

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

MOJO MOBILITY INC.,
Patent Owner.

IPR2023-01098
Patent 11,462,942 B2

Before BRIAN J. McNAMARA, MICHAEL J. FITZPATRICK, and
DAVID COTTA, *Administrative Patent Judges*.

Opinion concurring filed by *Administrative Patent Judge* FITZPATRICK.

PER CURIAM.

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

I. INTRODUCTION

Samsung Electronics Co., Ltd. (“Petitioner”) filed a petition, Paper 1 (“Petition” or “Pet.”), to institute an *inter partes* review (“IPR”) of claims 1, 2, 5, 8, and 12 (the “challenged claims”) of U.S. Patent No. 11,462,942 B2 (Ex. 1001, “the ’942 patent”). 35 U.S.C. § 311. Mojo Mobility Inc. (“Patent Owner”) filed a Preliminary Response, Paper 7 (“Prelim. Resp.”), contending that the Petition should be denied as to all challenged claims. We authorized Petitioner’s filing of a Reply to Patent Owner’s Preliminary Response (Paper 8, “Prelim. Reply”) and Patent Owner’s filing of a Preliminary Sur-reply (Paper 10, “Prelim. Sur-reply”).

We have jurisdiction under 35 U.S.C. § 6. This Decision on Institution is issued pursuant to 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition “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.”

A decision to institute under § 314 may not institute on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018). In addition, per Board practice, if the Board institutes trial, it will institute “on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” *See* 37 C.F.R. § 42.108(a).

Having considered the arguments and the associated evidence presented in the Petition, the Preliminary Response, Petitioner’s Reply, and Patent Owner’s Sur-reply, for the reasons described below, we decline to institute *inter partes* review.

II. REAL PARTIES IN INTEREST

The Petition identifies Samsung Electronics co., Ltd and Samsung Electronics America, Inc. as real parties-in-interest. Pet. 1. Patent Owner identifies itself(Mojo Mobility Inc.) as the real party-in-interest. Paper 4, 2.

III. RELATED MATTERS

The parties identify the following related matters:

Mojo Mobility Inc. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc., No. 1:22-cv-00433 (E.D. Tex.) (“the Texas Litigation”); *Samsung Electronics Co., Ltd. v. Mojo Mobility Inc.*, IPR2023-01099; *Samsung Electronics Co., Ltd. v. Mojo Mobility Inc.*, IPR2023-01100; *Samsung Electronics Co., Ltd. v. Mojo Mobility Inc.*, IPR2023-01124 Pet. 1, Paper 4, 2.

IV. EXERCISE OF DISCRETION

A. Discretion Under 35 U.S.C. § 314(a)- *Fintiv*

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*, 815 F.3d at 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

In the Preliminary Response, Patent Owner contends that we should exercise our discretion to deny the Petition in favor of the parallel proceeding in the Texas Litigation. Prelim. Resp. 12–22. 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 § 314(a). *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential) (“*NHK*”); Consolidated Trial Practice Guide (Nov. 2019)¹ at 58 & n.2. 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. We consider each of these factors below.

On June 21, 2022, the Director of the USPTO issued several clarifications concerning the application of the *Fintiv* Factors. *See Interim Procedure For Discretionary Denials In AIA Post-Grant Proceedings With Parallel District Court Litigation*, issued June 21, 2022 (“Guidance

¹ Available at: <https://www.uspto.gov/TrialPracticeGuideConsolidated>

Memo”)². The Director’s Memo states that “the precedential impact of *Fintiv* is limited to the facts of that case.” Guidance Memo 2. Under the Guidance Memo “the PTAB will not rely on the *Fintiv* factors to discretionarily deny institution in view of parallel Texas Litigation where a petition presents compelling evidence of unpatentability.” *Id.*

[C]ompelling, meritorious challenges will be allowed to proceed at the PTAB even where *Texas Litigation* is proceeding in parallel. Compelling, 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.

The Guidance Memo further states

[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.

Id. at 3; see *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential as to § II.A).

The Guidance memo also states

when considering the proximity of the district court’s trial date to the date when the PTAB final written decision will be due, the PTAB will consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides.

² Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621.pdf.

Guidance Memo 8–9³. With these factors and guidance in mind, we consider the parties’ contentions.

1. *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 argues that this factor is neutral “as there has been no actual denial of a stay.” Prelim. Reply 3. Petitioner’s motion to stay the Texas Litigation pending in the Eastern District of Texas has not been ruled on. Prelim. Resp. 15.

Patent Owner asserts that the motion to stay “will almost certainly be denied pre-institution,” because the Eastern District of Texas universally denies a motion to stay pre-institution. *Id.* at 15–16 (citing Ex. 2002, 1–2). Patent Owner contends that “even if instituted, the timing and advanced stage of litigation indicates that Judge Gilstrap is highly likely to deny a motion to stay.” *Id.* at 16 (citing *MyPort, Inc. v. Samsung Elecs. Co., Ltd.*, Case No. 2:22-CV-00114-JRG, Dkt. 73 at 4-5 (E.D. Tex. June 13, 2023); *Solas OLED Ltd. v. Samsung Display Co., Ltd.*, Case No. 2:19-CV-00152-JRG, Dkt. 133 at 3-4 (E.D. Tex. July 17, 2020); *Oyster Optics, LLC, v. Infierna Corp.*, Case No. 2:19-CV-00257-JRG, Dkt. 87 at 4-5 (E.D. Tex. July 17, 2020)).

