

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

MOJO MOBILITY INC.,
Patent Owner.

IPR2023-01099
Patent 11,462,942 B2

Before BRIAN C. 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

Petitioner, Samsung Electronics Co., Ltd., filed a Petition to institute an *inter partes* review of claims 21–26 of U.S. Patent No. 11,462,942 B2 (“the ’942 patent”) pursuant to 35 U.S.C. § 311(a). Paper 1 (“Pet.”). Patent Owner, Mojo Mobility Inc., filed a Preliminary Response pursuant to 37 C.F.R. § 42.107(b). Paper 7 (“Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply directed solely to the issue of discretionary denial under *Apple Inc. v. Fintiv, Inc.*, No. IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). Paper 8 (“Prelim. Reply”). With our authorization, Patent Owner filed a Preliminary Sur-reply also limited to that issue. Paper 10 (“Prelim. Sur-reply”).

Institution of an *inter partes* review requires that “the information presented in the petition filed under section 311 and any response filed under section 313 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). 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.”) Upon consideration of the record before us, and for the reasons explained below, we exercise our discretion not to institute *inter partes* review.

A. Related Matters

The parties identify the following district court proceeding involving the ’942 patent, *Mojo Mobility Inc. v. Samsung Electronics Co., Ltd.*, No. 22-cv-00398 (E.D. Tex.) (asserting the ’942 patent and also U.S. Patent Nos.

9,577,440, 11,201,500, 11,292,349, 7,948,208, 11,342,777, and 11,316,371) (“the Texas Litigation”). Pet. 1; Paper 4, 2. The parties also identify the following *inter partes* review proceedings involving the ’942 patent: (1) IPR2023-01098, challenging claims 1, 2, 5, 8, and 12, (2) IPR2023-01100, challenging claims 29 and 30, and IPR2023-001124 challenging claims 6, 9–10, and 13. Pet. 1; Paper 4, 2; Paper 3, 1–2.

In addition to the four petitions challenging claims the ’942 patent, Petitioner filed fourteen other petitions challenging claims of six related patents. *See* Prelim. Resp. 1 n.1 (listing all eighteen petitions); Prelim. Reply 4 (“Petitioner diligently prepared and filed this petition along with seventeen others[.]”).

B. Real Parties In Interest

Petitioner identifies itself, Samsung Electronics Co., Ltd., along with 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.

C. The ’942 Patent

The ’942 patent “is related generally to power supplies, power sources, and particularly to a system and method for inductive charging of portable devices.” Ex. 1001 at 1:45–47; *see also id.* at code (54) (“Efficiencies And Method Flexibilities In Induction (Wireless) Charging”). The “Summary” describes multiple embodiments in which a primary coil (or similar structure) of a base unit inductively generates a current in a receiver coil (or similar structure) of a portable device that is used to charge its

battery. Ex. 1001, 3:45–7:60. The '942 patent describes the system as having two main parts.

The first part is a pad or similar base unit that contains a primary, which creates an alternating magnetic field by means of applying an alternating current to a winding, coil, or any type of current carrying wire. The second part of the system is a receiver that comprises a means for receiving the energy from the alternating magnetic field from the pad and transferring it to a mobile or other device or rechargeable battery. The receiver may comprise coils, windings, or any wire that can sense a changing magnetic field, and rectify it to produce a direct current (DC) voltage, which is then used to charge or power the device.

Id. at 3:50–60. Of particular significance here is the '942 patent's description of coils that are substantially planar in shape and located parallel to a charging surface of the system. *See id.*, e.g., at 4:16–19, 5:19–23, 6:9–19. As discussed next, this is a featured recited by, or incorporated by reference into, all of the challenged claims.

D. The Challenged Claims

Inter partes review is sought for claims 21–26. Pet. 1. Of these, only claim 21 is independent, with claims 22–26 depending from claim 21. Claim 21 is reproduced below, with italics added.

