

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC. AND NOKIA OF AMERICA CORPORATION,
Petitioner,

v.

COLLISION COMMUNICATIONS, INC.,
Patent Owner.

IPR2022-01233
Patent 9,814,071 B2

Before THU A. DANG, NEIL T. POWELL, and
KEVIN C. TROCK, *Administrative Patent Judges*.

POWELL, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. BACKGROUND

Ericsson Inc. and Nokia of America Corporation (collectively, “Petitioner”) filed a Petition for *inter partes* review of claims 1–10, 13, 14, 16, and 21 of U.S. Patent No. 9,814,071 B2 (Ex. 1001, “the ’071 patent”). Paper 3 (“Pet.”). Collision Communications, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). With our authorization, Petitioner filed a Reply to Patent Owner Preliminary Response (Paper 8 (“Reply”)), and Patent Owner filed a Preliminary Sur-reply (Paper 10 (“Sur-reply”)).

We have authority, acting by designation of the Director, to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). We may institute an *inter partes* review if the information presented in the petition filed under 35 U.S.C. § 311, and any preliminary response filed under § 313, shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314(a).

However, we have discretion to deny a petition even if a petitioner satisfies the “reasonable likelihood” threshold standard for instituting trial. *See, e.g., Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”). Based on the current record and for the reasons explained below, we exercise our discretion under 35 U.S.C. § 314(a) to deny institution of an *inter partes* review of the ’071 patent.

B. RELATED MATTERS

The parties identify the following cases as related matters: *Collision Communications, Inc. v. Nokia Corp. et al.*, 2-21-cv-00308 (E.D.Tex.) (the “Nokia district court proceeding”) and *Collision Communications, Inc. v. Telefonaktiebolaget LM Ericsson et al.*, 2-21-cv-00327 (E.D.Tex.) (the “Ericsson district court proceeding”). Pet. 82; Paper 6, 2.

C. THE '071 PATENT

The '071 patent relates to “ad hoc wireless multiuser digital communication systems.” Ex. 1001, 1:22–24. The '071 patent explains that multiple users, or “nodes,” use one communication medium in shared, multiuser networks. *Id.* at 1:37–40. This provides certain advantages, but cannot accommodate more than one node sending information on the shared medium at any particular time. *Id.* at 1:37–45. The '071 patent discusses this in connection with Figure 1A, which is reproduced below.

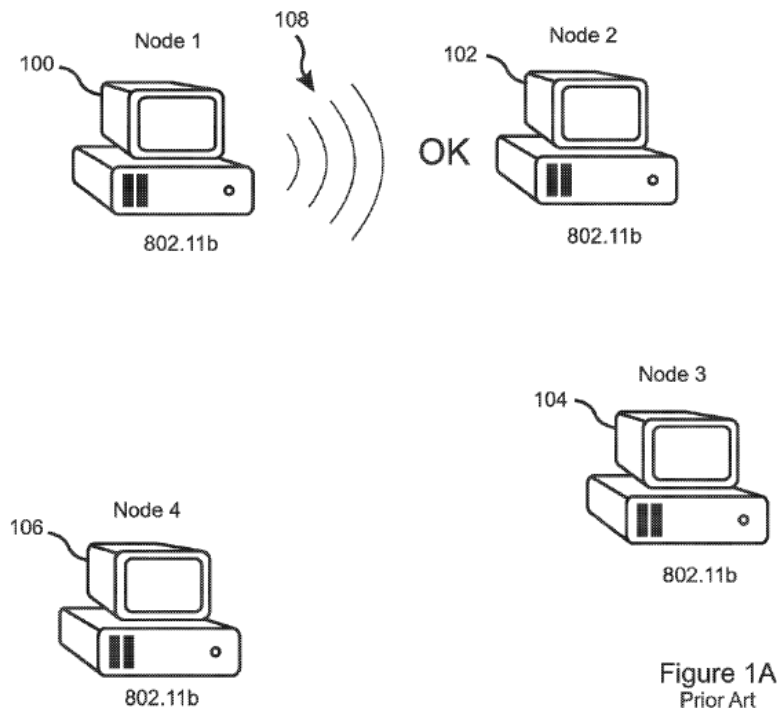


Figure 1A “is a functional diagram illustrating a single packet transmission on a shared, ad hoc, wireless, multiuser digital communication network.”

Id. at 6:7–9.

