

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

ASUS TECHNOLOGY LICENSING INC.,
Patent Owner.

IPR2024-01142
Patent 10,887,868 B2

Before JOSIAH C. COCKS, CHRISTOPHER L. OGDEN, and
BACH V. HOANG *Administrative Patent Judges*.

COCKS, *Administrative Patent Judge*.

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

I. INTRODUCTION

AT&T Services Inc., T-Mobile USA, Inc., Cellco Partnership d/b/a Verizon Wireless, Ericsson Inc., and Nokia of America Corporation (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) under 35 U.S.C. §§ 311–319 requesting *inter partes* review of claims 5, 6, 8, 13, 14, 16, 18 (“the challenged claims”) of U.S. Patent No. 10,887,868 B2 (Ex. 1001, “the ’868 patent”). ASUS Technology Licensing Inc. (“Patent Owner”) filed a Preliminary Response (Paper 11, “Prelim. Resp.”). With our authorization, Petitioner also filed a Preliminary Reply (Paper 12, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-reply (Paper 13, “Prelim. Sur-reply”).

Under the authority delegated to us by the Director of the U.S. Patent and Trademark Office under 37 C.F.R. § 42.4(a), we may only institute an *inter partes* review when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a); *see also* 37 C.F.R. § 42.108(c). However, 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 below, we exercise our discretion not to institute an *inter partes* review.

II. BACKGROUND

A. Related Matters

As related matters, the parties identify the following district court proceedings: *ASUS Tech. Licensing Inc. v. AT&T Inc.*, No. 2:23-cv-00486 (E.D. Tex. filed Oct. 19, 2023); *ASUS Tech. Licensing Inc. v. T-Mobile USA*,

Inc., No. 2:23-cv-00487 (E.D. Tex. filed Oct. 19, 2023); *ASUS Tech. Licensing Inc. v. Verizon Commc'ns, Inc.*, No. 2:23-cv-00488 (E.D. Tex. filed Oct. 19, 2023); *Innovative Sonic Ltd. v. AT&T Inc.*, No. 2:23-cv-00489 (E.D. Tex. filed Oct. 19, 2023); *Innovative Sonic Ltd. v. T-Mobile USA, Inc.*, No. 2:23-cv-00490 (E.D. Tex. filed Oct. 19, 2023); and *Innovative Sonic Ltd. v. Verizon Commc'ns, Inc.*, No. 2:23-cv-00491 (E.D. Tex. filed Oct. 19, 2023. Pet. 4; Paper 10, 2–3 (Patent Owner's Updated Mandatory Notices). We refer to these cases as the “parallel district court proceedings.”

Patent Owner also identifies *Samsung Elecs. Co. v. ASUS Tech. Licensing Inc.*, IPR2024-00614 (PTAB Mar. 13, 2024) (institution denied Sept. 24, 2024), as a related PTAB proceeding. Paper 10, 3.

B. Real Parties In Interest

Petitioner identifies “AT&T Enterprises, LLC,[□] AT&T Mobility LLC, AT&T Mobility II LLC, AT&T Services Inc., Cellco Partnership d/b/a Verizon Wireless, Verizon Corporate Resources Group LLC, T-Mobile USA, Inc., Ericsson Inc., Telefonaktiebolaget LM Ericsson, and Nokia of America Corporation,” as well as all current defendants in the related district court litigations as the real parties in interest. Pet. 3 & nn.1–2. Patent Owner identifies ASUS Technology Licensing Inc. as a real party in interest and also identifies Celerity IP, LLC as an entity who “assists ASUS Technology Licensing in the licensing of the [challenged] patent.” Paper 10, 2.

C. The '868 Patent (Ex. 1001)

The '868 patent is titled “Method and Apparatus for Transmission or Reception Using Beamforming in a Wireless Communication System.” Ex. 1001, code (54). The Abstract of the '868 patent is reproduced below:

Methods and apparatuses for transmission or reception using beamforming in a wireless communication system are disclosed herein. In one method, a user equipment receives a second signal indicating a first information. The UE^[1] derives at least one specific UE beam based on the first information. The UE uses the at least one specific UE beam to receive or transmit at least one transmission, in which the at least one transmission is periodic channel state indication, scheduling request, and/or scheduling information for downlink assignment or uplink resource.

Id. at code (57).

Figure 1 of the '868 patent is reproduced below:

