

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the application from which the ’662 patent issued claims the benefit of priority to an application that was filed before this date, the pre-AIA version of § 103 applies.

³ U.S. Patent Pub. No. 2011/0026495 A1, published February 3, 2011 (Ex. 1005, “Lee”).

⁴ U.S. Patent Pub. No. 2011/010332 A1, published May 5, 2011 (Ex. 1006, “Kim”).

should exercise discretion to deny institution under 35 U.S.C. § 314(a) in view of the related District Court Litigation, which is scheduled for trial in early November 2024,⁵ over 10 months before our final written decision would be due in this case (mid-September of 2025). *See* Prelim. Resp. 4 (citing *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 13–14 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). Petitioner argues we should not discretionarily deny institution. Pet. 62–65. For the reasons discussed herein, we exercise discretion to deny institution on this basis.

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a) (authorizing institution of an *inter partes* review under particular circumstances, but not requiring institution under any circumstances); *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273(2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review.” (emphasis omitted)); *Harmonic Inc.*, 815 F.3d at 1367 (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”)).

⁵ Patent Owner provides a First Amended Docket Control Order, dated May 2, 2024, which provides for jury selection on November 4, 2024. Ex. 2001. A review of the docket sheet reveals that a Third Amended Docket Control Order was entered on July 19, 2024, which alters some pretrial deadlines, but maintains the November 4, 2024, jury selection date. *See Wireless Alliance, LLC v. AT&T Mobility LLC*, CA No. 2:23-cv-00095, Dkt. No. 102 (E.D. Tex. July 19, 2024).

When determining whether to exercise discretion to deny institution in view of a parallel district court proceeding, we consider the following six factors:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

Fintiv, Paper 11 at 5–6. These 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.” *Id.* In evaluating the *Fintiv* factors, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review,” recognizing that “there is some overlap among these factors” and that “[s]ome facts may be relevant to more than one factor.” *Id.* at 6.

On June 21, 2022, the Director of the United States Patent and Trademark Office issued a Memorandum setting forth an “Interim Procedure for Discretionary Denials in AIA Post Grant Proceedings with Parallel

District Court Litigation” (hereafter, “Guidance Memo”).⁶ The Guidance Memo states that “to benefit the patent system and the public good, the PTAB will not rely on the *Fintiv* factors to discretionarily deny institution in view of parallel district court litigation where a petition presents compelling evidence of unpatentability.” *Id.* at 2. The Guidance Memo explains that “[c]ompelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” *Id.* at 4.

In the analysis that follows, we first consider whether *Fintiv* factors 1–5 weigh in favor of denying institution, and, if so, we must also determine whether the Petition presents compelling merits. *See CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 5 (PTAB Feb. 27, 2023) (precedential) (“In circumstances where . . . the Board’s analysis of *Fintiv* factors 1–5 favors denial of institution, the Board shall then assess compelling merits.”).

B. Likelihood of a Stay (Factor 1)

A district court stay of parallel litigation pending resolution of an *inter partes* review allays concerns about inefficiency and duplication of efforts, and strongly weighs against exercising our authority to deny institution. *Fintiv*, Paper 11 at 6.

Petitioner has not sought to stay the district court litigation pending in the Eastern District of Texas. *See* Pet. 62 (noting that consideration of this factor is “neutral because no party has requested a stay”).

⁶ Available at: https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

Patent Owner provides statistics and data that it contends demonstrate that, even if Petitioner were to seek a stay, it would be denied. Prelim. Resp. 4–6 (noting that “[t]he Eastern District of Texas has rarely stayed a patent case pending *inter partes* review”). Patent Owner contends that this factor “should be resolved as follows: no stay exists, and the evidence and recent opinions make clear that a stay will not be granted even if this IPR is instituted.” *Id.* at 7 (citing *Fintiv*, Paper 11 at 6).

Patent Owner is likely correct that the district court would not be inclined to grant a stay, if one were even requested at this late date, given the span of merely weeks between entry of our institution decision in this case and the scheduled trial date, not to mention the substantial investment by the court and the parties to-date in the parallel litigation (as noted further below). Nevertheless, acknowledging the speculative nature of this assumption, we weigh this factor as neutral at best. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 PTAB May 13, 2020) (informative) (cautioning against speculating whether the district court would grant a stay if one were requested).

C. Proximity of Trial Date to Projected Statutory Deadline (Factor 2)

If a district court’s trial date is earlier than the Board’s projected statutory deadline for a final written decision, the Board generally has weighed this fact in favor of exercising discretion to deny institution. *Fintiv*, Paper 11 at 9.

Petitioner asserts this factor is neutral. Pet. 62–63. In particular, in its Petition (filed February 29, 2024), Petitioner asserts “[t]he earliest estimated trial date for the district court litigation is far in the future as jury selection in AT&T, T-Mobile, and Verizon is not set to begin until at least October 21,

2024.” *Id.* at 62 (citing Ex. 1013, 1 (Docket Control Order)). Petitioner then posits that “[b]ecause much can change in approximately eight months, the current trial date does not support denial.” *Id.* at 63.

Patent Owner, on the other hand, contends this factor “weighs heavily against institution” because “[t]rial is set for November 4, 2024” whereas the final written decision is not expected to issue until September 2025.

Prelim. Resp. 7–8 (citing Ex. 2001 (First Amended Docket Control Order)).

Considering the arguments and evidence presented by the parties in light of the present record, we find that *Fintiv* factor 2 weighs in favor of exercising discretion to deny institution. As noted above, the District Court currently has set a trial date of November 4, 2024,⁷ which is over 10 months before the final written decision in this IPR would be due in mid-September 2025. As explained above, the Guidance Memo provides that the parties may also present the most recent statistics on median time-to-trial for civil actions in the relevant district court. Guidance Memo, 8–9. Although neither party has presented such statistics, our review of relevant data reveals that, as of December 2023, the median time to trial for the Eastern District of Texas is 21.4 months.⁸ Applying this median time-to-trial period to the Complaint’s filing date of March 7, 2023 (*see* Pet. 4) would put the estimated trial date in December 2024, shortly after the scheduled trial date of November 4, 2024. Even this slightly later projected date is nine months before our final written decision would be due.