The communication network of Figure 1A has nodes 100, 102, 104, and 106 “in communication through a wireless 802.11b network.”

Id. at 6:34–37. Figure 1A shows node 100 sending packet 108 to node 102.

Id. at 6:41–42. At that time, “no other communication is attempted on the network,” which facilitates successful transmission, but requires nodes 104 and 106 to abstain from communicating, slowing communication.

Id. at 6:42–49.

The ’071 patent discloses that “[a] method is claimed that employs multiuser detection (MUD) technology so as to allow a plurality of nodes to transmit simultaneously over a shared communication channel in a wireless ad hoc digital network.” *Id.* at 3:17–20. The ’071 patent explains that

MUD technology distinguishes, or “demodulates,” overlapping digital signals by capitalizing on differences in certain signal parameters that are applicable to the digital signals, such as, but not limited to, analog signal parameters that may include signal amplitude, signal phase, and relative time delay. In a wireless network, all of these parameters will be affected by the relative distances between nodes, as well as by the presence of any intervening buildings or other structures, or any environmental anomalies that affect, attenuate and/or reflect the signals. Multiple signals can be distinguished using MUD technology, so long as the signal parameters for each of the overlapping signals are known, or can be accurately estimated.

Id. at 7:13–25.

The ’071 patent shows “an embodiment of the present invention” in Figure 1C. *Id.* at 7:26–27. Figure 1C is reproduced below.

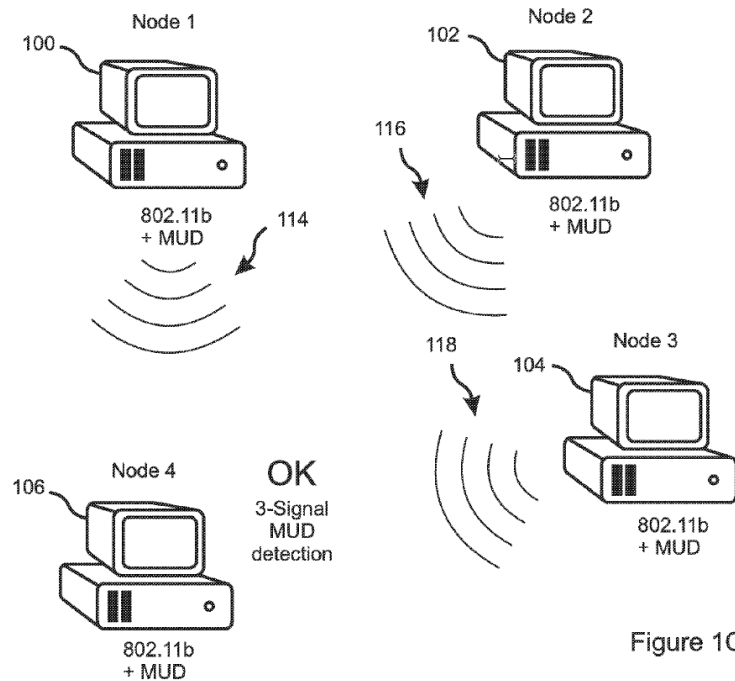


Figure 1C

Figure 1C shows “successful simultaneous transmission of a plurality of packets on a shared, ad hoc, wireless, multiuser digital communication network.” *Id.* at 6:13–16.

The network in Figure 1C resembles the network of Figure 1A, but in the network of Figure 1C, each of nodes 100, 102, 104, 106 implements MUD detection. *Id.* at 7:27–30. The ’071 patent explains that

a spread-spectrum technology (not illustrated) is used to provide at least three separate, low-rate parameter channels. Three of the nodes 100, 102, 104 have each acquired one of these parameter channels, and are transmitting parameter-estimating symbol patterns on the parameter channels while simultaneously transmitting data packets 114, 116, 118 to a fourth node 106.

Id. at 7:30–36. Fourth node 106’s MUD detector can use the parameter-estimating symbol patterns to accurately estimate the signal parameters for the transmitting nodes. *Id.* at 7:56–59. Fourth node 106 can

use the estimated parameters “to demodulate the three packets 114, 116, 118 and receive all of them.” *Id.* 7:56–61.

The '071 patent discusses communication channels in more detail in connection with Figure 3, which is reproduced below.