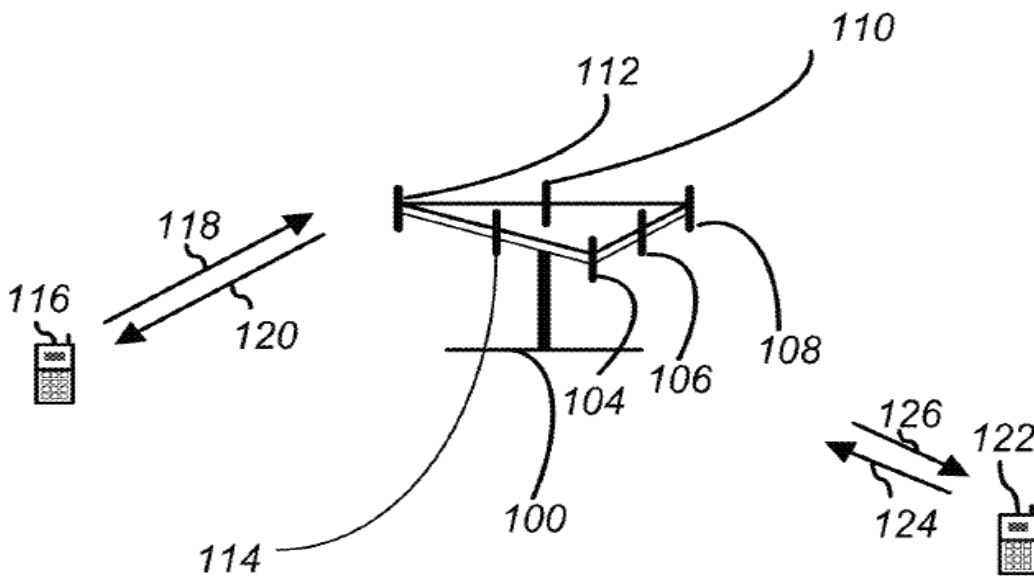


FIG. 1

Figure 1 above “shows a diagram of a wireless communication system

¹ “UE” is an acronym for “user equipment.” Ex. 1001, 3:51.

according to one exemplary embodiment.” *Id.* at 1:56–57. “An access network (AN) 100 includes multiple antenna groups, one including 104 and 106, another including 108 and 110, and an additional including 112 and 114.” *Id.* at 3:13–16. The antennas may transmit information to access terminals 116, 122 (which may also be characterized as user equipment (UE)). *Id.* at 3:20–27; 3:50–54. The access network may be a fixed station or base station used for communicating with the terminals. *Id.* at 3:46–48.

The ’868 patent explains the following in connection with “beamforming”:

[B]eamforming is a signal processing technique used in antenna arrays for directional signal transmission/reception. With beamforming, a beam can be formed by combining elements in a phased array of antennas in such a way that signals at particular angles experience constructive interference while others experience destructive interference. Different beams can be utilized simultaneously using multiple arrays of antennas.

Ex. 1001, 6:1–8.

The ’868 patent also describes that “UE beam(s) used for the transmission via pre-allocated radio resources may be called special UE beams(s)” and that “the network chooses at least one special UE beam for transmission.” *Id.* at 11:42–43, 11:52–54.

Figure 22 of the '868 patent is reproduced below:

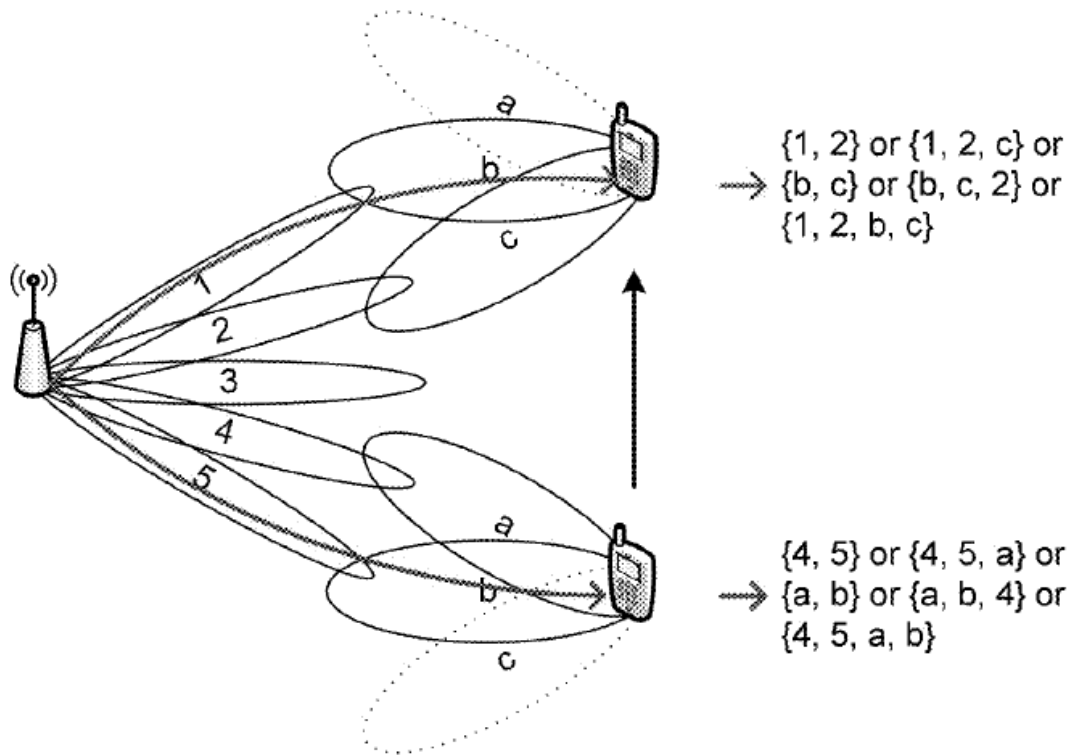


FIG. 22

Figure 22 above “illustrates one example for determining UE beam candidates.” *Id.* at 2:32–33. The network indicates to the UE which “UE beam(s) and/or network beam(s) could be candidate(s) for communication with the network and indicate explicitly which network beam(s) is/are special network beam(s).” *Id.* at 12:24–31.