We decline to presume that the court “is likely to deny” Petitioner’s motion to stay, which has remained pending for over three months. *Cf.* *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13,

³ See <https://www.uscourts.gov/statistics-reports/analysis-reports/federal-court-management-statistics>.

2020) (informative) (cautioning against speculating whether the district court would grant a stay if one were requested). Therefore, we weigh Factor 1 as neutral.

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

The Petition argues that this factor is neutral. Pet. 88–89. Based on median time-to-trial statistics for the Eastern District of Texas (19 months), Petitioner asserts that the projected trial date will be no earlier than May 2024. *Id.* at 89 (citing Ex. 1052, 35). Petitioner argues that the fact that “the FWD may come after the trial date is not dispositive,” and therefore this factor is neutral. *Id.* Petitioner also notes that it acted diligently to file the Petition in advance of the one-year bar date, within four months of Patent Owner’s infringement contentions in the Texas Litigation, and that when the Petition was filed expert discovery had not begun, fact discovery was not anticipated to close until March 18, 2024, and a *Markman* claim construction hearing was scheduled for February 6, 2024. *Id.*

Patent Owner contends this factor “weighs heavily in favor of denial.” Prelim. Resp. 18. Patent Owner argues that trial will occur prior to any anticipated final written decision. *Id.* at 17–18. Patent Owner asserts that jury selection in the parallel Texas Litigation has been scheduled for August 5, 2024, about five months before the projected statutory deadline (January 2025) for our final written decision. *Id.*; see Ex. 2007.

The circumstances in this case are similar to those in *NHK*. See *NHK* at 20 (denying a petition 35 U.S.C. § 314(a) where institution would have led to a final written decision approximately six months after a scheduled trial in a pending civil action involving the same patent). See also *Fintiv* Paper 11 at 3 (contrasting *NHK* with the circumstances in *Fintiv*, where the district court trial was set to occur after a final written decision and observing that,

in such cases, the Board may be less likely to deny institution under 35 U.S.C. § 314(a)).

We agree with Patent Owner’s analysis based on the schedule in the district court’s docket control order. Ex. 2007. The fact that the time-to-trial statistics cited by Petitioner predict that a trial in May 2024 (Pet. 89), a date even earlier than the trial date set in the court’s docket control order, confirms that the schedule set by the district court is credible and should be given weight. We are not persuaded by Petitioner’s argument that diligence in filing the Petition “in advance of the one-year bar date and within four months of PO’s infringement contentions in the Texas Litigation” should weigh in favor of institution. Pet. 89.

As the Texas Litigation is scheduled to go to trial in August 2024, approximately six months before a final written decision would be entered, we determine that Factor 2 weighs in favor of discretionary denial.

3. *Investment in the Parallel Proceeding (Factor 3)*

Petitioner contends that this factor “weighs against denial” because “[t]he district court case is in the early stages,” “[f]act discovery is in its infancy,” “the parties have not engaged in expert discovery,” “[t]he parties have not yet identified terms for construction,” and there has not been “any substantive orders” entered in the case. Pet. 89–90 (citing Ex. 1053, 3).

Patent Owner responds that “the district court proceeding has been pending since October of 2022” and “there is significant investment in the parallel district court proceeding.” Prelim. Resp. 18. Patent Owner explains that the “Parties have prepared and exchanged infringement and invalidity contentions, presented initial disclosures, and are in the midst of substantial fact discovery,” and “by the time the Board would even issue an institution decision, claim construction will have been briefed and argued.” *Id.* at 18–

19. Patent Owner’s timeline shows that a *Markman* hearing is scheduled for February 6, 2024, which is shortly before the expected institution decisions for this case and the remaining eight cases in the “[s]econd [s]et” of related cases.⁴ *See id.* at 17 (timeline); Ex. 2007, 3 (March 28, 2023, Docket Control Order).

The district court proceeding has been pending since October 2022 and has already advanced well beyond the pleadings stage. Fact discovery is well underway, e.g., the deadline to “substantially complete” document production has passed and fact discovery is set to close about a month after the anticipated issuance date of this decision. Ex. 2007. In addition, substantial preparation for a February 2024 *Markman* Hearing (including briefing) was to be completed by January 2024. *Id.* Although there is still much work to be done in the district court case, we find that this factor favors exercising our discretion to deny institution.

4. *Overlap of Issues (Factor 4)*

a) *Background*

Patent Owner asserts there is “significant overlap” between the Petition and Petitioner’s invalidity contentions in the Texas Litigation, which include “the same principal references,” in this case, Okada and Odendaal. Prelim. Resp. 20 (citing Ex. 2001, 13–18). Anticipating this argument, Petitioner stipulated “that, if the IPR is instituted, Petitioner will not pursue the IPR grounds in the district court litigation.” Pet. 90 (citing

⁴ As Patent Owner’s timeline shows, decisions in a “first set” of Decisions on Institution were entered several weeks ago. *See, e.g., Samsung Electronics Co. Ltd v. Mojo Mobility Inc.*, IPR2023-01091, Paper 11 (PTAB January 8, 2024).

Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC, IPR2019-01393, Paper 24 at 12 (PTAB June 16, 2020) (informative)).

Patent Owner pointed to the narrowness of Petitioner’s proffered stipulation, asserting that the stipulation was insufficient to overcome concerns of “duplicative efforts” and conflicting outcomes based on the Board’s own current guidance on the *Fintiv* factors. Prelim. Resp. 20–21 (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 20–21 (PTAB Dec. 1, 2020) (precedential as to § II.A)).

Petitioner replied by (1) pointing to a recent change in the claims being asserted in the Texas Litigation, narrowing the number of claims that are in suit and noting that claims 5 and 8 will not be addressed in the parallel Texas litigation,⁵ and (2) providing an “expand[ed]” stipulation, “to further mitigate concerns on *Fintiv*.” Prelim. Reply 1–3 (citing Exs. 1201, 1202). We discuss these new arguments in turn.

b) Narrowed Claims

As ordered by the district court, Patent Owner reduced the number of claims asserted in the Texas Litigation to 32. Exs. 1201, 1202. As a result, two claims challenged in the Petition (claims 2 and 8) would not be asserted in the Texas Litigation, and further reductions in the asserted claims have been ordered by the court. *See* Ex. 1202. Petitioner contends that as a result, “there will be no complete overlap of claims and prior art combinations amongst the Texas Litigation and IPR proceeding(s) should any [of] Petitioner’s IPR(s) be instituted.” Prelim. Reply 2. As the record currently stands, challenged claim 1, the only independent claim challenged

⁵ Petitioner’s Preliminary Reply states that challenged claims 5 and 8 will not be heard by the district court. Prelim. Reply 1. However, Exhibit 1201 indicates that claim 5 will be heard and claim 2 will not.

in the Petition, will be before both the district court and the Board in this proceeding, if instituted.

The Board's precedential *Fintiv* decision discusses the situation where a petition challenges additional claims to those challenged in district court. *See Fintiv*, IPR2020-00019, Paper 11. The Board concludes in *Fintiv* that “if a petition involves the same prior art challenges but challenges claims in addition to those that are challenged in the district court, *it may still be inefficient to proceed* because the district court may resolve validity of enough overlapping claims to resolve key issues in the petition.” *Fintiv*, Paper 11 at 13 (emphasis added). Here, Patent Owner has stipulated not to assert infringement of any claims challenged in the Petition that have been or will be dropped from the Texas Litigation. Prelim. Sur-reply 4. This diminishes the significance of the non-overlapping claims. We determine that, as in *Fintiv*, it would be inefficient to proceed. The claim that is the focus of the parties' arguments in this proceeding, independent claim 1, is common to both proceedings, and Patent Owner has stipulated not to assert infringement of the additional claims in the Petition.

c) New Stipulation

Petitioner's original stipulation was 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*, Paper 12 at 13–14, 18. Petitioner's new stipulation provides that, “if this IPR is instituted, Petitioner will not pursue an invalidity defense in the Texas Litigation with respect to the challenged claims of the '942 patent in this Petition based on . . . *any prior art reference that forms the basis of any instituted ground.*” Prelim. Reply 2 (emphasis added).

As was the case with its original stipulation, Petitioner's new stipulation is narrower than the *Sotera* stipulation approved in the Guidance Memo, as it does not include the prohibition against asserting grounds or references "that could have reasonably been raised in the petition." The Board's informative *Sand Revolution* decision expressed skepticism that such 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 reduces somewhat the overlap relating to the challenge presented in the Petition, but not as fully as would a *Sotera* stipulation. Although Petitioner's 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. In this case, the relevant art appears to include multiple references that disclose the same basic concepts. Thus, even with Petitioner's stipulation, Petitioner could raise substantially

the same arguments in district court using prior art references that did not “form[] the basis of any instituted ground.” Although this new stipulation is somewhat broader than the stipulation in *Sand Revolution*, the concerns discussed in *Sand Revolution* remain. Accordingly, this factor weighs only slightly against discretionary denial. *See id.* at 12.

5. *Identity of Parties (Factor 5)*

Patent Owner asserts that denying institution is supported because the same parties are involved in both the present proceeding and the parallel Texas Litigation. Prelim. Resp. 22. Petitioner does not dispute this fact. Pet. 90.

We determine that this factor weighs in favor of a discretionary denial. *See Sotera*, Paper 12 at 19 (citing *Fintiv*, Paper 15 at 15; *Sand Revolution*, Paper 24 at 12–13).

6. *Other Circumstances Including the Merits (Factor 6)*

Under *CommScope Technologies LLC v. Dali Wireless, Inc.*, if we determine that the other *Fintiv* factors favor discretionary denial, we must also consider whether the Petition presents compelling merits. IPR2022-01242, Paper 23 at 4–5 (PTAB February 27, 2023); Guidance Memo 3–5.

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*, where, as here, our analysis of the first five *Fintiv* factors favors denial of institution, we address the merits of the Petition to determine whether the merits are compelling.