⁷ As noted *supra* n.5, as of the Third Amended Docket Control Order dated July 19, 2024, jury selection remains set for November 4, 2024.

⁸ Those statistics are available at https://www.uscourts.gov/sites/default/files/fcms_na_distprofile1231.2023_0.pdf.

Because the district court would address issues relating to the validity of the '662 patent in a trial that, by any measure, would occur many months before we would issue a final written decision, we weigh the second *Fintiv* factor as favoring discretionary denial.

D. Investment in the Parallel Proceeding (Factor 3)

We consider now the amount and type of work that will have already been completed in the parallel litigation by the court and the parties at the time of our institution decision. *See Fintiv*, Paper 11 at 9.

Petitioner contends (in its February 2024 filing) that this factor “weighs against denial” because “[t]he associated district court case is still in the very early stages.” Pet. 63. In particular, Petitioner represents that “discovery is still in the preliminary stages, the Defendants filed their invalidity contentions in September 2023, and Claim Construction is not scheduled until April 10, 2024,” and “a claim construction order will not issue prior to the PTAB’s projected institution decision date.” *Id.*

Writing months after the Petition was filed, and benefiting from additional information, Patent Owner responds that, as of the time of filing its Preliminary Response, “the parties have already invested heavily in the litigations, including serving infringement and invalidity contentions, filing discovery motions, completing fact discovery, and serving opening expert reports on infringement, damages, and invalidity.” Prelim. Resp. 8–9 (citing Ex. 2001 at 2–3; Ex. 2006). Patent Owner further notes that, contrary to Petitioner’s prediction when filing its Petition in February 2024, the claim construction briefing and ruling were completed by April 2024. *Id.* at 8 (citing Ex. 2006 at Dkts. 74, 79; Ex. 2007). Patent Owner also notes that, by the time of this Institution Decision, “the parties will have further served

rebuttal expert reports, completed expert discovery, fully briefed dispositive motions, fully briefed *Daubert* motions, filed motions *in limine*, filed a joint pretrial order, filed proposed jury instructions, filed proposed verdict forms, filed exhibit lists, filed witness lists, and filed deposition designations.” *Id.* at 8–9 (citing Ex. 2006, 2). In short, per Patent Owner, the parties will be ready for their September 30, 2024, pretrial conference to take place shortly after issuance of our Decision, and “essentially only final preparations will need to be completed for the November 4, 2024 trial.” *Id.* (citing Ex. 2006, 1–2).

We agree with Patent Owner’s assessment that work by the parties and the district court is at an advanced stage. The District Court Litigation has been pending since March 2023, and trial is scheduled for less than two months from the issuance of this Institution Decision. Discovery and claim construction have been completed, and the parties are due to be engaging in final preparations for trial.

We find that this factor favors exercising our discretion to deny institution.

E. Overlap of Issues (Factor 4)

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 proceeding. *Fintiv*, Paper 11 at 12. In the Guidance Memo, the Director stated that “[c]onsistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB.”

Guidance Memo, 3 (footnote omitted) (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential) (“*Sotera*”).

Petitioner does not deny overlapping issues, or offer a *Sotera*-type stipulation, but states:

Instituting trial will allow issues to be narrowed in the district court because, if instituted, Petitioner stipulates that it will not pursue invalidity against the asserted claims in the district court *using the specific combination of prior art references set forth in the grounds presented in this Petition* for purposes of establishing obviousness (e.g., Lee in combination with Kim under § 103).

Pet. 63–64 (emphasis added) (citing *Sand Revolution II LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 11–12 (PTAB June 16, 2020) (holding a similar stipulation weighs against discretionary denial)). Petitioner further states that, “[g]iven the lack of overlap between the proceedings, this factor weighs against the Board exercising discretion to deny.” *Id.* at 64.

Patent Owner counters that this factor is neutral at best. Prelim. Resp. 9. Patent Owner represents that “Petitioners’ invalidity contentions assert the same two references (Lee and Kim) among 26 patents/publications, 92 works of non-patent literature, and three systems.” *Id.* Patent Owner further notes that Petitioner’s stipulation to forego pursuit of the “specific combination of prior art references set forth in the grounds presented in this Petition” is “a far cry from a *Sotera*-type stipulation.” *Id.*

We agree that Petitioner’s stipulation is narrower than a *Sotera* stipulation, i.e., a stipulation “not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could

have reasonably been raised in the petition.” See Guidance Memo at 7, 9; *Sotera*, IPR2020-01019, Paper 12 at 13–14, 18. In particular, Petitioner’s stipulation not to pursue invalidity against the asserted claims in the District Court Litigation “using the specific combination of prior art references set forth in the grounds presented in this Petition” does not include the prohibition against asserting grounds or references “that could have reasonably been raised in the petition.” Guidance Memo, 7, 9. The Board’s informative *Sand Revolution* decision expressed skepticism that such “hybrid” stipulations achieve the goals of avoiding duplication and inconsistent decisions:

Petitioner could have stipulated that it would not pursue any ground raised or that could have been reasonably raised in an IPR, *i.e.*, any ground that could be raised under §§ 102 or 103 on the basis of prior art patents or printed publications. A broader stipulation of that nature, not at issue here, might better address concerns regarding duplicative efforts and potentially conflicting decisions in a much more substantial way. Likewise, such a stipulation might help ensure that an IPR functions as a true alternative to litigation in relation to grounds that could be at issue in an IPR. Further still, Petitioner could have expressly waived in the district court any overlapping patentability/invalidity defenses. Doing so might have tipped this factor more conclusively in its favor.