Figure 21 of the '868 patent is reproduced below:

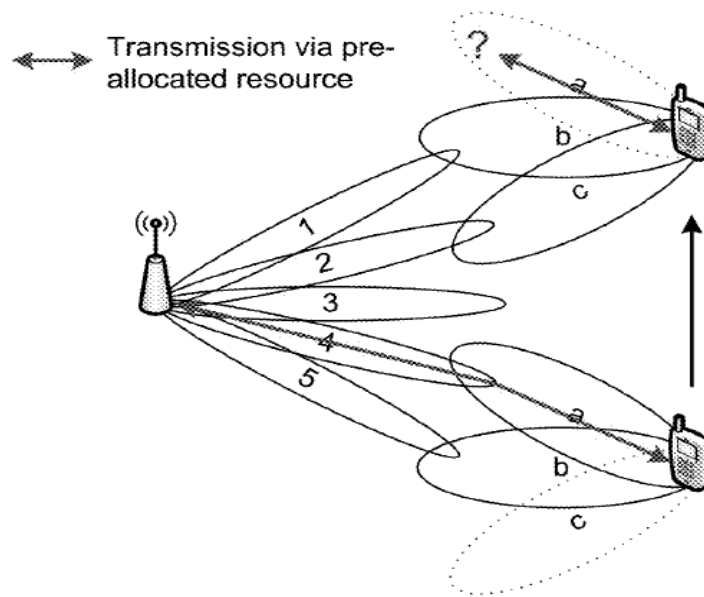


FIG. 21

Figure 21 above “illustrates one example of UE beam change.” *Id.* at 2:32. “[A]fter the UE moves as shown in FIG. 21, the network could indicate to the UE that beams b and c are candidates and beam 1 is the special network beam by providing the special UE beam indication via beam 1.” *Id.* at 12:38–32.

D. The Challenged Claims

Petitioner challenges claims 5, 6, 8, 13, 14, 16, and 18. Claims 5 and 13 are independent. Claims 6, 8, and 16 ultimately depend from claim 5, and claims 14 and 18 depend from claim 13. Independent claim 5 is representative and reads as follows:

5. A method of a network node for transmission or reception using beamforming, the method comprising:

selecting a network beam;

transmitting a first signal to a user equipment (UE) to indicate a first information associated with the network beam for the UE to derive, based on a beam reference signal of the network beam, a UE beam used to transmit a periodic Channel State Information (CSI) and to transmit a scheduling request, wherein the first signal is a Medium Access Control (MAC) signaling; and

using the network beam, mapped to the UE beam, to receive the periodic CSI and to receive the scheduling request.

Ex. 1001, 20:11–24.

E. The Asserted Grounds

Petitioner asserts two grounds for *inter partes* review, as summarized in the following table:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
5, 6, 8, 13, 14, 16, 18	103	Jung ²
5, 6, 8, 13, 14, 16, 18	103	Jung, Xiong ³

Pet. 7.

F. Testimonial Evidence

Petitioner submits a Declaration by Dr. Alex Haimovich, Ph.D.

Ex. 1003.

² Jung et al., U.S. Patent No. 11,539,419, issued Dec. 27, 2022 (Ex. 1005, “Jung”).

³ Xiong et al., U.S. Patent No. 11,096,195, issued Aug. 17, 2021 (Ex. 1007, “Xiong”).

III. DISCRETION TO DENY INSTITUTION UNDER § 314(A)

Patent Owner contends that “[t]he Board should deny institution under 35 U.S.C. § 314(a) because all six *Fintiv* factors favor discretionary denial.” Prelim. Resp. 19 (citing *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential)). For the reasons below, we agree with Patent Owner. To that end, we disagree with Petitioner that the Petition presents a compelling, meritorious challenge.

Institution of an *inter partes* review is discretionary. *See Harmonic v. Avid Tech.*, 815 F.3d at 1367; *see also* 35 U.S.C. § 314(a). The Board has held that the advanced state of a parallel district court action is a factor weighing in favor of denying a petition under § 314(a). *See NHK Spring Co., Ltd. v. Intri-Plex Techs. Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential); Patent Trial and Appeal Board, Consolidated Trial Practice Guide, 58 & n.2 (Nov. 2019), <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>. (“Trial Practice Guide”).

In *Fintiv*, the Board explained that “cases addressing earlier trial dates as a basis for denial under *NHK Spring* have sought to balance considerations such as system efficiency, fairness, and patent quality.” *Fintiv*, Paper 11 at 5. *Fintiv* sets forth six non-exclusive factors for determining “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.* at 6. These factors consider the following:

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.

Id. at 5–6. In evaluating these factors, “the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

The Director has issued additional guidance on the application of *Fintiv*. See Katherine K. Vidal, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022) 9, https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf (“*Fintiv* Memo,” Ex. 1009).

We address each of the above-noted *Fintiv* factors below.

A. Fintiv Factor 1: Whether the Court Granted a Stay or Evidence Exists that One May be Granted if a Proceeding is Instituted

In the Petition, Petitioner argues that the first *Fintiv* factor is neutral “because Petitioners have not yet moved for a stay.” Pet. 71 (citing *Hulu, LLC v. SITO Mobile R&D IP, LLC*, IPR2021-00298, Paper 11 at 10–11 (PTAB May 19, 2021)). In the Patent Owner Preliminary Response, Patent Owner also expresses that “[n]o motion to stay pending the institution decision has been filed in the litigations” but regards the situation as weighing in favor of denial. Prelim. Resp. 22.

Subsequent to both the Petition and Patent Owner Preliminary Response, a matter arose in the district court pertaining to a stay. In its Preliminary Reply, Petitioner represents simply that “this case has been stayed” without elaboration. Prelim. Reply 1 (emphasis omitted) (citing Exs. 1020, 1021). In its Preliminary Sur-reply, Patent Owner provides context as to the nature of the referenced stay. In that regard, Patent Owner expresses the following:

[T]he district court case is only momentarily stayed to address an antitrust issue unrelated to any PTAB proceeding. [Patent Owner] has since mooted the antitrust issue, and the stay is expected to be lifted on January 23, 2005. The current trial setting has not been continued and would still be expected well ahead of the projected deadline for a Final Written Decision even if impacted by the brief stay.