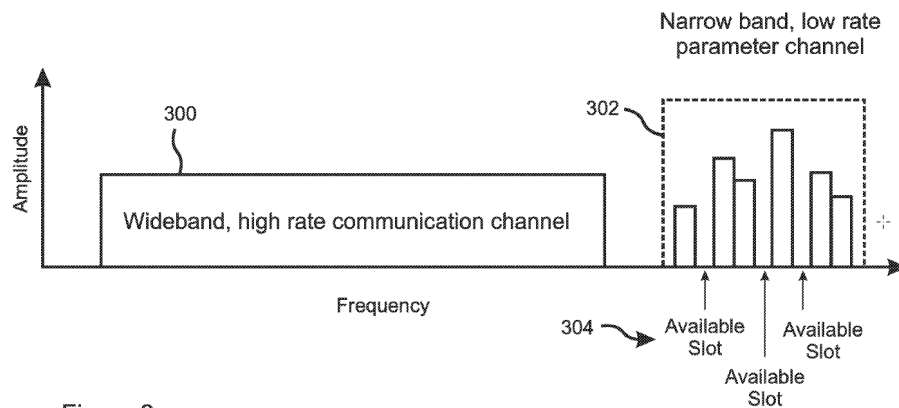


Figure 3

Figure 3 shows “FDMA spreading is used to spread a shared communication medium into a main communication channel 300 and a plurality of parameter channels 302.” *Id.* at 8:27–30. “The main communication channel 300 is a high rate channel and so requires a wide frequency bandwidth. The plurality of parameter channels 302 or ‘slots’ are clustered together in a narrow range of frequencies 302.” *Id.* at 8:30–34.

The '071 patent discusses methods of transmitting information in connection with Figure 4. Figure 4 is reproduced below.

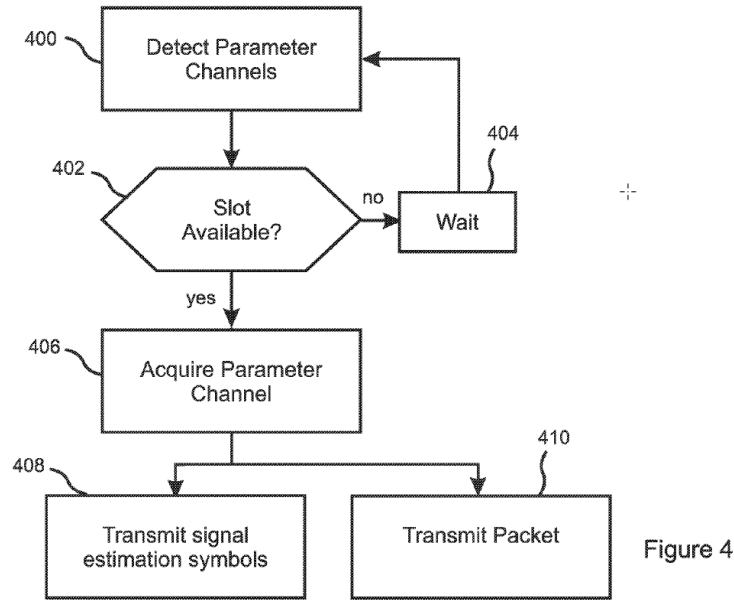


Figure 4 “is a flow diagram that illustrates the steps followed by a node that is seeking to transmit a packet on the network of [Figure] 3.” *Id.* at 8:43–45.

At 400 and 402, the node detects parameter channels and determines if any slot is available. *Id.* at 8:46–47. If no parameter channels are available, at 404, the node waits and keeps monitoring the parameter channels. *Id.* at 8:47–49. If a parameter channel is open, at 406, the node obtains one of the parameter channels. *Id.* at 8:49–50. At 408, the node sends a parameter-estimating symbol pattern. *Id.* at 8:49–51. Simultaneously, at 410, the node transmits the packet on the main communication channel. *Id.* at 8:49–53.

The '071 patent discusses a method of receiving information in connection with Figure 5, which is reproduced below.