Sand Revolution, Paper 24 at 12 n.5 (emphasis added). The Board in *Sand Revolution* accorded a stipulation not containing the “could have reasonably raised” provision “marginal[]” weight. *Id.* at 12.

Petitioner’s stipulation does reduce somewhat the overlap relating to the challenge presented in the Petition, but not as fully as would a *Sotera* stipulation. If we were to grant institution in this IPR, the Board would consider the same claims of the ’662 patent whose validity was previously

tried before the district court. Thus, while the new stipulation “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), it does not remove them. Accordingly, for the reasons given here and in *Sand Revolution*, this factor weighs only slightly against discretionary denial. *See Sand Revolution*, Paper 24 at 12,

F. Identity of Parties (Factor 5)

The parties agree that the same parties are involved in both the present proceeding and the parallel District Court Litigation, and they further each represent that this factor is therefore “neutral.” Pet. 64 (citing *Sand Revolution*, Paper 24 at 12–13); Prelim. Resp. 10.

Although the parties view this factor as neutral, we determine, applying Board precedent, that this factor weighs in favor of a discretionary denial. *See Sotera*, Paper 12 at 19 (determining that where the parties in the parallel litigation are “the same” as in the *inter partes* proceeding, “this factor supports denying institution”) (citing *Fintiv*, Paper 15 (informative) at 15; *Sand Revolution*, Paper 24 at 12–13).

G. Other Circumstances, Including the Merits (Factor 6)

The sixth *Fintiv* factor takes into account other circumstances that may bear on the decision to exercise discretion to deny, such as the merits of the patentability challenges. *Fintiv*, Paper 11 at 14–16. Under this factor, “the PTAB will not deny institution based on *Fintiv* if there is compelling evidence of unpatentability.” Guidance Memo, 5. Board precedent provides that we should only consider the compelling merits standard if the first five *Fintiv* factors favor discretionary denial. *CommScope Techs. LLC*, Paper 23 at 4–5.

We take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review” when evaluating these factors. *Fintiv*, Paper 11 at 6. We have considered the circumstances and facts before us in view of *Fintiv* factors 1–5. As discussed above, factor 1 is neutral, factors 2, 3, and 5 weigh in favor of discretionary denial of institution, and factor 4 weighs slightly against discretionary denial. We, therefore, conclude that the evidence of record on factors 1–5 favors exercising our discretion to deny institution of an *inter partes* review. Accordingly, following *CommScope*, we must address the merits of the Petition to determine whether they are compelling.

The Guidance Memo states that “[c]ompelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” Guidance Memo, 4. A challenge can meet this standard only “if it is highly likely that the petitioner would prevail with respect to at least one challenged claim.” *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102 at 49 (PTAB Oct. 4, 2022) (precedential) (“*OpenSky*”).

The Guidance Memo does not change the statutory standard for institution under 35 U.S.C. § 314(a). Instead, a determination of compelling merits will outweigh the other *Fintiv* factors, and such challenges will be allowed to proceed even if a district court litigation is proceeding in parallel. *Id.*

III. COMPELLING MERITS ANALYSIS

A. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) 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.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved 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 ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness.⁹ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic*, 815 F.3d at 1363 (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

⁹ Neither party presents arguments or evidence of secondary considerations. Therefore, secondary considerations do not constitute part of our analysis herein.

B. Level of Ordinary Skill in the Art

The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) (citing *Graham*, 383 U.S. at 17–18; *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991)).

Relying on the declaration testimony of Dr. Camp, Petitioner asserts that a person of ordinary skill in the art “would have had at least a bachelor’s degree in electrical engineering, computer engineering, computer science, physics, or the equivalent, and at least two years of experience working in the field.” Pet. 9 (citing Ex. 1009 ¶ 32). Petitioner also asserts that “[r]elevant working experience would include experience with telecommunications and networking, radio-access networking, and/or service provisioning in wireless networks.” *Id.* Petitioner additionally asserts that “[m]ore education can supplement practical experience and vice versa.” *Id.* Patent Owner does not propose an alternative assessment.

Based on the present record, we apply Petitioner’s definition of the level of ordinary skill in the art (*see* Pet. 9). We determine this level of skill comports with the qualifications a person would have needed to understand and implement the teachings of the ’662 patent and the prior art of record. *Cf. Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (noting that the prior art itself may reflect an appropriate level of skill in the art).

C. Claim Construction

In interpreting the claims of the ’662 patent, we “us[e] the same claim construction standard that would be used to construe the claim[s] in a civil action under 35 U.S.C. [§] 282(b).” *See* 37 C.F.R. § 42.100(b) (2021). The

claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims as would have been understood by one of ordinary skill in the art in light of the written description and the prosecution history pertaining to the patent. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Neither party proposes any terms for construction. *See* Pet. 14; *see also generally* Prelim. Resp.

We determine that no explicit construction of any terms is needed to resolve the issues presented by the arguments and evidence of record. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (per curiam) (claim terms need to be construed “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. Overview of Lee (Ex. 1005)

Lee is a U.S. Patent Application titled “Method for Performing Carrier Management Procedure in a Multi-Carrier Supported Wideband Wireless Communication System and Apparatus for the Same,” published on February 3, 2011. Ex. 1005, codes (43), (54). Petitioner asserts that Lee is prior art under 35 U.S.C. § 102(e). Pet. 8. Patent Owner does not challenge the status of Lee as prior art.

Lee describes “performing a carrier management procedure in a broadband wireless communication system supporting multiple carriers.” Ex. 1005 ¶ 3. A multicarrier system allows a mobile station to exchange data with a base station through a plurality of carriers including a primary carrier and a secondary carrier. *Id.* ¶¶ 6, 9. The primary carrier is a carrier that the base station and mobile station use to exchange traffic and control

signaling, whereas the secondary carrier is an additional carrier that the mobile station uses for traffic. *Id.* ¶ 9. The secondary carrier comes into play according to a command by the base station. *Id.*

The base station determines whether to use a secondary carrier based on factors such as load balancing and channel quality. Ex. 1005 ¶¶ 95, 149. These factors may give rise to a need for deactivating a secondary carrier that is already activated (i.e., in use) and activating another secondary carrier that is not yet in use. *Id.* To illustrate, Figure 8 is reproduced below.