21. A portable device configured to receive inductive power from an inductive charging system comprising a primary coil and associated circuit, the portable device comprising:

a battery;

a coil substantially planar in shape and located parallel to a charging surface of the portable device so that an alternating magnetic field, when received through the charging surface of the portable device from the primary coil of the inductive charging system in a direction substantially perpendicular to the plane of the coil, inductively generates a

current in the coil to provide power inductively to the portable device when the portable device is placed on the inductive charging system for charging the battery of the portable device;

a ferrite layer positioned under the coil on a side of the coil opposite to the charging surface of the portable device; and

a receiver circuit powered by the received inductive power from the inductive charging system, wherein the receiver circuit comprises:

a receiver rectifier circuit including a rectifier and a capacitor;

a receiver communication and control circuit including a microcontroller, wherein the receiver communication and control circuit is configured to modulate the current in the coil to communicate with the inductive charging system while the receiver circuit is being powered by the inductive charging system;

a voltage regulator coupled to an output of the receiver rectifier circuit and coupled to the microcontroller, wherein the voltage regulator is configured to provide a regulated voltage to power the microcontroller from the received inductive power; and

a battery charging circuit configured to charge the battery, wherein the battery charging circuit is coupled to the output of the receiver rectifier circuit and coupled to the battery and is configured to begin drawing current when the output of the receiver rectifier circuit reaches a set minimum voltage value;

wherein when a current is generated in the coil inductively by the primary coil:

the receiver rectifier circuit is configured to rectify and smooth the current,

the voltage regulator is configured to use the current to power and activate the microcontroller, and

the battery charging circuit is configured to use the current to charge the battery of the portable device; and

wherein upon powering and activation of the receiver circuit by the primary coil, the receiver circuit is configured to:

communicate to the inductive charging system information corresponding to a voltage or current value at the output of the receiver rectifier circuit induced by the primary coil, a unique identifier code, and a power requirement; and

periodically communicate to the inductive charging system additional information corresponding to a presently induced output voltage or current of the receiver rectifier circuit to enable the inductive charging system to regulate in a closed loop feedback manner the output voltage or current of the receiver rectifier circuit during the charging of the portable device.

Ex. 1001, 79:5–80:3 (emphasis added).

C. Asserted Patents and Printed Publications

Name	Reference	Exhibit
Okada	JP 2006-141170A, published June 1, 2006	Ex. 1005 ¹
Odendaal	US 6,960,968 B2, issued Nov. 1, 2005	Ex. 1008
Cho	WO 02/37641 A1, published May 10, 2002	Ex. 1061
Tetlow	US 2009/0243799 A1, published Oct. 1, 2009	Ex. 1064
Nguyen	US 2002/0166073 A1, published Nov. 7, 2002	Ex. 1066
Berghegger	US 6,912,137 B2, issued June 28, 2005	Ex. 1006
Calhoun	US 2005/0127868 A1, published June 16, 2005	Ex. 1041
Labrou	US 2007 /0022058 A1, published Jan. 25, 2007	Ex. 1062
Meadows	US 2003/0195581 A1, published Oct. 16, 2003	Ex. 1060

¹ Exhibit 1005 contains an English translation (Ex. 1005, 1–51), followed by translation certification (*id.* at 52), followed by a copy of the actual publication in Japanese (*id.* at 53–92). Our citations to “Okada” are to its English translation.

Name	Reference	Exhibit
Shima	US 5,808,587, issued Sept. 15, 1998	Ex. 1032

In addition to these references, Petitioner relies on declaration testimony of R. Jacob Baker, Ph.D., P.E. (Ex. 1002, “Baker Decl.”).

D. The Asserted Grounds of Unpatentability

Petitioner asserts the following five grounds of unpatentability:

Claim(s) Challenged	35 U.S.C. § ²	Basis
21, 24	103(a)	Okada, Odendaal, Cho, Tetlow, Nguyen, Berghegger, Calhoon
22	103(a)	Okada, Odendaal, Cho, Tetlow, Nguyen, Berghegger, Calhoon, Shima
23	103(a)	Okada, Odendaal, Cho, Tetlow, Nguyen, Berghegger, Calhoon, Labrou
25	103(a)	Okada, Odendaal, Cho, Tetlow, Nguyen, Berghegger, Calhoon, Meadows
26	103(a)	Okada, Odendaal, Cho, Tetlow, Nguyen, Berghegger, Calhoon, Takagi

Pet. 2–3.

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, which was enacted September 16, 2011, made amendments to 35 U.S.C. §§ 102 and 103. AIA § 3(b)–(c). Those amendments became effective eighteen months later on March 16, 2013. *Id.* at § 3(n). Because the application from which the ’942 patent issued claims priority to an application filed before March 16, 2013, any citations herein to 35 U.S.C. §§ 102 and 103 are to their pre-AIA versions. *Id.* at § 3(n)(1).

II. DISCRETIONARY DENIAL

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.”).