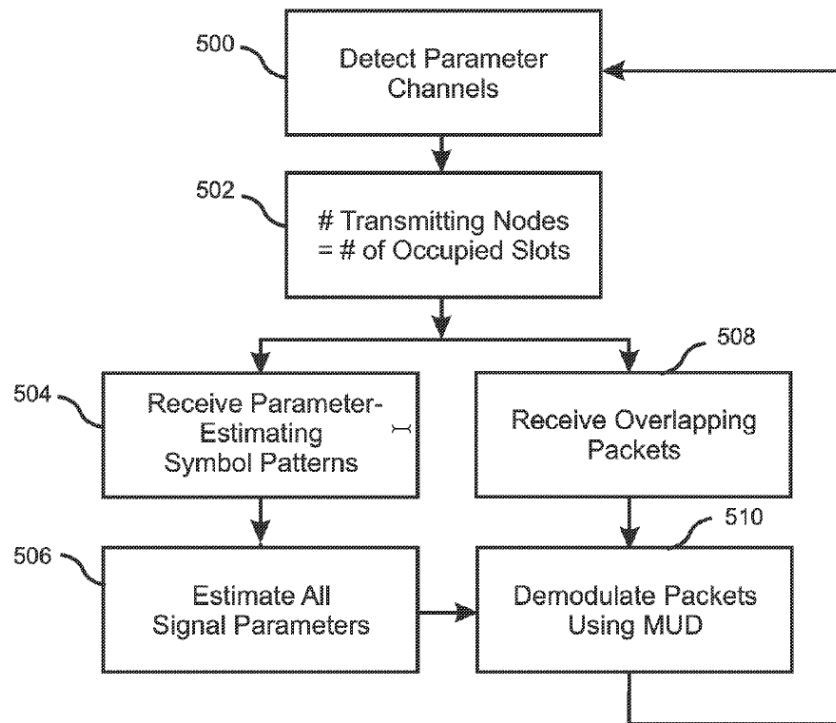


Figure 5

Figure 5 “is a flow diagram that illustrates the steps followed by a node that is seeking to receive a packet on the network of [Figure] 3.” *Id.* at 8:54–56.

At 500, the receiving node detects and obtains all of the parameter channels’ traffic. *Id.* at 8:56–57. As shown at 502, the transmitting node can ascertain how many nodes are transmitting from the number of occupied slots. *Id.* at 8:57–59. At 504, the receiving node can use the parameter-estimating symbol patterns to estimate each transmitting node’s signal parameters, “including amplitude, phase, and relative time delay.” *Id.* at 8:59–63. At 506, “[t]he estimated parameters are then provided to the MUD detector.” *Id.* at 8:65–67. This allows the MUD detector to demodulate and individually receive the overlapping, simultaneously received information packets at 508 and 510. *Id.* at 8:65–9:2.

D. ILLUSTRATIVE CLAIM

Of the challenged claims, claims 1 and 21 are independent. Each of claims 2–10, 13, 14, and 16 depends, directly or indirectly, from claim 1.

Claim 1 is illustrative and is reproduced below with labels added:¹

1. [1.0] A method for enabling a receiving node to distinguish information simultaneously received from a plurality of transmitting nodes on a shared communication channel of a wireless digital network, the method comprising:

[1.1] providing a plurality of parameter channels on the network in addition to the shared communication channel;

[1.2] requiring each transmitting node to transmit a parameter estimating signal on an unshared said parameter channel;

[1.3] detecting the parameter-estimating signals on the unshared parameter channels and estimating therefrom at least one unique signal parameter for each of the transmitting nodes; and

[1.4] detecting and distinguishing the information simultaneously received from each of the transmitting nodes according to their respective said unique estimated signal parameters.

Ex. 1001, 9:12–28.

¹ We have added the same labels that Petitioner applies to the different portions of claim 1. *See* Ex. 1020.

E. ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner challenges the patentability of claims 1–10, 13, 14, 16, and 21 of the '071 patent on the following grounds (Pet. 8):

Claims Challenged	35 U.S.C. §	References
1–3, 5–7, 13, 14, 16, 21	103	Kim ²
1–5, 10, 16, 21	103	Tong ³ , Jia ⁴
6, 7	103	Tong, Jia, Zhu ⁵
13, 14	103	Tong, Jia, Zhu, Dubac ⁶
1, 4, 8–10	103	Baum ⁷

Petitioner supports its challenge with a Declaration of Sumit Roy, Ph.D. Ex. 1003.

II. ANALYSIS

A. 35 U.S.C. § 314(a)

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.”); 35 U.S.C. § 314(a). The Board has held that the advanced state of a parallel district court action is a factor that may weigh in favor of denying a petition under

² U.S. Patent Application Publication No. US 2008/0032630 A1, published Feb. 7, 2008 (“Kim”) (Ex. 1010).

³ U.S. Patent Application Publication No. US 2004/0114618 A1, published June 17, 2004 (“Tong”) (Ex. 1011).