Prelim. Sur-reply 1.⁴

In the Preliminary Response, Patent Owner also contends that Petitioner has not indicated any “substantive objection to the dismissal of [Patent Owner’s] antitrust claims with prejudice, eliminating the basis for the stay” and that the stay remaining in place until the January 23 hearing is merely a “formality.” *Id.* at 2. In a subsequent update provided to the Board via e-mail (*see* Ex. 3001), Patent Owner expresses that the stay was, indeed, lifted on January 23, 2026.

The circumstances here of the temporary stay, now lifted, in the district court on a matter unrelated to any PTAB issue coupled with no

⁴ We note that Patent Owner’s Preliminary Sur-reply does not have page numbering beyond the initial introductory pages designated as “i” and “ii.” We regard the unnumbered pages beginning after page “ii,” as being consecutively pages 1–4.

indication that any stay is contemplated that is connected to this present *inter partes* review proceeding, in our view, establishes this *Fintiv* factor as neutral.

B. Fintiv Factor 2: Proximity of the Court's Trial Date to the Board's Projected Statutory Deadline for a Final Written Decision

Petitioner argues that the second factor is neutral because “[j]ury selection is scheduled to begin on July 21, 2025” and “a final written decision may be expected by December 2025, not long after the trial date (and likely before any appealable post-trial decision).” Pet. 71–72 (citing Ex. 1010, 1). Petitioner also argues that the parallel district court proceedings are only consolidated for pretrial, and “[i]t is reasonable to expect that all trials will not be complete or through post-trial orders before the final written decision.” *Id.* at 72(citing Ex. 1011; *CrowdStrike, Inc. v. Open Text Inc.*, IPR2023-00556, Paper 9 at 8 (PTAB Sept. 12, 2023)).

In the Preliminary Response, Patent Owner argues that the second factor weighs in favor of denial because jury selection begins on July 21, 2025 and the final written decision will be due by January 29, 2026, so “half a year or more after the trial.” Prelim. Resp. 23. Patent Owner also argues that the current median time to trial for the Eastern District of Texas is 21.6 months, so based on the filing date of October 19, 2023, “trial would be expected July or August 2025.” *Id.* at 23–24. As of the filing of the Preliminary Sur-reply, Patent Owner expressed that despite the above-discussed stay, the trial date has not been continued, but if it were shifted by the length of the expected stay (i.e., 1.5 months), a “Final Written Decision would still issue more than four months after the trial.” Prelim. Sur-reply 2–3.

According to Patent Owner in the Preliminary Response, the second factor weighs in favor of denial under these circumstances. *Id.* at 24; Prelim. Sur-reply 2.

In the e-mail noted above (Ex. 3001), Patent Owner represents that a new trial date of October 6, 2025, has been scheduled due to the now lifted stay. Based on the preliminary record, including that e-mail update, we can reasonably expect trial in the parallel district court proceedings to begin approximately four months prior to the deadline for our final written decision, based on a scheduled October 6, 2025, trial date and the median time-to-trial statistics. *See Fintiv* Memo 8–9 & n.12 (approving the use of median time-to-trial statistics). Even if the proceedings are staggered, at least one of the proceedings would likely begin and conclude well before our decision, making it highly likely that there will be duplicate efforts in evaluating the challenged claims based on the prior art. Thus, we agree with Patent Owner that the second factor weighs substantially in favor of discretionary denial.

C. Fintiv Factor 3: Investment in the Parallel Proceeding by the Court and the Parties

Petitioner argues that the third *Fintiv* factor weighs against denial of institution because “[t]he district court litigation is in its early stages,” and in particular, the parties have not engaged in expert discovery, the parties have not identified terms for claim construction, and there have been no substantive orders in the case. Pet. 73 (citing Ex. 1010, 3–5). Petitioner also argues that “Petitioners diligently filed th[e] Petition after they received Patent Owner’s infringement contentions that confirmed Petitioners’ technology is at the center of the district court litigation.” *Id.*

Patent Owner argues that the third *Fintiv* factor weighs in favor of denial because the parties have completed their infringement contention disclosures, and by the time of our institution decision, “the parties will have submitted their opening claim construction briefs, submitted their opening claim construction briefs, completed claim construction discovery, and submitted technical tutorials.” Prelim. Resp. 25–26 (citing Ex. 1010, 4–5). According to Patent Owner, claim construction proceedings are scheduled to begin on January 22, 2025, and February 5, 2025, so by the time of this decision, the parties will have needed to complete significant substantive effort on claim construction. *Id.* at 24–25 (citing Ex. 1010, 3).

Patent Owner also argues that Petitioner “waited approximately five months from receiving infringement contentions to file the Petition,” and waited seven weeks after filing invalidity contentions. Prelim. Resp. 27 (citing Ex. 1010, 5, 6 (indicating that infringement contentions were filed on January 4, 2024)); *see also* Pet. 73 (acknowledging a delay “in the six-month timeframe here.”).

Although the parties have engaged in some preliminary work in the parallel district court proceedings, the court has not issued any substantive orders. This weighs against discretionary denial. *Fintiv*, IPR2020-00019, Paper 11 at 10 (“If, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution . . .”). On the other hand, the record shows that Petitioner waited five months to file the Petition after receiving Patent Owner’s infringement contentions, and Petitioner has not presented any factual evidence to justify this delay. *See id.* at 11–12 (“[T]he parties should explain facts relevant to timing,” and “if the petitioner

cannot explain the delay in filing its petition, [this fact has] favored denial.”).