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 314(a) and deny the Petition in view of the Texas Litigation. Prelim. Resp. 11–22; Prelim. Sur-reply 1–5. Petitioner argues to the contrary. Pet. 80–83; Prelim. Reply 1–5. We consider the parties’ arguments below in relation to what are known as the *Fintiv* factors, namely:

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

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

A. Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted

On August 11, 2023, Petitioner filed a motion to stay the Texas Litigation pending its eighteen petitions for *inter partes* review. Ex. 2002. If the court had entered a stay, that would dispel inefficiency concerns. *See Fintiv* at 6 (“A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts.”). However, according to the record before us, Petitioner’s motion to stay has yet to be ruled on. *See* Prelim. Reply at 3 (Petitioner arguing that the motion to stay is still pending and thus Patent Owner’s prediction that it will be denied “is speculative”).

Petitioner argues that this factor is neutral “as there has been no actual denial of a stay.” Prelim. Reply 3. In contrast, Patent Owner argues that this factor “heavily favors denial” of the Petition because the court “is likely to deny” a stay of the litigation. Prelim. Resp. 16. Patent Owner argues that the presiding judge is likely to deny Petitioner’s motion to stay the litigation in view of his track record of denying such motions. *Id.* at 15–16 (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)). Patent Owner further argues that denial of a stay is likely given the progression of the

Texas Litigation relative to the eighteen petitions for *inter partes* review. *See id.* at 16–17 (“Case Timeline”). Patent Owner’s arguments are appealing, but the fact remains that the court has yet to rule on the motion to stay. It strikes us as imprudent to presume that the court “is likely to deny” Petitioner’s motion to stay, which has remained pending for over three months.

Factor 1 is neutral.

B. Factor 2: proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision

The Petition asserts that factor 2 “is neutral.” Pet. 81. In its Preliminary Reply, Petitioner more aggressively argues that this factor “*weighs against denial* or is at least neutral.” Prelim. Reply 4 (emphasis added). Petitioner acknowledges that trial is scheduled for August 2024 and that a median time-to-trial for the Eastern District of Texas (19 months) would place the trial even earlier, in May 2024. Pet. 81–82 (citing Ex. 1052, 35; Ex. 1053, 1). Petitioner maintains that this factor is nonetheless neutral (or even weighs against discretionary denial) when considering the trial’s August 2024 date along with other considerations, namely that (1) “Petitioner diligently filed this petition (challenging long, convoluted claims) in advance of the one-year bar date and within four months of [Patent Owner]’s infringement contentions in the Texas Litigation,” (2) “[f]act discovery is not anticipated to close until March 18, 2024,” (3) “[e]xpert discovery has not yet started,” (4) “the *Markman* hearing is scheduled for February 6, 2024, after the filing of this petition,” and (5) there is a “lack of overlap” between the Texas Litigation and the Petition. Pet. 82; Prelim. Reply 4.

Patent Owner’s arguments are focused on the fact that the trial is scheduled to occur six months prior to when a final written decision would issue were we to institute an *inter partes* review. Prelim. Resp. 17–18.

In *NHK Spring Co. v. Intri-Plex Techs., Inc.*, No. IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential) (“*NHK*”), the Board denied a petition under 35 U.S.C. § 314(a)³ 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. *NHK* at 20. In *Fintiv*, the Board discussed *NHK* and held the following:

NHK applies to the situation where the district court has set a trial date to occur earlier than the Board’s deadline to issue a final written decision in an instituted proceeding. In a case where, in contrast to the facts present in *NHK*, the district court has set a trial date after the Board’s deadline to issue a final written decision in an instituted proceeding, the Board may be less likely to deny institution under 35 U.S.C. § 314(a) based on district court trial timing depending on other factors as set forth below.

Fintiv at 3. The instant situation is the former one described above by *Fintiv* and to which “*NHK* applies.”