V. THE '942 PATENT

The '942 patent concerns a system and method for inductive charging of portable devices, e.g., cellular phones, Bluetooth headsets, notebook computers and other such equipment. Ex. 1001, 1:51–2:7. Recognizing the rapid increase in the number and variety of mobile equipment with different charging requirements, the '942 patent observes that inductive charging, e.g., using pad-like inductive charging devices capable of charging different types of devices, reduces the inconvenience of users having multiple chargers or adapters. *Id.* at 2:9–3:28. The '942 patent also identifies limitations of such pad-like charging devices and observes that “to date, no device has been provided that is portable, and that allows for inductive charging of multiple devices with differing power requirements and which itself can be intermittently or occasionally charged either by an external power source, or by other means, or that is self-powered or includes its own power source.” *See id.* at 3:35–3:41.

The “Summary” describes multiple embodiments in which a primary coil of a base unit inductively generates a current in a receiver coil of a portable device that is used to charge its battery. *Id.* at 3:45–7:60. The '942 patent describes a system that has two parts, i.e., a unit containing a primary that creates an alternating magnetic field from current current applied to a winding and a receiver that receives energy from the alternating magnetic field and transfers it to the mobile or other device. *See id.* at 3:45–60. In one embodiment a primary coil that is substantially planar and substantially parallel to a charging surface provides power inductively to the portable

device. *Id.* at 4:16–19. To provide power inductively to the portable device, a FET driver circuit applies alternating current to the primary in a range of operating frequencies near resonance of a circuit comprising the primary coil and a capacitor to generate an alternating magnetic field in a direction that is substantially perpendicular to the plane of the first primary coil and the charging surface of the system. *Id.* at 4:21–31. Increasing the operating frequency within the range corresponds to inducing a lower voltage or current in the receiver circuit. *Id.* at 4:31–34. A sense circuit having a low pass filter and an amplifier is coupled to the primary coil to detect communication of information induced in the primary coil by the receiver coil. *Id.* at 4:36–40. A communication and control circuit, including a microcontroller coupled to the first drive circuit and the sense circuit, detects the communication of information in the primary coil and operates the drive circuit to inductively transfer power from the primary coil to a receiver circuit that communicates the information detected in the first primary coil via the sense circuit. *Id.* at 4:40–50. The received communication of information includes information corresponding to the voltage or current induced by the first primary coil at the output of the receiver circuit, a unique identification code, and a power requirement. *Id.* at 4:54–58. The communication and control circuit is configured to operate the first drive circuit according to the power requirement to provide the power from the first primary coil to the receiver coil to charge the battery of the portable device. *Id.* at 4:58–62.

The '942 patent states that “the coils can be formed in any number of different shapes, including, for example, flat or planar hexagonal shapes, or spirals.” *Id.* at 30:57–60. All of the challenged claims recite, or incorporate by reference, a primary coil having a “substantially planar” shape.

VI. ILLUSTRATIVE CLAIM

Independent claim 1, reproduced below with paragraph designations used in the Petition, is illustrative of the subject matter recited in the challenged claims.

[1(a)] A system for providing power inductively to a portable device comprising a battery and an inductive receiver unit including a receiver coil and a receiver unit, the system comprising:

[1(b)] a first primary coil that is substantially planar and substantially parallel to a charging surface of the system for providing power inductively to the portable device:

[1(c)(1)] a first drive circuit, including a FET driver, a capacitor, and a FET switch, coupled to a DC voltage input and coupled to the first primary coil,

[1(c)(2)] wherein during operation the first drive circuit is configured to apply an alternating electrical current to the first primary coil at an operating frequency and duty cycle to generate an alternating magnetic field in a direction substantially perpendicular to the plane of the first primary coil and the charging surface of the system to provide power inductively to the portable device,

[1(c)(3)] wherein the operating frequency is within a range of frequencies (i) that are near a resonance frequency of a circuit comprising the first primary coil and the capacitor, (ii) such that increasing values of the operating frequency within the range of frequencies would correspond to a lower voltage or current induced in an output of the receiver circuit and (iii) that allow activation and powering of the receiver unit and charging the battery of the portable device;

[1(d)] a first sense circuit, including a low pass filter and an amplifier, coupled to the first primary coil to detect communication of information induced in the first primary coil by the receiver coil; and

[1(e)] a communication and control circuit, including a microcontroller coupled to the first drive circuit and the first sense circuit, configured to:

[1(f)] detect, through the first sense circuit, a received communication of information in the first primary coil;

[1(g)] operate the first drive circuit to inductively transfer power from the first primary coil to the receiver coil to activate and power the receiver unit to enable the receiver circuit to communicate the information detected in the first primary coil via the first sense circuit, wherein the received communication of information includes information to enable the communication and control circuit to configure the inductive transfer of power to the portable device,

[1(h)] wherein the received communication of information includes: information corresponding to a voltage or current induced by the first primary coil at the output of the receiver circuit; a unique identification code; and a power requirement; and

[1(i)] operate the first drive circuit according to the power requirement to provide the power from the first primary coil to the receiver coil to power the receiver unit and charge the battery of the portable device,