Under these circumstances, the third factor weighs against discretionary denial, but only marginally so because Petitioner has failed to explain its substantial delay in filing the Petition after receiving Patent Owner’s infringement contentions.

D. Fintiv Factor 4: Overlap Between Issues Raised in the Petition and in the Parallel Proceeding

Petitioner initially stipulated that it “will not pursue this IPR’s Grounds in the district court litigation.” Pet. 74. This stipulation is similar to that in *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 12 (PTAB June 16, 2020) (informative), and is often called a “*Sand Revolution* stipulation,” which the Board often considers to weigh only “marginally” against denying institution. *See, e.g., id.; Nokia of Am. Corp. v. Soto*, IPR2023-00680, Paper 30 at 13 (USPTO Dir. Rev. (Vidal) Dec. 3, 2024).

Petitioner later stipulated that if we institute an *inter partes* review, Petitioner has “agreed not pursue invalidity arguments in the district court litigation against the Challenged Claims on the grounds or the primary prior art references asserted in this Petition.” Prelim. Reply 2. Petitioner contends that this stipulation is broader than a *Sand Revolution* stipulation and that it would minimize overlap between an *inter partes* review and the parallel district court proceedings. *Id.* at 1–3.

Patent Owner argues that the new stipulation “adds little to the prior [stipulation]” and that “Jung and Xiong are both a ground and the primary reference of this IPR, so Petitioners’ new stipulation merely repeats their

original stipulation not to pursue Jung and Xiong.” Prelim. Sur-reply 3.

According to Patent Owner,

Petitioners are free to pursue other combinations of patents and printed publications, such as Kim, Zhang, Koskela, or any 3GPP specification. EX2007, 11. These other arts contain overlapping disclosures on beam pair selection and may supply similar teachings. Petitioners’ new stipulation does not reduce the chance that the district court will address the same patentability issues as decided here.

Id.

We agree with Patent Owner that Petitioner’s new stipulation is not substantially broader than its original *Sand Revolution* stipulation.

We also note that there is complete overlap between the claims asserted in the Petition and the claims that Petitioner asserted in its invalidity contentions. *See* Ex. 2007, 2 (asserting claims 5, 6, 8, 13, 14, 16, and 18 of the ’868 patent).

Based on the preliminary record, we find that the fourth *Fintiv* factor weighs only marginally against discretionary denial. Although the asserted primary references (Jung and Xiong) would be unavailable to Petitioner in the parallel district court proceedings, Petitioner can still assert multiple other identified references (*see* Ex. 2007, 11) and others possibly similar to Jung and Xiong if any exist, and the district court would likely address many of the same patentability issues that we would address in an *inter partes* review.

E. Fintiv Factor 5: Whether the Petitioner and the Defendant in the Parallel Proceeding Are the Same Party

There is no dispute that the parties in this proceeding are, or may through motions to intervene become, the same as the parties in the parallel

district court proceedings. *See* Pet. 75; Prelim. Resp. 30. Petitioner argues that this weighs in favor of institution. Pet. 75. Patent Owner argues that this weighs in favor of discretionary denial. Prelim. Resp. 30.

Generally, where the parties are the same as between an *inter partes* review and a parallel proceeding, the Board weighs the fifth *Fintiv* factor as either “neutral” or “weighing slightly in favor of exercising discretion to deny institution. *See, e.g., Snap, Inc. v. SRK Tech. LLC*, IPR2020-00820, Paper 15, 16 (PTAB Oct. 21, 2020) (precedential as to Section II.A) (“we regard the consideration of the fifth *Fintiv* factor as neutral or, at most, weighing slightly in favor of exercising discretion to deny institution.”); *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 19 (PTAB Dec. 1, 2020) (precedential as to Section II.A) (the panel holding that the fifth *Fintiv* factor “supports denying institution.”); *see also Nokia v. Soto*, IPR2023-00680, Paper 30 at 13 (in which the Director held that “I agree with the parties that *Fintiv* factor 5 is neutral.”⁵).

Under these circumstances, the fifth *Fintiv* factor is regarded as either neutral or weighing in favor of denying institution. Based on a holistic view of the factors, however, we would reach the same conclusion based on either weight level afforded this fifth factor. *See infra* § III.H.

F. Summary: Fintiv Factors 1–5

In summary, our assessment of *Fintiv* Factors 1–5 is as follows. Factor 1 is neutral. Factor 2 weighs substantially in favor of discretionary

⁵ Unlike in *Nokia v. Soto*, the parties in this proceeding do not agree on how we should weigh the fifth *Fintiv* factor.

denial because district court is very likely to address patentability issues at trial before we would issue a final written decision. Factors 3 and 4 weigh marginally against discretionary denial. Factor 5 either weighs in favor of discretionary denial or is neutral, but even if it were neutral, factor 2 alone outweighs the marginal weight of factors 3 and 4.

Based on our assessment, we determine that *Fintiv* Factors 1–5 favor exercising discretion to deny institution. With that determination in mind, we proceed to evaluate *Fintiv* Factor 6.

G. Fintiv Factor 6: Other Circumstances that Impact the Board’s Exercise of Discretion, Including the Merits

The *Fintiv* Memo directs that “compelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel.” Ex. 1009, 4. The Director defines “[c]ompelling, meritorious challenges [as] 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.*

Petitioner argues that we should not deny institution under *Fintiv* because the Petition presents “compelling merits.” Pet. 77 (*CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 5 (PTAB Feb. 27, 2023) (precedential)).