Further, the additional considerations Petitioner advances are not persuasive that factor 2 is neutral or weighs against discretionary denial. First, the fact that Petitioner filed its Petition “in advance of the one-year

³ In *NHK*, the Board additionally denied institution under 35 U.S.C. § 325(d). *NHK* at 18. However, the determination under § 325(d) was “independent” of the determination under 35 U.S.C. § 314(a). See *Fintiv*, at 5 n.8 (“To the extent we refer to such a denial of institution as a ‘denial under *NHK*,’ we refer to *NHK*’s § 314(a) denial due to the earlier trial date in the district court and not the independent basis for denial under § 325(d).”).

bar,” referring to 35 U.S.C. § 315(b), is irrelevant to the *Fintiv* analysis, which presupposes that Petitioner has filed its Petition before the expiration of the one-year bar. Pet. 82. Second, the fact that Petitioner filed its Petition within four months of Patent Owner’s infringement contentions does not change the fact that the trial is scheduled to occur six months prior to when a final written decision would issue. In any event, neither *Fintiv* nor the non-precedential *Verizon* decision cited by Petitioner (see Pet. 82) considers diligence in filing a petition as part of a factor 2 analysis, let alone that such diligence might outweigh a scheduled trial predating a final written decision by six months. See *Fintiv* at 11 n.21 (discussing diligence in the context of factor 3 but not factor 2); *Verizon Business Network Services, Inc. v. Huawei Techs. Co.*, No. IPR2020-01141, Paper 12 at 12 (PTAB Jan. 14, 2021) (same). Petitioner’s arguments about fact discovery, expert discovery, *Markman* hearing, and lack of overlap similarly concern other factors, not factor 2.

In sum, because the Texas Litigation is scheduled to go to trial in August 2024, approximately six months before a final written decision would be entered, factor 2 weighs in favor discretionary denial.

*C. Factor 3: investment in the parallel proceeding
by the court and the parties*

Petitioner’s arguments under this factor emphasize what remains to take place in the Texas Litigation while Patent Owner’s arguments emphasize what has already transpired. Pet. 83; Prelim. Reply 4–5; Prelim. Resp. 18–19; Prelim. Sur-reply 2. For example, Petitioner argues that the Texas Litigation “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. 82 (citing Ex. 1053, 3). In contrast, Patent Owner argues, and Petitioner does not dispute, that “the district court proceeding has been pending since October 2022,” and the parties “have prepared and exchanged infringement and invalidity contentions, presented initial disclosures, and are in the midst of substantial fact discovery.” Prelim. Resp. 18; *see* Prelim. Reply 4–5 (not disputing these arguments). Additionally, Patent Owner argues, and Petitioner does not dispute, that claim construction will have been briefed and argued by the time the instant decision is entered. Prelim. Resp. 18; *see* Reply 4–5 (not disputing this argument).

The district court proceeding has been pending since October 2022 and has already advanced well beyond the pleadings stage. Fact discovery is well underway (the deadline to “substantially complete” document production has passed and fact discovery is set to close a little more than a month after the issuance of this decision) and claim construction has been briefed and argued. Ex. 2007 (Docket Control Order). While there is still much work to be done on the district court case, on balance, we find that this factor favors exercising our discretion to deny institution.

Petitioner additionally argues that its “significant investment to expeditiously prepare and file this petition, along with seventeen others within four months of [Patent Owner]’s infringement contentions to address *nearly one hundred* []asserted claims” should be considered “prompt action ‘after becoming aware of the claims being asserted’ [and] weighs heavily

against discretionary denial.” Prelim. Reply 5 (citing Ex. 1018; Ex. 1022⁴ and quoting *Fintiv* at 11); *see* *Fintiv* at 11 n.21 (“If the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted, this fact has weighed against” discretionary denial. (citing *Intel Corp. v. VLSI Tech. LLC*, No. IPR2019-01192, Paper 15 at 12–13 (PTAB Jan. 9, 2020); *Illumina, Inc. v. Natera, Inc.*, No. IPR2019-01201, Paper 19 at 8 (PTAB Dec. 18, 2019)).

We do not doubt that preparing and filing eighteen the Petitions was a significant investment. But that it was completed within four months of receiving infringement contentions is not a degree of diligence that dominates the factor 3 analysis. 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.

In sum, factor 3 weighs in favor discretionary denial.

D. Factor 4: overlap between issues raised in the petition and in the parallel proceeding

Petitioner argues that this factor weighs against discretionary denial in view of its updated and broader stipulation 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 (i) any of the same instituted grounds or (ii) any prior art reference that

⁴ Exhibits 1018 and 1022 are Patent Owner’s infringement chart and contentions, respectively, from the Texas Litigation, both dated February 18, 2023.

forms the basis of any instituted ground.” Reply 2; *see* Pet. 83 (original stipulation, stating that, “if the IPR is instituted, Petitioner will not pursue the IPR grounds in the district court litigation”).