⁴ U.S. Patent Application Publication No. US 2004/0066866 A1, published Apr. 8, 2004 (“Jia”) (Ex. 1020).

⁵ U.S. Patent No. 7,778,337 B2, issued Aug. 17, 2010 (“Zhu”) (Ex. 1012).

⁶ U.S. Patent No. 7,486,735 B2, issued Feb. 3, 2009 (“Dubuc”) (Ex. 1006).

⁷ U.S. Patent No. 5,867,478, issued Feb. 2, 1999 (“Baum”) (Ex. 1005).

§ 314(a). *See NHK Spring Co. 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) (“Trial Practice Guide”)⁸. We consider the following factors to assess “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”:

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.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). In evaluating these factors, we “take[] 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*

⁸ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

*Denials in AIA Post-Grant Proceedings with Parallel District Court
Litigation* (June 21, 2022)⁹ (“Fintiv Memo”).

Petitioner argues that we should not exercise our discretion to deny institution under *Fintiv*. Pet. 83–86; Reply 1–5. Patent Owner argues that we should. Prelim. Resp. 43–50; Sur-reply 1–5.

1. *Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Neither party asserts that a motion to stay has been or will be filed. See Pet. 84; Prelim. Resp. 44–45; Reply 1; Sur-reply 1. Based on that, Petitioner argues that Factor 1 is neutral, whereas Patent Owner argues it weighs in favor of denial. Pet. 84; Prelim. Resp. 44–45; Reply 1; Sur-reply 1. We will not speculate regarding the possibility of a stay, and we find Factor 1 neutral. See *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative); *HP Inc. v. Slingshot Printing LLC*, IPR2020-01084, Paper 13 at 9 (PTAB Jan. 14, 2021).

2. *Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision*

Petitioner asserts that this factor is neutral. Pet. 84–85; Reply 1. Petitioner argues that the trial date is uncertain. Pet. 84–85; Reply 1. In the Petition and the Reply, Petitioner acknowledged that trial was scheduled for early January 2023, but noted that other trials were scheduled at the same time. *Id.* Additionally, Petitioner asserted that “the median time to trial in the Eastern District of Texas is 24.2 months . . . , yielding a trial date of approximately August 2023.” Pet. 84.

⁹ Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf

Patent Owner argues that “this factor strongly favors denial,” given the scheduled trial date of January 2023. Sur-reply 1–2. At the time of its Sur-reply, Patent Owner noted that the Nokia district court proceeding was “fifth on the court’s trial docket.” Sur-reply 1 (citing Ex. 2013). Patent Owner also argues that “even using Petitioners’ August 2023 date, trial would take place more than four months before any final written decision.” *Id.* at 2.

We do not agree with Petitioner that this factor is neutral. Even if we assume trial would not occur until August 2023, that weighs in favor of denying institution, given that we would not expect to issue a final written decision until at least four months later. Moreover, in the Nokia district court proceeding, the final pretrial conference occurred on December 19, 2022, and trial is scheduled for January 23, 2023. Ex. 3001, 44, 46; Paper 11, 2. Additionally, a PACER search reveals that each of the district court cases that was listed ahead of the Nokia district court proceeding in Exhibit 2013 has been stayed, referred to mediation, dismissed, or already tried (jury verdict entered). Thus, trial in the Nokia district court proceeding appears imminent, which weighs heavily in favor of denying institution, given that we would not issue a final written decision until approximately a year later.

3. *Investment in the parallel proceeding by the court and the parties*

In the Petition, Petitioner argued that this factor “favors institution.” Pet. 85. Petitioner explained that it “promptly filed this Petition.” *Id.* Petitioner added that “it is premature to argue regarding the timing of respective milestones in the proceeding versus the litigation, as the schedule may shift in the coming several months.” *Id.*

Patent Owner countered that this factor “strongly favors denial.” Prelim. Resp. 46. Patent Owner explained that, before the due date for our decision whether to institute *inter partes* review, the

trial date will have passed; all substantive motions (including dispositive motions, *Daubert* motions, and motions *in limine*) have been filed (October 14 or 17, 2022 for dispositive motions and *Daubert*) or will have been filed (November 9, 2022 for motions *in limine*); pre-trial disclosures were served on October 19, 2022; and expert discovery has already concluded (October 13, 2022). See Ex. 2002, 1-4. The magistrate judge issued a *Markman* Order on August 31, 2022. Ex. 2001. Thus, the present cases are significantly advanced.