[1(j)] wherein to charge the battery of the portable device the communication and control circuit is further configured to: receive additional information in the first primary coil corresponding to the voltage or current at the output of the receiver circuit while charging the battery of the portable device;

[1(k)] regulate in a closed loop feedback manner the voltage or current at the output of the receiver circuit in accordance with the received additional information corresponding to the voltage or current at the output of the receiver circuit by adjusting at least one of the operating frequency, the duty cycle, and a DC voltage at the DC voltage input of the first drive circuit while charging the battery of the portable device;

[1(l)] monitor for continued presence of the portable device and completion of the charging of the battery of the portable device detected by the communication and control circuit through the first sense circuit; and

[1(m)] if the portable device is no longer present or charging is complete, stop operation of the first drive circuit for the provision of power inductively to the portable device.

See Pet. 93–96.

VII. ASSERTED GROUNDS

Petitioner asserts that claims 1, 2, 5, 8, and 12 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 8	103	Okada ⁶ , Odendaal ⁷ , Kook ⁸
2	103	Okada, Odendaal, Kook, Kazutoshi ⁹ , Calhoon ¹⁰ , Black ¹¹
5	103	Okada, Odendaal, Kook, Masias ¹²
12	103	Okada, Odendaal, Kook, Takagi ¹³ , Masias, Kazutoshi

VIII. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner describes a person of ordinary skill in the art (“POSITA” or “ordinarily skilled artisan”) as one having “at least a master’s degree in electrical engineering, or a similar discipline, and two or more years of experience with wireless charging systems, including, for example, inductive power transfer systems.” Pet. 4 (citing Ex. 1002, Declaration of Dr. R. Jacob Baker (“Baker Decl.”) ¶¶ 20–21). Petitioner further states that

⁶ Translation of Japanese Patent Application Publication No. 2006-141170A (Ex. 1005)

⁷ U.S. Patent No. 6,960,968 (Ex. 1008)

⁸ U.S. Patent Application Publication No. 2009/0261778A1 (Ex. 1059)

⁹ U.S. Patent Application Publication No. 2005/0135129A1 (Ex. 1034)

¹⁰ U.S. Patent Application Publication No. 2005/0127868A1 (Ex. 1041)

¹¹ U.S. Patent Application Publication No. 2006/0145660A1 (Ex. 1007)

¹² U.S. Patent No. 7,339,353 (Ex. 1031)

¹³ U.S. Patent Application Publication No. 2005/0134213A1 (Ex. 1033)

additional education can supplement practical experience and vice versa. *Id.* At this stage of the proceeding, Patent Owner does not challenge Petitioner’s description of an ordinarily skilled artisan. Prelim. Resp. 11.

The level of ordinary skill in the art may be evidenced by the references themselves. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). As, Petitioner’s description of a person of ordinary skill appears commensurate with the subject matter of the ’942 patent and the references, we apply it for purposes of this Decision.

IX. CLAIM CONSTRUCTION

For petitions filed after November 13, 2018, we interpret claim terms using “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2019). In this context, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (citations omitted) (en banc). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317 (citations omitted).

Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

We construe only those claim terms that require analysis to determine whether to institute *inter partes* review. *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))).

Neither party has proposed a special definition or explicit construction of any claim term. We do not perceive a need to expressly construe any term.

X. ANALYSIS

A. Legal Principles

“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 Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (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).

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) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in

the fashion claimed by the patent at issue.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)); see *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016) (citing *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006)).

An obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418; accord *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259 (Fed. Cir. 2007). Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Instead, Petitioner must articulate a reason why a person of ordinary skill in the art would have combined the prior art references. *In re NuVasive*, 842 F.3d 1376, 1382 (Fed. Cir. 2016).

A reason to combine or modify the prior art may be found explicitly or implicitly in market forces; design incentives; the “interrelated teachings of multiple patents”; “any need or problem known in the field of endeavor at the time of invention and addressed by the patent”; and the background knowledge, creativity, and common sense of the person of ordinary skill. *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328–29 (Fed. Cir. 2009) (quoting *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418–21 (2007)).

In determining whether a claim is obvious in light of the prior art, when in evidence, we consider any relevant objective evidence of non-obviousness. See *Graham*, 383 U.S. at 17. Notwithstanding what the

teachings of the prior art would have suggested to one of ordinary skill in the art at the time of the invention, the totality of the evidence submitted, including objective evidence of non-obviousness, may lead to a conclusion that the challenged claims would not have been obvious to one of ordinary skill. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). At this stage of the proceeding Patent Owner does not present evidence of such objective considerations

We analyze the asserted grounds of unpatentability in accordance with these principles to determine whether Petitioner has met its burden to establish a reasonable likelihood of success at trial.