Patent Owner contends that Petitioner has not shown that its patentability challenges rise to the standard of “compelling” because they are deficient in accounting for all of the requirements of the challenged claims. Prelim. Resp. 31–32 (citing *CommScope v. Dali*, IPR2022-01231, Paper 23 at 5 (“Merely pointing to . . . analysis under the lower institution

standard is insufficient to demonstrate that the Petition presents a compelling unpatentability challenge.”)).

We therefore consider whether there are compelling merits when, as here, our analysis of the first five *Fintiv* factors favors denial of institution. *See CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 5 (PTAB Feb. 27, 2023) (precedential).

1. Level of Ordinary Skill

As part of our compelling-merits analysis, we consider the level of ordinary skill in the art. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–1313 (Fed. Cir. 2005) (en banc) (the level of ordinary skill is pertinent to claim construction); *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966) (the level of ordinary skill is one of the factors to consider when determining obviousness). Petitioner proposes the following:

[A] person of ordinary skill in the art at the time of the alleged invention of the '868 patent (“POSITA”) would have had a B.S. in Electrical Engineering or a related field with at least three years of experience designing, developing, and/or testing telecommunication systems. Ex-1003, ¶ 48. A POSITA would also have familiarity with the wireless standards and well-known protocols for accessing wireless networks. *Id.* More education may supplement practical experience or *vice versa*. *Id.*

Pet. 20–21.

Patent Owner does not offer an assessment of its own, or dispute Petitioner’s proposed level of ordinary skill in the art. For this decision, we adopt Petitioner’s proposed level of ordinary skill.

2. Claim Construction

In interpreting the claims of the '868 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) (2020). 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 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*).

Petitioner contends that no terms need to be construed to resolve this proceeding. *See* Pet. 12. Patent Owner provides a construction of the phrase “to derive, based on a beam reference signal of the network beam, a UE beam,” which Patent Owner contends is not necessary to substantiate its arguments, but is offered to “elucidate[] the distinction between the ’868 Patent and the alleged prior art from the reasons” offered by Patent Owner in its Preliminary Response. PO Resp. 8. In particular, Patent Owner contends that the above-noted phrase means “selecting a UE beam from a plurality of candidate UE beams based on a beam reference signal of the network beam.” *Id.*

Patent Owner explains the basis for its proposed construction of the relevant phrase through citation to content of the ’868 patent including Figures 21 and 22 of the patent along with description of those Figures. *See* Prelim. Resp. 8–10. In reviewing the basis for Patent Owner’s proposed claim construction, we conclude that the construction has ample and adequate support in the record before us.

We determine that no other claim term need be addressed expressly *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those 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))).

3. Overview of Jung (Ex. 1005)

Jung is titled “System, Method, and apparatus of Beam-Tracking and Beam Feedback Operation in a Beam-Forming Based System.” Ex. 1005, code (54). Jung’s Abstract is reproduced below:

The present disclosure relates to a pre-5th-Generation (5G) or 5G communication system to be provided for supporting higher data rates Beyond 4th-Generation (4G) communication system such as Long Term Evolution (LTE). A mobility application method of a user equipment (UE) residing in a system of wireless communication systems, which supports transmission/reception of data, using a beamforming, via multiple input multiple output (MIMO) antennas is provided. The method includes measuring beam measurement reference signals that a network transmitted using different transmission nodes and evolved NodeB (eNBs) and transmitting the measured information to the network in a system using a number of beams.

Id. at code (57).

4. Overview of Xiong (Ex. 1007)

Xiong is titled “Scheduling Request for Standalone Deployment of a System Using Beamforming.” Ex. 1007, code (54). Xiong’s Abstract is reproduced below:

Technology for a user equipment (UE) using a self-contained scheduling resource to communicate with an eNodeB within a wireless communication network is disclosed. The UE can select, at the UE, a selected eNodeB transmission (Tx) beam and a selected UE reception (Rx) beam based on a highest power beamforming reference signal (BRS) received power (BRS-RP). The UE can signal a transceiver of the UE to transmit to the

eNodeB a scheduling request (SR), using the selected Rx beam, on a scheduling request (SR) resource in a self-contained subframe according to a time and frequency location of the selected eNodeB Tx beam. The UE can process an advanced physical downlink control channel (xPDCCH), received from the eNodeB, for an uplink (UL) grant using the selected UE RX beam.

Id. at code (57).

5. *Grounds Based on Jung and Xiong*

Each of independent claims 5 and 13 recites steps or features pertaining “beamforming” involving “selecting a network beam” and then transmitting a signal to user equipment (UE) “to derive, based on a beam reference signal of the network beam, a UE beam” used in other transmission operations. *See* Ex. 1001, 20:11–24, 20:62–21:14. As discussed above in conjunction with claim construction, Patent Owner reasonably advances the understanding that the “derive” requirement of the claims involves selecting a UE beam from a plurality of candidate UE beams based on a beam reference signal of the network beam.

A central basis of dispute between the parties pertains to the requirement of the selection of a network beam and then the derivation (i.e., selection) of a UE beam “based on a beam reference signal of the network beam.”

Petitioner purports to account for that requirement in three ways.

First, Petitioner points to various portions in Jung, including Figure 11, of the operation of a “beam using entity” and a “beam measurement entity” in forming a “beam pair” or “best beam.” Pet. 38–41. With respect to Figure 11, Petitioner places emphasis on step “1155” stating “MEASURE BEAM, AND SELECT BEST BEAM (1 or N)” in accounting for the pertinent claim requirement. *See id.* at 39.

Second, Petitioner contends that even if Jung does not disclose the pertinent claim requirement, it would have been obvious to a skilled artisan “to modify Jung so that it expressly teaches” what is required by the claims. *Id.* at 42–43.