Figure 8, reproduced below, illustrates a disconnection time for use in a secondary carrier management procedure. *Id.* ¶ 49.

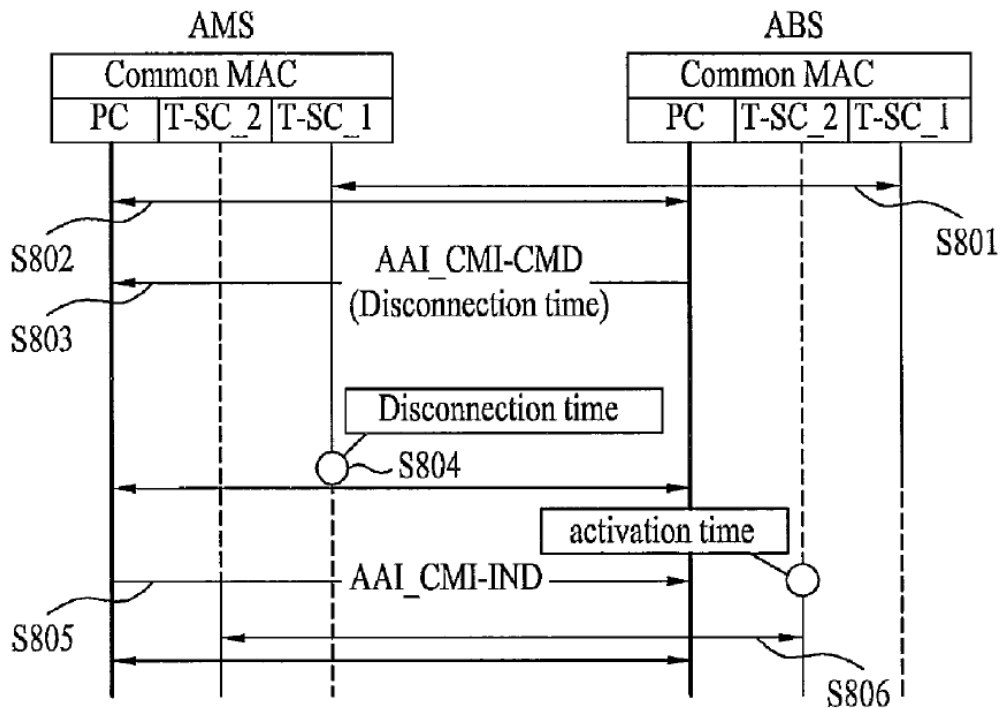


Figure 8 illustrates secondary carrier management procedure to be used when a disconnection time is defined. Ex. 1005 ¶ 159.

Figure 8 of Lee shows a secondary carrier management procedure. Ex. 1005 ¶¶ 49, 159. At step S801,¹⁰ an Advanced Mobile Station (AMS) exchanges data with an Advanced Base Station (ABS) via a first target secondary carrier (T-SC_1). *Id.* ¶ 159. At step S802,¹¹ the AMS exchanges a control message (AAI_CM-CMD¹²) and data with the ABS via a primary carrier (PC). *Id.* The control message includes parameters needed to deactivate the first target secondary carrier (T-SC_1) and activate a second target secondary carrier (T-SC_2). *Id.* The control message also includes a disconnection time for the first target secondary carrier (T-SC_1) at step S803. *Id.*

Lee explains that the first and second target secondary carriers may not always be activated (i.e., in use) simultaneously where the AMS can only support a limited number of carriers. Ex. 1005 ¶ 159; *see also id.* ¶ 149 (“Although the AMS supporting the carrier aggregation mode receives *n* assigned carriers from the ABS, the AMS having only the capability . . . of aggregating only *m* carriers . . . from among the *n* assigned carriers may be present.”). Accordingly, the AMS deactivates the first target secondary

¹⁰ Lee describes exchanges between the AMS and ABS via the first target secondary carrier occurring at step S802 instead of step S801. Ex. 1005 ¶ 159. This reference to step S802 appears to be a typographical error. *See id.*, Fig. 8.

¹¹ Lee describes exchanges between the AMS and ABS via the primary carrier occurring at step S801 instead of step S802. Ex. 1005 ¶ 159. This reference to step S801 appears to be a typographical error. *See id.*, Fig. 8.

¹² AAI_CM-CMD stands for Advanced Air Interface Carrier Management Command. Ex. 1005 ¶ 10. Figure 8 includes the designation AAI_CMI-CMD instead of AAI_CM-CMD. *Id.*, Fig. 8. This designation appears to be a typographical error.

carrier (T-SC_1) at the disconnection time at step S804 before activating the second target secondary carrier (T-SC_2). *Id.* ¶ 159. As shown in Figure 8, the representation of the first target secondary carrier (T-SC_1) changes from a solid line (activation) to a dotted line (deactivation) at the disconnection time. *Id.* ¶ 159, Fig. 8.

When data is ready to be sent or received via the newly activated second target secondary carrier (T-SC_2), the AMS sends an indication message (AAI_CM-IND¹³) to the ABS to inform the ABS at step S805. Ex. 1005 ¶ 159, Fig. 8. If the ABS receives the indication message, data can be exchanged via the second target secondary carrier (T-SC_2) at step S806. *Id.*

E. Asserted Obviousness

Petitioner contends that claims 1–4 are unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Lee and Kim. Pet. 37–61. Patent Owner disputes certain aspects of Petitioner’s analysis for claim 1. Prelim. Resp. 10–13. We have reviewed Petitioner’s challenges and Patent Owner’s arguments, and for the reasons explained herein, we are not persuaded that Petitioner’s asserted ground of obviousness is supported by compelling merits.