B. Petitioner’s Contentions Common to All Grounds

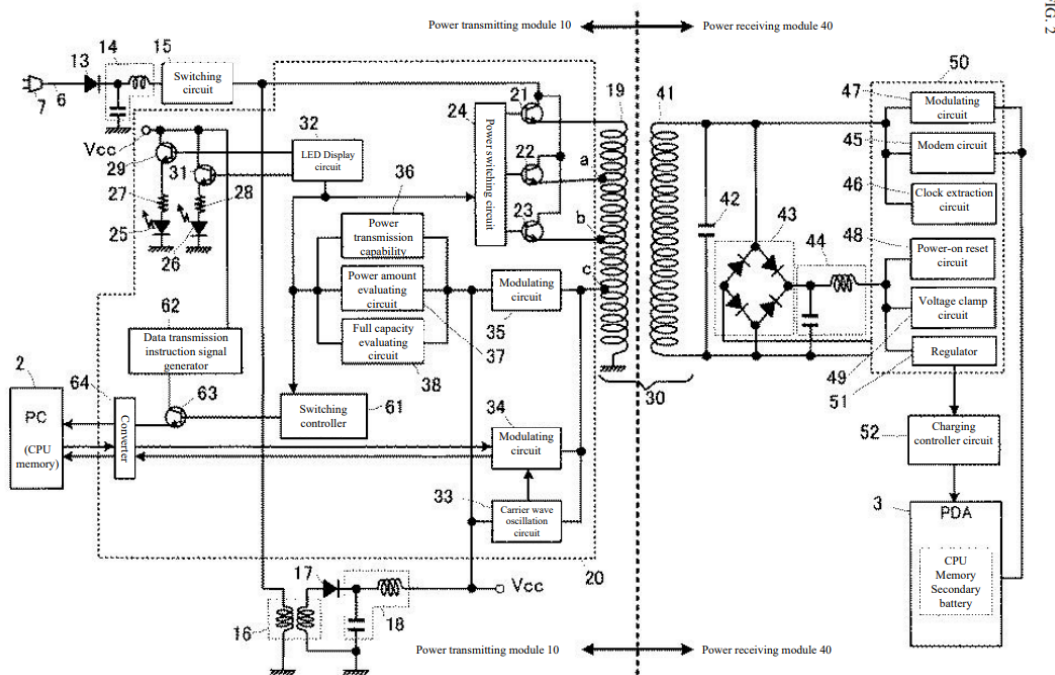
As all challenged claims depend from claim 1, we address the limitations of claim 1 and the relevant references.

1. Okada (Ex. 1005)

Okada is a Japanese patent application publication titled “Electric Power Supply System, Power Transmitting Device, and Power Receiving Device for System.” Ex. 1005, code (54). Okada discloses a power supply system that supplies power to different types of receivers. *Id.* at code (57). The system uses a common cradle having a power transmitting module including an internal coil that is supplied with a commercial voltage and a receiver having a power receiving module including an internal coil. *Id.* When a receiver such as a PDA (Personal Digital Assistant) is placed on the common cradle, magnetic coupling occurs between the coil in the receiver and the coil in the common cradle. *Id.* A voltage is induced at both ends of the coil in the receiver based on the commercial voltage supplied to the common cradle and this supplies power to the receiver. *Id.* According to Okada, after power transmission has begun, a carrier wave is periodically

transmitted from the common cradle to determine whether the receiver is properly positioned and whether it is fully charged. *Id.* ¶¶ 74–76, Fig. 3. The common cradle can switch power over three levels (low, intermediate, and high) depending on the power transmission requirements of the power receiving apparatus. *Id.* ¶¶ 51, 90.

Figure 2 of Okada, reproduced below, is a block diagram illustrating electrical connections of Okada’s power supply system. *Id.* ¶ 154.



Id. at Fig. 2. As shown in Figure 2, on the left side of the dashed vertical line Okada’s system includes a power transmitting module 10 with primary coil 19; on the right side of the dashed vertical line Okada’s system includes power receiving module 40 with secondary-side coil 41. *Id.* ¶¶ 40, 50–51. Together, primary-side coil 19 and secondary-side coil 41 constitute transformer 30, such that magnetic coupling induces a voltage on both sides of secondary-coil 41 when a voltage is applied to the primary-side coil. *Id.* ¶¶ 40, 51. Primary-side coil 19 has taps a, b, and c in order of the number of

turns; taps a, b, and c are connected to the emitters of transistors 21, 22, and 23, respectively. *Id.* ¶¶ 40, 50–51. The magnitude of the voltage generated is affected by the transformation ratio of primary-side coil 19 and secondary side coil 41. *Id.* ¶¶ 40, 51. The transformation ratio (and the magnitude of the generated voltage) is different depending on which of transistors 21, 22, and 23 are switched ON by power switching circuit 24. *Id.* ¶¶ 40, 51.