Lastly, Petitioner points generally to Xiong’s Figure 4 in conjunction with the relevant claim requirement. With little explanation, Petitioner contends that in view of that Figure “a POSITA would understand the combination of Jung and Xiong discloses this claim element.” *Id.* at 43 (citing Ex. 1003 ¶ 186).

According to Patent Owner, “neither Jung nor Xiong ‘derive[s]’ a UE beam based on the network beam or its beam reference signal.” Prelim. Resp. 12–13. With particular respect to Jung, Patent Owner contends that the reference is adequate to account for the above-noted requirement because “Jung teaches using a reference signal to select a **beam pair** comprising **both** a network beam and a UE beam.” *Id.* at 12–13. Patent Owner proceeds to supports its contention and citation to, and discussion of, disclosure of Jung, including its description of selecting a beam pair or “best beam” at column 12 and Figure 11. *Id.* at 13–16. With respect to Figure 11, the same Figure on which Petitioner focuses, Patent Owner provides the following annotated version of the Jung’s Figure 11 to convey its view of Jung’s teachings:

FIG. 11

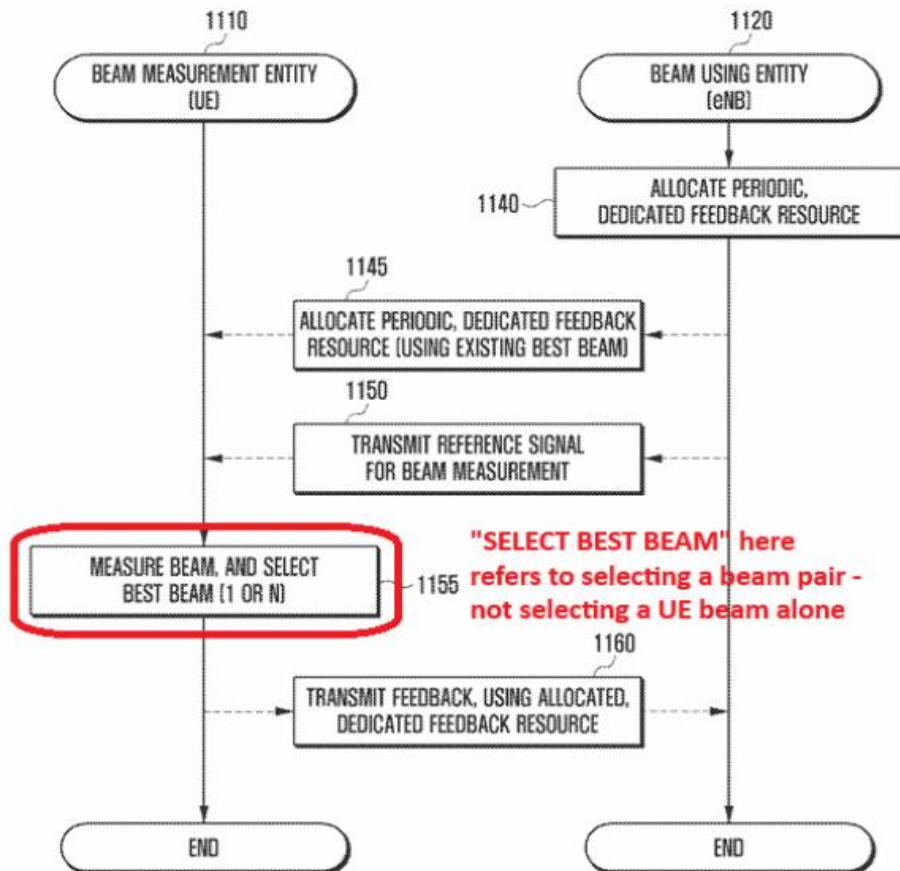


Figure 11 shows a “flow diagram that describes a method for a UE to measure a beam and transmitting beam feedback” according to an embodiment of Jung’s disclosure. Ex. 1001, 3:60–63. In the red annotations in the version of Figure 11 above, Patent Owner draws reference to the same step “1155” as did Petitioner, and characterizes it as a “single step” for selecting a “best beam” or “beam pair” composed of both a network beam and UE beam rather the UE beam based on a network beam. *See Prelim. Resp. 15.*

Patent Owner summarizes its views as to Jung's content and resulting deficiencies in accounting for the claims as follows:

Because Jung defines the “best beam” as a beam pair comprising both a network beam and a UE beam, Jung does not teach selecting a specific network beam alone or selecting a specific UE beam alone. Rather, Jung teaches selecting a beam pair comprising both a network beam and a UE beam together, in a single selection step. As such, Jung cannot teach ordered steps where the network beam is selected first and then the UE beam is derived from the beam reference signal of the network beam. Jung instead teaches that both the network beam and the UE beam are selected together as a single beam pair (the “best beam”) in a single selection step. Jung's single selection step cannot map to a selection step and then a deriving step using the network beam selected in the selection step as claimed. There is no teaching in Jung that the UE beam is selected based on the reference signal of the network beam—nor could there, if both the network beam and the UE beam are selected together in a single step.

Id. at 16.