Patent Owner argues that “Petitioner’s new stipulation does not eliminate the substantial overlap with the district court case [because] petitioner continues to seek to challenge the patents’ validity based on published prior art before both the district court and the PTAB.” Prelim. Sur-reply 2. Patent Owner adds that it “remains” the case “that institution of the IPR petitions would result in published prior art invalidity assertions being made before both the district court and the PTAB.” *Id.* at 3. Patent Owner is correct.

In addition, the stipulation would not prevent Petitioner from arguing invalidity in the Texas Litigation on a similar, and perhaps substantively identical, ground using different references that are cumulative of the references asserted here.

Accordingly, the stipulation removes some, but not all, overlap between issues raised in the Petition and the Texas Litigation. On balance, factor 4 weighs slightly against discretionary denial.

*E. Factor 5: whether the petitioner and the defendant
are the same in the parallel proceeding*

The parties here are the same as in the Texas Litigation. Accordingly, factor 5 weighs in favor of discretionary denial.

*F. Factor 6: other circumstances that impact the Board’s
exercise of discretion, including the merits*

Fintiv states that, “in evaluating the factors, the Board takes a holistic view of whether efficiency and integrity of the system are best served by

denying or instituting review.” *Fintiv* at 6. Here, there are “other factors” present that should be considered in forming this holistic view.

The Texas Litigation involves seven patents asserted by Patent Owner. *See* Pet. 1 (listing the seven patents). Petitioner filed the instant Petition, along with seventeen additional petitions, to challenge collectively various claims of the same seven patents. *See* Prelim. Resp. 1 n.1 (listing all eighteen petitions); Prelim. Reply 4 (“Petitioner diligently prepared and filed this petition along with seventeen others[.]”). The Texas Litigation can resolve the entire seven-patent dispute between the parties.

It strikes us as inefficient to conduct, in parallel with the Texas Litigation, numerous *inter partes* reviews of the same seven patents. This is particularly the case here where the best available evidence indicates that the Texas Litigation will go to trial approximately six months prior to when a final written decision would be entered if *inter partes* review were to be instituted. Thus, this additional reason weighs in favor of discretionary denial.

G. Fintiv Conclusion

As a whole, the *Fintiv* factors weigh in favor of discretionary denial of the Petition, with factor 1 being neutral, factors 2, 3, 5, and 6 weighing in favor of discretionary denial and factor 4 weighing slightly against it. However, we “will not deny institution based on *Fintiv* if there is compelling evidence of unpatentability.” *CommScope Techs. LLC v. Dali Wireless Inc.*, No. IPR2022-01242, Paper 23 at 4 (PTAB Feb. 27, 2023) (precedential) (“*CommScope*”). Thus, we now consider the merits of the Petition under this higher standard.

III. ANALYSIS UNDER COMPELLING MERITS STANDARD

“[T]he compelling merits standard is a higher standard than the standard for institution set by statute.” *Commscope* at 3 (referring to 35 U.S.C. § 314(a)). “[W]hen determining whether there is a compelling unpatentability challenge, the Board evaluates whether the Petition presents challenges 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.* (quotation marks and citation omitted). Put another way, the compelling merits standard is satisfied “if it is highly likely that the petitioner would prevail with respect to at least one challenged claim.” *Id.* at 4 (citation omitted). For the reasons explained below, the Petition fails to meet this standard.

A. Claim Construction

The challenged claims should be read in light of the specification, as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we generally give claim terms their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (“The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question.” (internal quotation marks omitted)); *see also* 37 C.F.R. § 42.100(b) (stating that claims are construed in IPRs according to the same standard as used in federal court).

Neither party proposes any express constructions of claim terms. Pet. 5–6; Prelim. Resp. 11. Accordingly, we do not adopt any express constructions.

B. Obviousness Generally

A claim is unpatentable “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103(a). “Obviousness is a question of law based on underlying facts.” *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1167 (Fed. Cir. 2015). The underlying facts include “(i) the scope and content of the prior art, (ii) the differences between the prior art and the claimed invention, (iii) the level of ordinary skill in the field of the invention, and (iv) any relevant objective considerations of nonobviousness.” *Id.* (citing *Graham v. John Deere of Kan. City*, 383 U.S. 1, 17–18 (1966)). An additional underlying fact is whether there was a reason to combine prior art teachings when so asserted. *Id.*; *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418–19 (2007) (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does . . . because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.”).

C. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). The “person having ordinary skill in the art” is a hypothetical construct, from whose vantage point obviousness is assessed. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

Petitioner contends a person of ordinary skill in the art of the ’942 patent “would have had 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,” with additional education supplementing “practical experience and vice versa.” Pet. 4–5 (citing Ex. 2002 ¶¶ 20–21).