Carrier wave oscillating circuit 33 on the primary side generates a carrier wave that is provided to tap c of primary coil 19, such that magnetic coupling occurs between primary side coil 19 and secondary side coil 41. *Id.* ¶ 57. The induced voltage is converted to a DC voltage that is applied to power on-reset circuit 48 and recognized by power receiving control circuit 50 of power receiving module 40. *Id.* Clock extracting circuit 46 extracts a clock signal from the carrier wave; modulating circuit 47 uses that clock signal to modulate the carrier wave based on information from PDA 3, e.g., with codes indicating the PDA is capable of receiving power, power consumption information, and full capacity information. *Id.* A modulated wave generated by this information is applied to secondary-side coil 41. *Id.* Demodulating circuit 35 connected to tap c of primary-side coil 19 receives and demodulates the transmitted wave modulated by the code information. *Id.* ¶ 64. For example, demodulated power consumption information is used by power evaluating circuit 37 of power transmitting module 10 to determine the amount of power to supply to the PDA in the cradle and to instruct power switching circuit 24 to change the turn ratio of transformer 30 by switching transistors 21, 22, and 23. *Id.* ¶¶ 57, 64. As Okada points out

because a clock signal necessary for modulation is extracted from the carrier wave transmitted from the power transmitting module 10, an oscillating circuit does not need to be provided in the PDA 3, which is a power receiving apparatus. Furthermore,

because DC voltage generated by a carrier wave provided by the carrier wave oscillating circuit 33 can be used as a driving power source for the clock extracting circuit 46 and the modulating circuit 47, a driving power source is not needed in the power receiving module 40, which enables the circuit configuration to be simplified.

Id. ¶ 58.

2. *Odendaal (Ex. 1008)*

Odendaal is a United States Patent titled “Planar Resonator for Wireless Power Transfer.” Ex. 1008, code (54). Odendaal discloses coils arranged in spirals “on opposite sides of each other” to form a wireless connection, “so that a battery of a cellphone could be charged without physical wires connecting the cellphone to a charger.” *Id.* at 1:64–67. “According to an aspect of the present invention, a signal applied to the first spiral-shaped conductor can be transferred to the second spiral-shaped conductor by coupling of magnetic flux of the first and second spiral-shaped conductors.” *Id.* at 2:65–3:2. Odendaal’s coils are spiral-shaped conductors that are “integrated into a planar (flat/thin) structure.” *Id.* at 3:3–5.

3. *Claim Limitations 1(a) and 1(b)*

Petitioner designates the preamble of claim 1 as claim limitation 1(a). Pet. 93. The preamble reads “[a] system for providing power inductively to a portable device comprising a battery and an inductive receiver unit including a receiver coil and a receiver circuit.” *Id.* To the extent that the subject matter of the preamble is limiting, Petitioner cites Okada as disclosing the features recited in limitation 1(a). *Id.* at 6–13 (citing, e.g., Ex. 1005, code (57), ¶¶ 1, 34–36, 38–59, 47, 49, Fig. 2).

Petitioner designates as claim limitation 1(b) the recitation “a first primary coil that is substantially planar and substantially parallel to a charging surface of the system for providing power inductively to the

portable device.” *Id.* at 93. Petitioner cites Okada’s primary-side coil 19 as disclosing a primary coil that is substantially parallel to a surface of the system, as claimed. *Id.* at 14. Petitioner acknowledges that Okada does not expressly state that the first primary coil is substantially planar, as also required by limitation 1(c). *Id.* at 15. Instead, noting that planar coils positioned parallel to a power transfer system’s charging surface were known, Petitioner argues it would have been obvious to an ordinarily skilled artisan to configure Okada’s system using a planar primary coil (and secondary coil). *Id.* at 15–16. Petitioner states that Odendaal discloses such known planar-type inductors (resonators) for inductive power transfer include spiral shaped conductors integrated into a planar (flat/thin) structure to transfer energy across an interface-of-energy-transfer in magnetic form to wirelessly charge a cell phone battery. *Id.* at 16–17 (citing Ex. 1008, Figs. 1A–1B, 2A, 2C, 8E, 1:58–2:43, 2:55–3:5, 3:65–67, 4:44–5:8, 6:1–18; Ex. 1002, Baker Decl. ¶¶ 86–89, 135–137). According to Petitioner,

a POSITA would have been motivated and found obvious, to modify the *Okada* system to use a “**primary coil**” that is “**substantially planar and substantially parallel to a surface of the system**” (and accompanied such design with corresponding planar secondary coil(s) in the portable device) to expand/complement *Okada*’s thin-form configuration applications.

Id. at 17 (citing Ex. 1002, Baker Decl. ¶¶ 138–139; Ex. 1005, Figs. 1, 9, 10–16, ¶¶ 33–34, 116–146). Petitioner contends that the modification would reduce distance between primary-secondary coils, which “would have promoted close-proximity coupling, improving power transmission efficiency, reducing energy waste, and shorten[ed] charging time.” *Id.* (citing Ex. 1002, Baker Decl. ¶¶ 138–139; Ex. 1008, 2:29–44; Ex. 1005 ¶¶ 66–68, 112, Figs. 4(a), 4(b); Ex. 1036, 24:19–22).

Noting that Okada does not mention planar coils, Patent Owner contends Petitioner's argument that a person of ordinary skill would have had reason to modify Okada to incorporate Odendaal's planar coils is a conclusory assertion inadequate to support institution. Prelim. Resp. 34–35. According to Patent Owner, neither the Petition nor Odendaal explains how to replace Okada's multi-section solenoid coil formed by taps along the coil's length with a planar coil without losing functionality. *Id.* at 34, 39.