Id. Patent Owner also argues that Petitioner did not file its Petition promptly after Patent Owner’s assertion of infringement. Prelim. Resp. 50.

In its Reply, Petitioner states that this factor “weighs against institution, but only marginally.” Reply 1–2. Petitioner explains that “[a]lthough the district court lawsuits are at an advanced stage,” the parties did not dispute claim terms for the ’071 patent and Petitioner has stopped relying on Baum for invalidity in the district court. *Id.* at 2.

In its Sur-reply, Patent Owner reiterates that *Fintiv* factor 3 “strongly favors denial.” Sur-reply 2. Patent Owner maintains that there have been “significant investments by the parties and the court, including fact and expert discovery in addition to substantive motions and pre-trial disclosure.” *Id.*

We agree with the parties that this factor weighs in favor of discretionary denial. Petitioner has not rebutted Patent Owner’s arguments that the parties and the court have invested great time, effort, and expense in discovery, briefing, and substantive orders. See Pet. 85; Prelim. Resp. 46–47; Reply 1–2; Sur-reply 2. This substantially outweighs

Petitioner’s arguments that the parties and the court have not done certain things. Reply 1–2; Sur-reply 2. Additionally, we agree with Patent Owner that, contrary to Petitioner’s argument, the Petition was not filed “promptly.” Pet. 85; Prelim. Resp. 50; Sur-reply 2. In particular, we do not agree with Petitioner’s view that filing the Petition “less than nine months after receiving infringement contentions” constitutes filing the Petition “promptly.” Pet. 85. Moreover, as Patent Owner notes, Petitioner waited almost a year from inception of the Nokia district court proceeding on August 10, 2021 until the filing of the Petition on July 20, 2022. Prelim. Resp. 50. Accordingly, we find this factor weighs decidedly in favor of discretionary denial.

4. *Overlap between issues raised in the Petition and in the parallel proceeding*

In its Petition, Petitioner argued that the “overlap is minimal.” Pet. 85. Petitioner explained that its invalidity positions in the district court did not rely in any way on four of the six references cited in the Petition. *Id.* Petitioner also noted that its Petition “addresses all claims asserted in district court.” *Id.*

In its Preliminary Response, Patent Owner asserted that this factor favors denial. Prelim. Resp. 47–48. Patent Owner argued that Petitioner had “not offered to withdraw *all* grounds that it reasonably could have raised—i.e., the full scope of estoppel if this IPR proceeds to final written decision.” *Id.* (citing 35 U.S.C. § 315(e)(2); *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24, 12 n.5 (PTAB June 16, 2020) (informative)).

In its Reply, Petitioner states that it “hereby stipulates not to pursue invalidity challenges to [the ’071] patent in the [Nokia district court proceeding] and the [Ericsson district court proceeding] that rely on any prior art reference used in the grounds of the Petition (specifically, Baum, Kim, Tong, Jia, Dubuc, or Zhu).” Reply 2. Petitioner adds that its “[s]tipulation is not conditioned on institution of [*inter partes* review].” *Id.* Petitioner asserts that its “stipulation ‘occupies an intermediate ground between the stipulations in *Sotera* and *Sand Revolution*.’” *Id.* Accordingly, Petitioner argues that its stipulation favors institution. *Id.* (citing *Ericsson Inc. v. Koninklijke KPN N.V.*, IPR2022-00069, Paper 9 at 13–14 (PTAB May 25, 2022)).

Patent Owner responds that Petitioner’s “stipulation (PPR, 2) is narrower than a *Sotera* stipulation.” Sur-reply 2. Patent Owner also contends that Petitioner is “pursuing invalidity arguments in district court regarding the ’071 patent that could have been brought before the Board.” *Id.*

In view of Petitioner’s stipulation, we find this factor weighs against discretionary denial.¹⁰

5. *Whether the petitioner and the defendant in the parallel proceeding are the same party*

Petitioner and the defendant in the district court proceeding are the same party. Pet. 85–86; Prelim. Resp. 49; Reply 2; Sur-reply 2. Accordingly, this factor weighs in favor of denial.

¹⁰As both parties note, however, Petitioner’s stipulation falls short of a *Sotera* stipulation, which would have obviated a full analysis of the *Fintiv* factors. Reply 2; Sur-reply 2; *Fintiv* Memo 7.