¹³ AAI_CM-IND stands for Advanced Air Interface Carrier Management Indication. Ex. 1005 ¶ 10. Figure 8 includes the designation AAI_CMI-IND instead of AAI_CM-IND. *Id.*, Fig. 8. This designation appears to be a typographical error.

1. “*Predetermined Time*” Limitation

We focus our analysis on limitation [1.b],¹⁴ which recites “changing the secondary carrier to a deactivation state based on a predetermined time from the transmission of the deactivation message.” Petitioner relies solely on Lee for this limitation (*see* Pet. 42–48), and relies on Kim in combination with Lee for an additional limitation that is not part of our analysis herein (*see id.* at 34–37, 48–55 (relying on combination of Lee and Kim for limitation “stopping downlink (DL) transmission of the secondary carrier and initializing uplink (UL) and DL retransmission buffers after transmitting the deactivation message”)).

Petitioner identifies Lee’s disconnection time as a “predetermined time from the transmission of the deactivation message.” Pet. 43 (“[T]he ‘disconnection time’ is a predetermined time from the transmission of the deactivation message, and Lee discloses changing the secondary carrier to a deactivation state based on a predetermined time (*i.e.*, disconnection time) from the transmission of the deactivation message.”). As support, Petitioner asserts that Lee’s “disconnection time (i) is included in the deactivation (AAI_CM-CMD) message, (ii) is a predetermined time, and (iii) indicates when the change to a deactivation state should occur with respect to the deactivation (AAI_CM-CMD) message.” *Id.*

In particular, Petitioner asserts that “Lee discloses examples of the contents of the AAI_CM-CMD message when used to deactivate a secondary carrier and discloses that the message could indicate that the

¹⁴ Bracketed references preceding the limitations of the claims are those provided by Petitioner in the Claim Appendix. *See* Pet. 1. Patent Owner has adopted the same references. *E.g.*, Prelim. Resp 10.

disconnection time is defined in the message.” Pet. 43. As an example, Petitioner directs us to where Lee teaches that “[i]n the case where the action code of the AAI_CM-CMD message is set to ‘0’ (secondary carrier management) and the indication type #1 is set to ‘1’ (deactivation), *a disconnection time is defined.*” *Id.* (quoting Ex. 1005 ¶ 154) (emphasis by Petitioner)). Additionally, Petitioner notes that Lee’s tables “provide exemplary formats for the message that could be used for a deactivation of a secondary carrier and that include a disconnection time.” *Id.* at 44; *see also id.* at 43–45 (citing Ex. 1005 ¶¶ 153–158, 163–169, tbls.5–12).

Petitioner also asserts that “Lee further explains that in the case of deactivating multiple carriers . . . different times can be used for each carrier, or the same disconnection time can be used to deactivate all carriers simultaneously.” Pet. 44 (citing Ex. 1005 ¶ 158). According to Petitioner, an ordinarily skilled artisan “would have understood that to deactivate carriers at different times or simultaneously, the disconnection timing would have to be predetermined,” and, “[t]hus, Lee discloses defining a predetermined ‘disconnection time’ when deactivating secondary carriers.” *Id.* Petitioner adds that Lee’s “disconnection time is a predetermined time” because it is “communicated by the base station in the AAI_CMI-CMD message,” which means “the time is determined before the [mobile station] receives the command, thus making the disconnection time predetermined.” *Id.* at 46.

Petitioner further asserts that “Lee discloses changing the secondary carrier to a deactivation state after the disconnection time.” Pet. 46; *see also id.* at 47 (“[T]he base station (ABS) changes the secondary carrier (T-SC-1) from an active state to a deactivation state after the disconnection

time expires.”). To illustrate, Petitioner provides an annotated version of Figure 8 of Lee, which is reproduced below. *Id.* at 47.

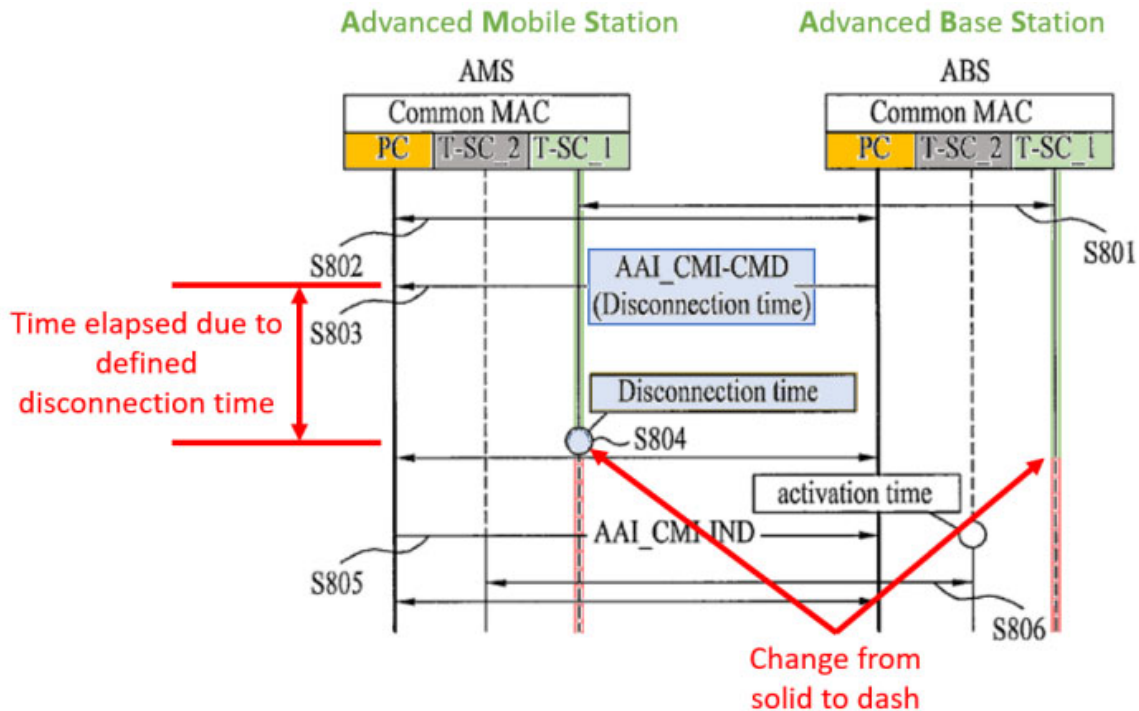


Figure 8 of Lee, as annotated by Petitioner, shows a disconnection time for use in a secondary carrier management procedure. See Ex. 1005 ¶ 159.