Patent Owner does not dispute Petitioner’s description of a person of ordinary skill in the art or provide its own description.

Because Petitioner’s formulation of the level of ordinary skill in the art appears consistent with the ’942 patent and the asserted prior art, and because there is no argument to the contrary at this stage of the proceeding, we apply it in our analysis below.

D. Overview of Key Prior Art 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, (54). Okada discloses a power supply system that supplies power to different types of receivers. *Id.* at (57); *see also id.* ¶8 (“An object of the present invention is to provide a power supply system that enables the same power transmitting device to supply power to different types of power receiving apparatuses while saving space.”).

The system includes a power transmitting device and a power receiving device. *Id.* ¶9. The power transmitting device has a primary-side coil and a primary-side circuit that provides a switched pulse voltage to the primary-side coil. *Id.* The power receiving device has a secondary-side coil that magnetically couples to the primary-side coil and a secondary-side circuit that rectifies and smooths voltage induced by the secondary-side coil. *Id.* Thus, when a power-receiving device such as PDA 3 is placed on a power transmitting device such as common cradle 4, a magnetic coupling occurs between the secondary-side coil in the receiver and the primary-side coil in the common cradle, which induces a voltage in the secondary-side coil. *Id.* ¶35.

As the Okada system is designed for use with different power-receiving devices, its power transmitting device can adjust the power transmitted according to the amount of power that can be received by the power receiving device. *Id.* ¶73. The amount of power is varied by varying the turn ratio of the primary-side coil with the secondary-side coil,

specifically by changing the effective number of actual turns of the primary-side coil 19. *Id.*

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.

2. Odendaal (Ex. 1008)

Odendaal is a United States Patent titled “Planar Resonator for Wireless Power Transfer.” Ex. 1008, (54). Odendaal discloses first and second coils (also referred to as conductors) 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. The spiral-shaped coils/conductors “are preferably integrated into a planar (flat/thin) structure.” *Id.* at 3:3–5.

E. All Grounds

Petitioner challenges independent claim 21 and dependent claim 24 as unpatentable for obviousness under 35 U.S.C. § 103(a) in view of a combination of Okada, Odendaal, Cho, Tetlow, Nguyen, Berghegger, and Calhoon. Pet. 2, 6–60; Ex. 1002, ¶¶ 120–212.

Patent Owner argues that the “Petition fails to show that a [person of ordinary skill in the art] would have been motivated to combine and modify the many asserted prior art references to arrive at the claimed subject matter”

or, even if motivated, “would have had a reasonable expectation of success in making the alleged combinations and changes.” Prelim. Resp. 23. Patent Owner’s argument is persuasive with respect to at least one limitation common to all challenged claims, as we discuss below.

Claim 21 recites that the portable device comprises “a coil substantially planar in shape and located parallel to a charging surface of the portable device.” Ex. 1001, 79:10–11.

Petitioner argues that “*Okada* in view of *Odendaal* discloses/suggests this limitation.” Pet. 13. As Petitioner points out, *Okada*’s cradle 4 includes primary-side coil 19 that inductively generates a current in receiver-side coil 41 of PDA 3. *Id.* at 13–15; Ex. 1005 ¶¶9, 13. However, *Okada* does not describe either coil being substantially planar in shape. Thus, Petitioner proposes a modification in view of *Odendaal*, arguing:

While *Okada* does not expressly state the “coil *substantially planar in shape* and located parallel to a charging surface of the portable device,” a POSITA would have found it obvious to configure *Okada*’s portable device to implement/use planar coil(s) (and primary coil(s)) in view of *Odendaal*. (Ex. 1002, ¶132.).

Pet. 17.

Petitioner extensively, and persuasively, argues that it was known in the art to have “[p]lanar coils placed in parallel to a power transfer system’s surface.” Pet. 17. Indeed, *Odendaal* states that its spiral-shaped conductors/coils “are preferably integrated into a planar (flat/thin) structure.” Ex. 1008, 3:3–5. We are also satisfied by Petitioner’s argument that *Odendaal* is analogous art. *See* Pet. 18. However, an invention “composed of several elements is not proved obvious merely by demonstrating that each

of its elements was, independently, known in the prior art.” *KSR*, 550 U.S. at 418.