6. *Other circumstances that impact the Board's exercise of discretion, including the merits.*

Petitioner argues that this factor weighs against discretionary denial. Pet. 86; Reply 2–5. Petitioner contends that based solely on its allegedly “compelling unpatentability challenge,” we should not exercise discretion to deny. *Id.*

Patent Owner argues this factor weighs in favor of discretionary denial. Prelim. Resp. 49–50; Sur-reply 2–5. Patent Owner contends that Petitioner does not demonstrate a reasonable likelihood of prevailing on the merits, much less a “compelling unpatentability challenged.” *Id.*

We do not agree with Petitioner's assertion that it presents a “compelling unpatentability challenge.” Pet. 86; Reply 2–5. Weighing the arguments and evidence presently of record, we do not find Petitioner's evidence sufficient to “plainly” result in a conclusion of unpatentability. Fintiv Memo 5 n.6; Pet. 9–81; Prelim. Resp. 16–43. For example, in the challenge based on Kim, we do not find Petitioner's evidence regarding claim elements [1.4] and [21.3] sufficient to plainly lead to a conclusion of unpatentability. *See* Pet. 12–18, 28; Prelim. Resp. 21–25. We find significant merit in Patent Owner's position that Petitioner fails to address persuasively limitation [1.4]'s recitation of “distinguishing the information simultaneously received from each of the transmitting nodes according to their respective said unique estimated signal parameters” and similar language in element [21.3]. Prelim. Resp. 21–25. Patent Owner presents viable arguments that Petitioner addresses this claim language with evidence that is unavailing, for instance, because it relates to Kim's request channel, whereas Petitioner's evidence for earlier, related limitations relates to traffic data. *Id.*

As another example, we find significant merit in Patent Owner’s position that Petitioner’s Baum-based challenge relies on different embodiments of Baum without providing sufficiently persuasive evidence that the different embodiments would apply to one another. *See* Pet. 75–76 (relying on “joint detection”); Prelim. Resp. 41 (“First, the Petition combines multiple embodiments from Baum, but without any explanation of why the teachings relating to the ***non-joint detection*** embodiment would apply to the ***joint detection*** embodiment so as to teach distinguishing the individual signal components of the ‘joint desired signal.’”); *see also* Reply 5; Sur-reply 5. Petitioner apparently views the disclosures in Baum’s columns 18–21 as all discussing the same embodiment, but Petitioner does not provide sufficiently persuasive support for this position. *See* Pet. 75–76; Reply 5.

Because the Petition does not represent a “compelling unpatentability challenge,” we do not agree with Petitioner’s contention that we should decline to discretionarily deny based solely on this factor. *Fintiv* Memo 4–5; *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102 at 49 (PTAB Oct. 4, 2022) (precedential, decision upon Director review). Considering the above, we find *Fintiv* factor 6 weighs slightly in favor of discretionary denial.

7. *Balancing the Fintiv Factors*

A holistic balancing of the *Fintiv* factors weighs decidedly in favor of a discretionary denial. As discussed above, only factor 4 weighs against discretionary denial, factor 1 is neutral, and factors 2, 3, 5, and 6 weigh in favor of discretionary denial. Given the lack of strong countervailing considerations, the timing of the Petition, the great investment of the parties

in the district court, and the imminence of trial overwhelmingly favor exercising our discretion to deny institution in this proceeding.

III. CONCLUSION

For the foregoing reasons, we exercise our discretion pursuant to 35 U.S.C. § 314(a) to deny institution of *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is:

ORDERED that the Petition (Paper 3) is denied as to the challenged claims of the '071 patent; and

FURTHER ORDERED that no *inter partes* review is instituted.

IPR2022-01233
Patent 9,814,071 B2

PETITIONER:

Clint Wilkins
Andrew Lowes
HAYNES AND BOONE, LLP
clint.wilkins.ipr@haynesboone.com
andrew.lowes.ipr@haynesboone.com

David Frist
Nicholas Tsui
ALSTON & BIRD LLP
david.frist@alston.com
nick.tsui@alston.com

Eric Hansen
MCKOOL SMITH P.C.
ehansen@mckoolsmith.com

PATENT OWNER:

James L. Davis, Jr.
Scott A. McKeown
Alexander E. Middleton
Shong Yin
ROPES & GRAY LLP
james.l.davis@ropesgray.com
scott.mckeown@ropesgray.com
alexander.middleton@ropesgray.com
shong.yin@ropesgray.com