Referring to Figure 8, Petitioner points to Lee’s teaching that “the representation of the first target secondary carrier (T-SC_1) is changed from a solid line (activation) to a dotted line (deactivation) at the disconnection time.” Pet. 46 (quoting Ex. 1005 ¶ 159).

Lastly, Petitioner asserts that Lee’s disconnection time “can be defined *in relation to* the AAI_CM-CMD message.” Pet. 47 (quoting Ex. 1005 ¶ 153) (emphasis by Petitioner)). According to Petitioner, “[t]his is . . . shown [in Petitioner’s version of Lee’s Figure 8] as the red arrow with the label ‘Time elapsed due to defined disconnection time,’ which is connected to the time the AAI_CMI-CMD message is sent/received and the

disconnection time.” *Id.* Petitioner contends that “Lee thus discloses that the secondary carrier is deactivated after a predetermined time from the transmission of the deactivation (AAI_CM-CMD) message.” *Id.* at 47–48.

In support of its arguments, Petitioner relies on the declaration testimony of Dr. Camp. Pet. 42–48 (citing Ex. 1009 ¶¶ 133–151).

Patent Owner responds that “Petitioner[] ha[s] not demonstrated that Lee’s ‘disconnection time’ is the claimed predetermined time *from* the *transmission* of the deactivation message.” Prelim. Resp. 10–11. Starting with Petitioner’s argument that Lee teaches its disconnection time “can be defined *in relation to* the AAI_CM-CMD message” (*see* Pet. 47 (quoting Ex. 1005 ¶ 153)), Patent Owner contends that Petitioner does not “explain[] why the ‘relation’ is specifically ‘from the transmission.’” Prelim. Resp. 11. According to Patent Owner, Petitioner takes Lee’s teaching “out of context” because “[i]mmediately after the cited statement from Lee’s paragraph 153, Lee provides four specific examples of how the predetermined time is defined,” and “[n]one of these four examples state[s] that the ‘disconnection time’ is ‘from the transmission of the deactivation message.’” *Id.* (citing Ex. 1005 ¶¶ 153–157). Patent Owner asserts that three of the examples “simply state that ‘a disconnection time is defined’” (*id.* (citing Ex. 1005 ¶¶ 154–156) and that the fourth example “implicitly defines the ‘disconnection time’ as an event (the *reception* of the purported deactivation message)” (*id.*).

Turning to Petitioner’s reliance on Lee’s tables (*see* Pet. 44–45), Patent Owner contends that “Petitioner[] argue[s] that these tables show predetermined disconnection times,” but that “Petitioner[] do[es] not further argue that the disconnection time[s] in Tables 5–12 are predetermined times

from the transmission of the deactivation message.” Prelim. Resp. 11–12 (citing Pet. 44–46).

Finally, Patent Owner addresses Petitioner’s annotated version of Lee’s Figure 8 showing what Petitioner describes as a “red arrow with the label ‘Time elapsed due to defined disconnection time,’ which is connected to the time the AAI_CMI-CMD message is sent/received and the disconnection time.” See Pet. 47. Patent Owner contends that Petitioner’s annotated label “indicates a time elapsed from the *receipt* of the AAI_CMI-CMD message at the terminal (called an AMS in Lee),” and that “Petitioner[] do[es] not explain why a figure demonstrating a time lapse from the *receipt* of the AAI_CMI-CMD message is relevant to ‘predetermined time *from the transmission* of the deactivation message.” Prelim. Resp. 12–13.

Patent Owner adds that “Petitioner[] use[s] the ambiguous phrasing ‘sent/received’ because Petitioner[] cannot definitively establish which of the two is taught by Lee.” Prelim. Resp. 12. According to Patent Owner, “a ‘disconnection time’ cannot be defined as starting from two different starting times (the sending or the reception) because wireless messages are not sent and received at the same time.” *Id.*

As noted above, our inquiry is directed to whether the Petition meets the compelling merits standard, not the “reasonable likelihood” standard of § 314(a). On this record, we agree with Patent Owner.

Claim 1 recites “changing the secondary carrier to a deactivation state based on a predetermined time from the transmission of the deactivation message.” To illustrate, Figure 10 of the ’662 patent is reproduced below.

FIG. 10

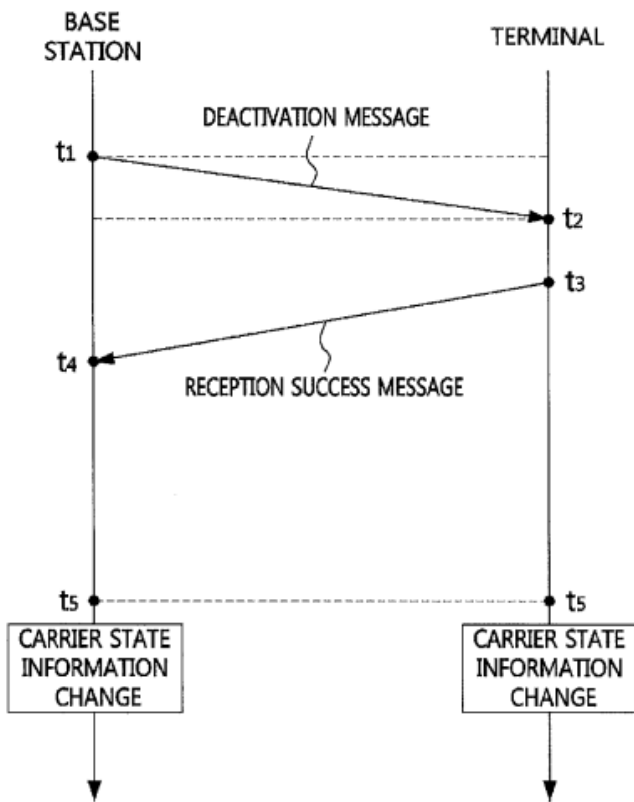


Figure 10 is a diagram of a carrier state management method. Ex. 1001, 4:49–50.