Here, Petitioner argues that a person of ordinary skill in the art would have “modif[ied] the *Okada* system to use planar coil 41 in PDA3 (and complimented such a design with corresponding planar primary coil).” Pet. 20. Petitioner states that the skilled artisan would have done so “to expand/compliment applications compatible with those contemplated by *Okada* to use thin(ner) devices.” *Id.* (citing Ex. 1002 ¶¶147–148). Dr. Baker repeats this statement and adds that the modification could reduce size and/or weight of a device and, due to the “close proximity coupling,” could improve power transmission efficiency, reduce energy waste, and shorten charging time. Ex. 1002 ¶147; *see also id.* ¶ 148 (testifying that “complementing a secondary-side/primary-side planar coil with a primary-side/secondary-side planar coil would provide for efficient transmission of energy between the two planar coils in an inductive charging/power systems”).

Patent Owner argues that the Petitioner’s proposed modification of *Okada*, to use *planar* primary-side and secondary-side coils, would have presented a number of issues for a person of ordinary skill in the art to solve and ultimately would have deterred the skilled artisan from implementing such a modification. Prelim. Resp. 32–34. Patent Owner quotes a prior Board decision that held “[c]ombinations of references that render a prior art device inoperable, or that fundamentally change the manner of operation of the device, often will not support a finding of obviousness.” *Id.* at 33 (quoting *Plas-Pak Indus., Inc. v. Sulzer Mixpac AG*, No. 13-7786, 2014 WL 203101, at *2 (PTAB. Jan. 17, 2014)). The Board’s holding in *Plas-Pak*, in

turn, was based on binding precedent, *In re Ratti*, 270 F.2d 810 (CCPA 1959), which held that a combination of references is “not a proper ground for rejection” where it “would require a substantial reconstruction and redesign of the elements shown [in the prior art] as well as a change in the basic principles under which [the prior art] construction was designed to operate.” *Id.* at 813.

Patent Owner argues that, “for specific reasons of common magnetic coupling and alignment (fundamental to the Okada system design and operation), Okada teaches a system with non-planar, solenoid wirewound coils 19 and 41.” Prelim. Resp. 34. Patent Owner explains that Okada utilizes varying portions of the primary coil for communication purposes and for varying the power induced in the secondary coil. *Id.* at 34–39.

To illustrate its point, Patent Owner annotates Figure 2 of Okada, which we reproduce below.

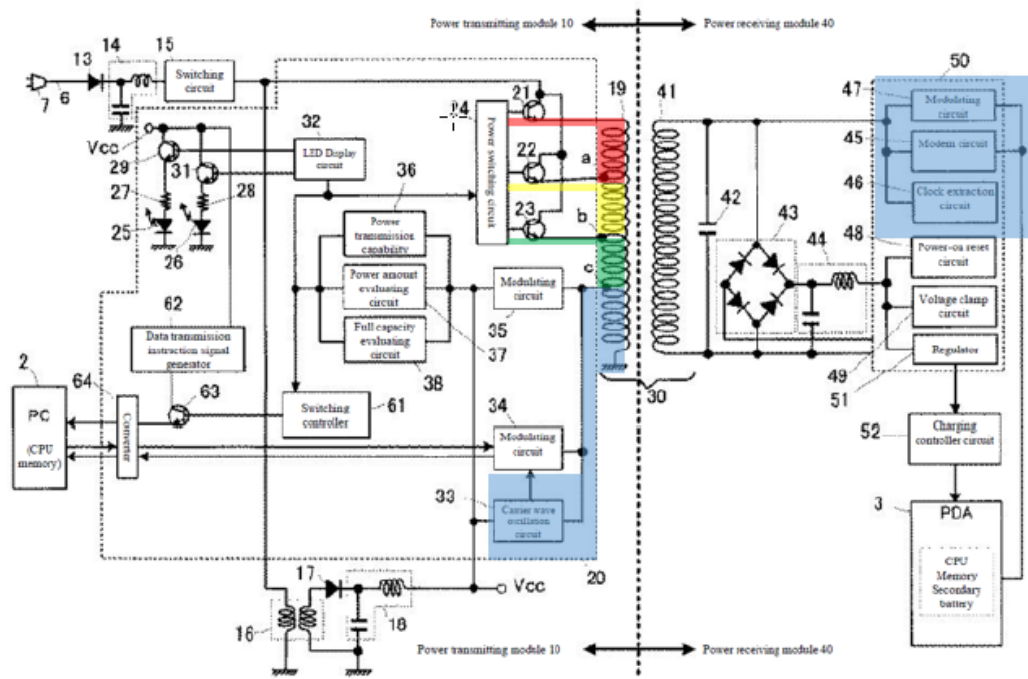


FIG. 2

Figure 2 of Okada, as annotated on page 35 of the Preliminary Response, is reproduced above and shows a “block diagram illustrating the electrical configuration of the common cradle 4 . . . equipped with the power transmitting module 10 and the PDA equipped with the power receiving module 40.” Ex. 1005 ¶37. The power transmitting module includes primary-side coil 19, and the power receiving module includes secondary-side coil 41. *Id.* ¶40.