Thus, Patent Owner submits that the claims of the '868 patent requires “ordered steps” in first selecting a network beam and then subsequently selecting (i.e., deriving) a UE beam based on the beam reference signal of the network beam. *See id.* Jung, however, in Patent Owner's view discloses selecting both beams, i.e., the alleged “network beam” and “UE beam,” in a “single step,” which is inadequate to account for the requirement of the claims. *See id.*

We further note that Petitioner's general view that it would have been obvious to a person of ordinary skill in the art to modify Jung to arrive at the pertinent limitation is not well supported and somewhat circular. *See Pet.* 42–43. It is inadequately explained why a skilled artisan would have reasonably sought to modify Jung so that it then “expressly teaches” what is

required by the claims, as is advanced by Petitioner. *See id.* at 42. It is a dubious proposition that simply seeking to account for the requirements of the challenged claims serves as suitable reasoning that would have prompted modification of the “express[] teach[ings]” of a reference.

Patent Owner also discounts Petitioner’s reliance on Xiong as “suffer[ing] from the same deficiency.” Xiang’s Figure 4, on which Petitioner relies, is reproduced below in the annotated form presented by Patent Owner:

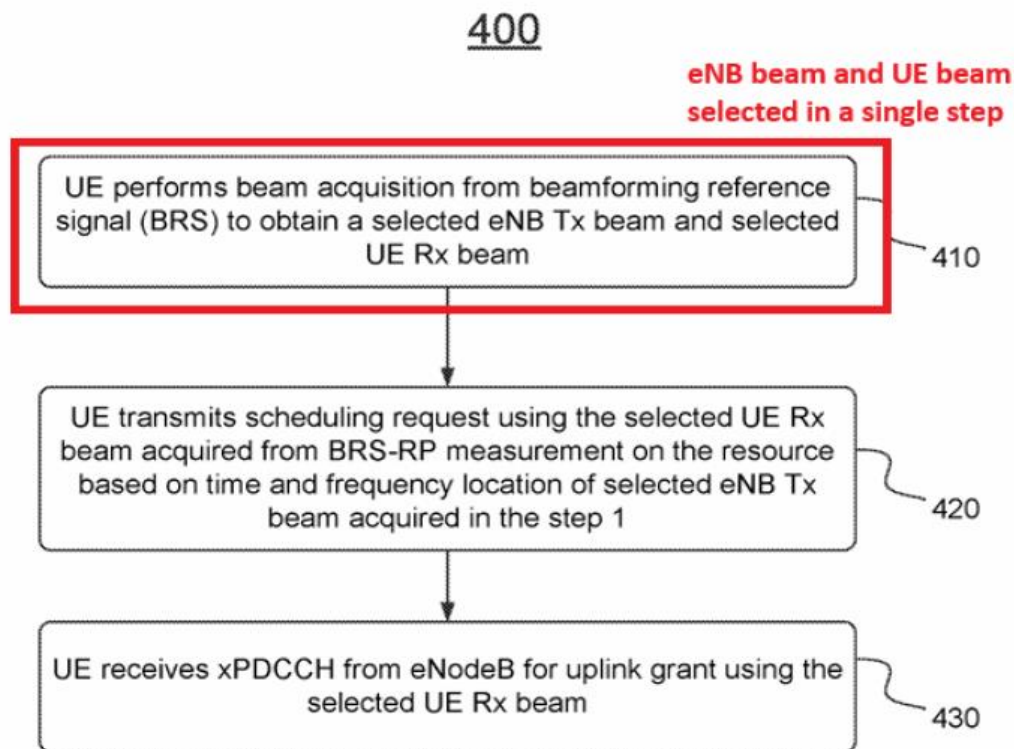


FIG. 4

Figure 4 illustrates a “diagram of a scheduling request transmission” in accordance with an example of the Xiang’s disclosure. Ex. 1007, 1:59–

61. Referring to the Figure 4 of Xiong, and as emphasized by red annotation, Patent Owner describes the figure as depicting “selection of both the network beam and the UE beam in a single step 410.” Prelim. Resp. 17. Patent Owner characterizes Xiang’s disclosure as inadequate to “teach the claimed ordered steps because it instead teaches selection of both the network beam and the UE beam in a single step” and that “[t]here is simply no teaching in Xiong that the UE beam is selected based on the reference signal of the network beam—nor could there be, if both the network beam and the UE beam are selected together in a single step.” *Id.* at 18.

On this record, we need not decide whether Petitioner would likely prevail on the above-noted issues as Patent Owner raises sufficiently substantial arguments that the preliminary evidence, if unrebutted in trial, does not plainly lead to a conclusion that claim 1 is unpatentable by a preponderance of the evidence. Because, as noted above, Patent Owner has identified a plausible understanding of the meaning of the claims of the ’868 patent and potential dispositive inadequacies in Petitioner’s approach to accounting for features of those claims based on Jung’s and Xiong’s disclosures, Petitioner’s proposed grounds cannot be said to rise to the level of a “compelling” meritorious challenge.

6. Conclusion for Factor 6

For all the above reasons, we determine that Petitioner has not shown a compelling meritorious challenge in its Petition or any other circumstances that impact the Board’s exercise of discretion. Therefore, under the preliminary record, the sixth *Fintiv* factor is neutral.

H. Balancing the Fintiv Factors

As discussed above, Factors 1 and 6 are neutral. Factor 2 weighs substantially in favor of discretionary denial because district court is very likely to address patentability issues at trial well before we would issue a final written decision. Factors 3 and 4 weigh only marginally against discretionary denial. Factor 5 either weighs in favor of discretionary denial or is neutral. In holistically balancing the *Fintiv* factors, we conclude that they favor the exercise of our discretion to deny institution of an *inter partes* review.

IV. CONCLUSION

For the above reasons, we exercise our discretion under 35 U.S.C. § 314(a) to deny institution of an *inter partes* review challenging claims 5, 6, 8, 13, 14, 16, and 18 the '868 patent.

V. ORDER

It is

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

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Patent 10,887,868 B2

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