The '662 patent teaches that “the base station performs the step . . . of transmitting the deactivation message to the terminal at a time t1.” *Id.* at 13:50–52. The '662 patent further teaches that “[t]he base station may perform the step . . . of changing state information for a secondary carrier that is managed by the base station to the deactivation state at a time t5 after the lapse of a predetermined time (t5–t1).” *Id.* at 13:60–63.

As discussed above, Petitioner argues that Lee’s disconnection time corresponds to the recited “predetermined time.” Pet. 43. To satisfy the limitation of claim 1 under this theory, Petitioner must show that Lee’s disconnection time is the time *from the transmission of the AAI_CM-CMD*

message (which Petitioner identifies as the recited “deactivation message”).
See Pet. 42–43, 47 (Petitioner’s mapping).

Petitioner’s argument and evidence, however, are unpersuasive. For example, Petitioner asserts that “Lee discloses examples of the contents of the AAI_CM-CMD message when used to deactivate a secondary carrier and discloses that the message could indicate that the disconnection time is defined in the message.” Pet. 43. As support, Petitioner points us to four examples in Lee. *Id.* (citing Ex. 1005 ¶¶ 154–157). For three of the examples, Lee describes scenarios where “a disconnection time is defined.” Ex. 1005 ¶¶ 154–156. For the fourth example, Lee describes a scenario where “[n]o disconnection time is defined in the AAI_CM-CMD message,” but “a reception time of the AAI_CM-CMD message is implicitly defined as a disconnection time.” *Id.* ¶ 157. Although these examples may show that the disconnection time can be defined in the AAI_CM-CMD message, as Petitioner contends, none of the examples readily shows the disconnection time is the time *from the transmission of the AAI_CM-CMD message*. Nor does Petitioner adequately explain how these examples show the disconnection time is the time *from the transmission of the AAI_CM-CMD message*. Lee’s fourth example in particular shows that the disconnection time is the time *of the reception* of the AAI_CM-CMD message, not the time *from the transmission* of the AAI_CM-CMD message.

We note Petitioner’s assertion that “Lee also discloses examples of the specific fields that could include the disconnection time,” where specifically “Tables 6 through 12 provide exemplary formats for the message that could be used for a deactivation of a secondary carrier and that include a disconnection time.” Pet. 44–45. None of these tables appears to reference

the disconnection time with respect to the timing of the transmission of the AAI_CM-CMD message. *See* Ex. 1001, tbls.5–12 (cited by Pet. 44–45). As with Lee’s four examples discussed above, Lee’s tables do not readily show the disconnection time is the time *from the transmission of the AAI_CM-CMD message*. Nor does Petitioner adequately explain how the tables show the disconnection time is the time *from the transmission of the AAI_CM-CMD message*.

As to Petitioner’s citation to Lee’s teaching that “a disconnection time of the target carrier can be defined *in relation to* the AAI_CM-CMD message,” we find this teaching alone does not say anything about whether the disconnection time is defined as the time *from the transmission of the AAI_CM-CMD message*. *See* Pet. 47 (quoting Ex. 1005 ¶ 153). Moreover, as Patent Owner points out, Lee immediately follows this teaching with the four examples discussed above. *See* Prelim. Resp. 11; Ex. 1005 ¶¶ 153–157 (describing the four examples in paragraphs 154 through 157). For the reasons given, Petitioner’s reliance on these examples does not present a compelling case that Lee’s disconnection time is defined as the time *from the transmission of the AAI_CM-CMD message*.

Petitioner argues that “the red arrow with the label ‘Time elapsed due to defined disconnection time’” in its annotated version of Lee’s Figure 8, which is reproduced below, shows the disconnection time can be defined “in relation to” the AAI_CM-CMD message. Pet. 47.