As described by Patent Owner, Okada uses only the blue portion of the primary-side coil—from tap “c”—to send a communication carrier wave, receive an information signal from the secondary-side coil, and detect whether the secondary side coil is properly aligned with primary-side coil. Prelim. Resp. 36 (citing Ex. 1005 ¶¶50, 63–66, Fig. 2). Once the system has determined a degree of alignment between the coils and the power receiving module’s required power level (low, intermediate, or high), one of three different sections of the primary side coil is enabled using different taps (starting at red, yellow, or green and continuing to ground) and connected to switching circuit 15 to provide power to charge the portable device. *Id.* (citing Ex. 1005 ¶¶50, 63–66, Fig. 2).

Patent Owner explains that “Okada relies only on the blue portion of the coil to determine whether the device is ‘correctly placed,’ but then uses one of three larger portions of the primary side coil 19 for charging (from red, yellow, or green to ground).” Prelim. Resp. 36. Patent Owner further explains that “Okada’s tapped solenoid design allows the system to select a *different* section of the primary side coil 19 with a different number of turns to transfer power at the desired power level (steps S8, S10 or S12 in Fig. 3), secure in the knowledge that each of the three power transfer windings /

sections and the communication winding / section are equally well aligned and coupled to the solenoid secondary side coil.”). *Id.* at 38; *see* Ex. 1005 ¶73 (The amount of power is varied by varying the turn ratio of the primary-side coil with the secondary-side coil, specifically by changing the “effective number of actual turns of the primary-side coil 19.”).

Despite this deliberate deployment of a tapped solenoid coil as fundamental to Okada’s operation, the Petition does not factor it into the modification. *See, e.g.* Prelim. Resp. 39–41 (arguing that Odendaal discloses only simple two-port spiral coils, without any taps along the length of the coil (citing Ex. 1008, Fig. 1A) and the Petition fails to identify any multi-tap planar coils in the prior art). In fact, the Petition does not even address Okada’s use of a tapped solenoid coil for communication and power control purposes or provide any explanation as how to such features could be preserved in a planar coil arrangement. *See, e.g.*, Pet. 7 (stating that Okada’s power transmitting module “includes a primary coil 19” but not addressing its taps a, b, and c, or the use of said taps).

The Petition’s reason for why a person of ordinary skill in the art allegedly would have made the proposed modification, i.e., “to expand/compliment applications compatible with those contemplated by *Okada* to use thin(ner) devices” (Pet. 20), is not persuasive. Rather, it appears, based on the record presented, that the 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 Ratti*, 270 F.2d at 813 (A combination of references is “not a proper ground for rejection” where it “would require a substantial reconstruction and redesign of the elements shown [in the prior

art] as well as a change in the basic principles under which [the prior art] construction was designed to operate.”); *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984) (reversing BPAI decision affirming obviousness rejection where a proposed modification to the prior art would have “rendered [it] inoperable for its intended purpose”).

For these reasons, the Petition does not present “compelling evidence of unpatentability.” *Commscope* at 4.

III. CONCLUSION

The *Fintiv* factors, on balance, favor discretionary denial under 35 U.S.C. § 314(a) and the Petition lacks a compelling unpatentability challenge. Accordingly, we deny the Petition.

IV. ORDER

In consideration of the foregoing, it is hereby:

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

IPR2023-01099
Patent 11,462,942 B2

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

MOJO MOBILITY INC.,
Patent Owner.

IPR2023-01099
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. Specifically, I find, in contrast to the majority opinion, that factor 2 weighs *heavily* in favor discretionary denial, factor 3 weighs *slightly against* discretionary denial, and factor 4 weighs *moderately* against discretionary denial. Despite these differences, I concur with the determination that the *Fintiv* factors overall weigh in favor of discretionary denial of the Petition. Further, I join the majority's determination that the Petition does not satisfy the compelling merits standard.

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