Patent Owner contends that Okada's non-planar solenoid coils 19 and 41 provide common magnetic coupling and alignment that is fundamental to Okada's system design and operation. *Id.* at 35. Patent Owner cites Okada's teaching that, based on the power requirements of receiving module 40, switching circuit 15 supplies an AC signal to different primary-side coil sections using taps that apply low, intermediate, and high power to receiving module 40. *Id.* at 36. Patent Owner emphasizes that, via the portion of the coil from tap “c” to ground, Okada sends a communication carrier wave to the secondary side, receives back information about the requirements of the connected device and, switches FETs 21, 22, 23 to select primary transformer taps that adjust the primary to secondary coil ratio thereby aligning the power transfer to the requirements of the device to be charged. *Id.* at 36–39 (citing Ex. 1005 ¶¶ 42, 50, 63–67, Figs 2, 3).

Patent Owner acknowledges that the challenged claims do not require taps, but argues that Petitioner has failed to show how Okada's system could be adapted to use planar coils as claimed while remaining operable. *Id.* at 40. As Patent Owner points out, the “the Petition does not identify any prior art that shows the use of a planar coil with a tap for selecting a sub-length of the planar coil . . . and does not even attempt to show how Okada could be

implemented with planar coils—with or without taps (i.e., by some other method)—let alone that it would have been obvious to do so.” *Id.*

Patent Owner persuasively argues that Odendaal’s planar coil is not a simple drop-in replacement for Okada’s tapped solenoid, as the Petition seems to suggest. *Id.* at 40. The Petition states only that a person of ordinary skill would have had reason to modify Okada to use a primary coil that is substantially planar and substantially parallel to the surface to expand or complement Okada’s thin-form charging applications. Pet. 17 (citing Ex. 1002, Baker Decl. ¶¶ 138–139; Ex. 1005, Figs 1, 9, 10–16, ¶¶ 33–34, 116–146). Petitioner’s argument that reducing the distance between primary and secondary would promote close proximity couple, reduce energy waste, and shorten charging time fails to address salient issues underlying the combination. *Id.* (citing Ex. 1002, Baker Decl. ¶¶ 50–53, 138–139; Ex. 1008, 2:29–44; Ex. 1005 ¶¶ 66–68, 112, Figs. 4(a)–4(b); Ex. 1036, 24:19–22).

Although Okada is premised on a multi-section primary coil, the Petition does not identify any multi-tap planar coil or explain why a person of ordinary skill would have had reason to modify Odendaal’s planar coil to add taps to it. Moreover, the Petition does not explain how a person of ordinary skill attempting to exchange Okada’s multi-section solenoid coil with a planar coil could add multiple taps to said primary coil to create multiple sections and access those sections. As Patent Owner points out, utilizing multi-tap solenoid coils, Okada relies on detection of the degree of coupling/alignment between the communication section of the primary side of the coil and a secondary coil to determine whether there is correct alignment for power delivery sections of the primary and secondary sections of the coil. *See* Prelim. Resp. 38. The Petition does not address how

Odendaal's planar could would be incorporated to provide this functionality of Okada. On this record it appears that Petitioner's proposed modification would render Okada's primary-side coil inoperable for communicating carrier waves or controlling the level of power at which it induces a current in the secondary-side coil. *See Shimano, Inc. v. Globeride, Inc.*, IPR2015-00273, Paper 40 at 12 (Final Written Decision) (PTAB Jun 16, 2016) (citing *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984) as standing for the proposition that a case of obviousness is undermined if modifying the prior art would render that prior art inoperable for its intended purpose).

In consideration of the above, we are not persuaded that Petitioner has cited sufficient evidence to support its contention that a person of ordinary skill would have had reason to combine the teachings of Okada and Odendaal.

4. *Conclusion*

a) *Claim 1*

Having considered the arguments and evidence of record, the Petition does not put forth compelling evidence of unpatentability and we exercise our discretion to decline to institute *inter partes* review of challenged claim 1.

b) *Claims 2, 5, 8, and 12*

Claims 2, 5, 8, and 12 all depend from claim 1. In view of our determination concerning claim 1, we determine that the Petition has not put forth compelling evidence of unpatentability of claims 2, 5, 8, and 12 for the same reasons. We decline to institute *inter partes* review of claims 2, 5, 8, and 12.

XI. ORDER

In consideration of the foregoing, it is hereby:
ORDERED that the Petition is denied.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

MOJO MOBILITY INC.,
Patent Owner.

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Patent 11,462,942 B2

FITZPATRICK, *Administrative Patent Judge*, concurring.

I write separately only to state that I weigh some of the *Fintiv* factors differently than as set forth above. I find, in contrast to the majority opinion, that factor 2 weighs *heavily* in favor of discretionary denial, factor 3 weighs *slightly against* discretionary denial, and factor 4 weighs *moderately* against discretionary denial.

Further, under *Fintiv* factor 6, which looks to whether there are “other circumstances that impact the Board’s exercise of discretion,” I find it significant that there is a pending district court case that could resolve the entire seven-patent dispute between the parties and that it would be inefficient to conduct, in parallel with that case, numerous *inter partes* reviews of the same seven patents.

I concur with the majority’s determination that the *Fintiv* factors overall weigh in favor of discretionary denial of the Petition. Further, I join

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the majority's determination that the Petition does not satisfy the compelling merits standard.

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