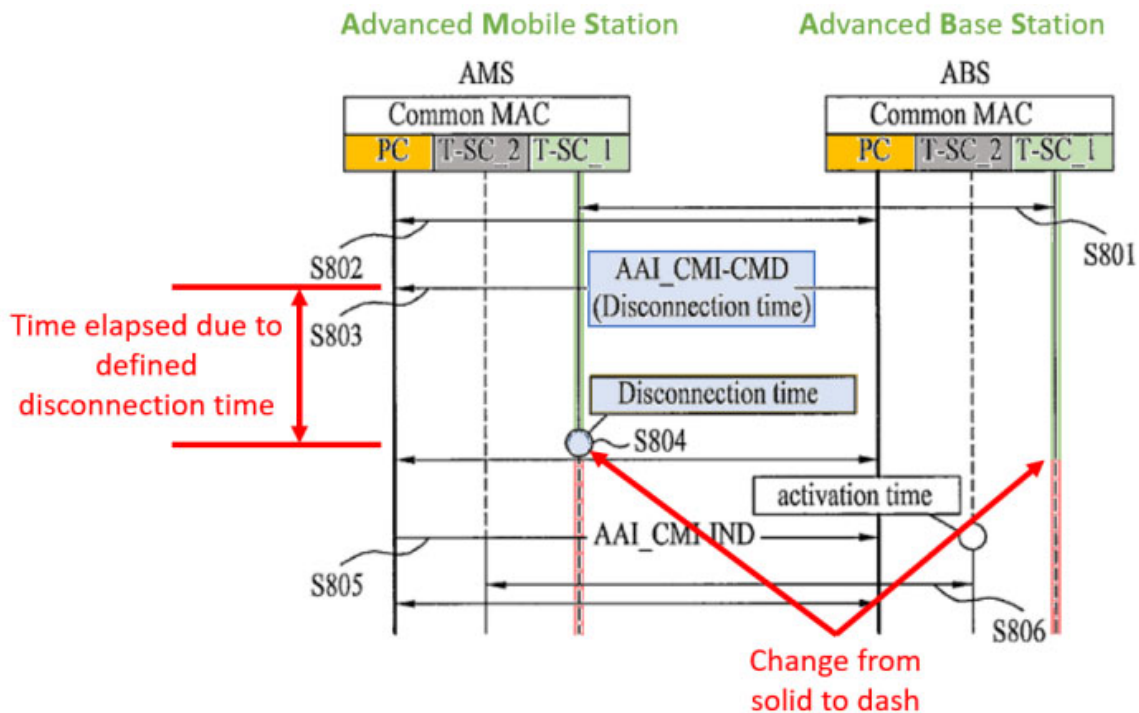


Figure 8 of Lee, as annotated by Petitioner (Pet. 47), shows a disconnection time for use in a secondary carrier management procedure. See Ex. 1005 ¶ 159.

We are not persuaded that the annotated figure supports Petitioner’s position, certainly not under the compelling merits standard. The disconnection time appears to correspond to the *time of deactivation of secondary carrier T-SC_1*, rather than the *time from the transmission of the AAI_CM-CMD message*. See Ex. 1005 ¶ 159 (“As can be seen from FIG. 8, the representation of the first target secondary carrier (T-SC_1) is changed from a solid line (activation) to a dotted line (deactivation) at the disconnection time.”).

Even if we were to treat Lee’s disconnection time as corresponding to the “[t]ime elapsed due to defined disconnection time,” as Petitioner urges us to do, it is not clear from Lee’s Figure 8 whether the disconnection time would be the time from the *transmission* of the AAI_CM-CMD message or

the time from the *reception* of the AAI_CM-CMD message. *See* Pet. 47 (annotated Fig. 8 of Lee). Lee's Figure 8 appears to show the transmission and reception of the AAI_CM-CMD message occurring at the same time. *See id.* As Patent Owner points out, however, "wireless messages are not sent and received at the same time." Prelim. Resp. 12; *see* Ex. 1001, Fig. 10 (showing transmission of deactivation message at time t1 and reception of deactivation message at later time t2). Petitioner asserts that the "[t]ime elapsed due to defined disconnection time[]' . . . is *connected* to the time the AAI_CMI-CMD message is sent/received and the disconnection time," but does not explain the connection. *See* Pet. 47 (emphasis added). Without more, we remain unpersuaded that Lee's Figure 8 provides compelling support for Petitioner's position.

We therefore find flaws in Petitioner's reasoning that Lee's disconnection time is a predetermined time. *See* Pet. 44 ("A [person of ordinary skill in the art] would have understood that to deactivate carriers at different times or simultaneously, the disconnection timing would have to be predetermined. Thus, Lee discloses defining a predetermined 'disconnection time' when deactivating secondary carriers."); *id.* at 46 ("Because the disconnection time is communicated by the base station in the AAI_CMI-CMD message, the time is determined before the [mobile station] receives the command, thus making the disconnection time predetermined."). In addition, we find flaws in Petitioner's argument that "Lee discloses changing the secondary carrier to a deactivation state after the disconnection time." *Id.* In particular, these arguments do not address claim 1's requirement that the disconnection time is the time from the transmission of the AAI_CM-

CMD message, and thus they do not support a compelling, meritorious challenge.

2. Summary

As discussed above, “[c]ompelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” Guidance Memo, 4. Based on the preliminary record, we agree that Patent Owner has raised substantial issues with Petitioner’s analysis of at least one limitation in independent claim 1, so the evidence does not plainly support Petitioner’s contention that claim 1 is unpatentable over the combination of Lee and Kim. For the same reasons, we also determine that Petitioner has not provided compelling evidence to support its contention that any of dependent claims 2–4 is unpatentable over the combination of Lee and Kim.

Because we determine that Petitioner has not presented a “compelling, meritorious challenge[]” to any claim of the ’662 patent, we find that the sixth *Fintiv* factor does not weigh against discretionary denial.

IV. BALANCING THE *FINTIV* FACTORS

We have considered the circumstances and facts before us in view of the *Fintiv* factors. As discussed above, factor 1 is neutral, factors 2, 3, and 5 weigh in favor of discretionary denial of institution, and factor 4 weighs slightly against discretionary denial. We, therefore, conclude that the evidence of record on factors 1–5 favors exercising our discretion to deny institution of an *inter partes* review.

Following the Guidance Memo, we have further determined that the Petition does not show compelling evidence of unpatentability under *Fintiv*

factor 6. We, therefore, conclude that the evidence of record favors exercising our discretion to deny institution of an *inter partes* review.

V. CONCLUSION

Upon consideration of the Petition and Preliminary Response, and the accompanying evidence, we exercise our discretion under 35 U.S.C. § 314(a) to deny institution of an *inter partes* review challenging claims 1–4 of the '662 patent.

VI. ORDER

For the reasons given, it is:

ORDERED that the Petition is denied, and no trial is instituted.

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Patent 9,565,662 B2

PETITIONER:

John Haynes
David Frist
Michael Deane
ALSTON & BIRD LLP
john.haynes@alston.com
david.frist@alston.com
michael.deane@alston.com

PATENT OWNER:

Qi Tong
Irene Lee
RUSS AUGUST & KABAT
ptong@raklaw.com
ilee@raklaw.com