

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD,
Petitioner,

v.

MOJO MOBILITY INC.,
Patent Owner.

IPR2023-01089
Patent 11,292,349 B2

Before WILLIAM V. SAINDON, MICHAEL J. FITZPATRICK, and
KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge*
SZPONDOWSKI.

Opinion Concurring filed by *Administrative Patent Judge* FITZPATRICK.

SZPONDOWSKI, *Administrative Patent Judge*.

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

I. INTRODUCTION

Samsung Electronics Co., Ltd. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 1, 4, 5, 7, 10–12, and 26 of U.S. Patent 11,292,349 B2, issued on April 5, 2022 (Ex. 1001, “the ’349 patent”). Mojo Mobility Inc. (“Patent Owner”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply (Paper 8, “Reply”), and Patent Owner filed a Preliminary Sur-reply (Paper 10, “Sur-reply”).

Institution of an *inter partes* review is authorized when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Based on the current record, and for the reasons explained below, we determine that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim, and we institute an *inter partes* review.

II. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. as the real party-in-interest. Pet. 1. Patent Owner identifies itself as the real party-in-interest. Paper 5, 2 (Mandatory Notices of Patent Owner).

B. *Related Matters*

The parties identify *Mojo Mobility Inc. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.*, Case No. 2:22-cv-00398 (E.D.

Tex.) as a related case (“district court litigation”). Pet. 1; Paper 5, 2.¹ The parties also state that Petitioner has concurrently filed another petition for *inter partes* review of the ’349 patent (IPR2023-01090). *Id.*

C. The ’349 Patent (Ex. 1001)

The ’349 patent is titled “System and Method for Powering or Charging Receivers or Devices Having Small Surface Areas or Volumes” and is generally directed to “systems and methods for enabling transfer of power, from a wireless charger or power supply, to one or more receivers placed on or near the wireless charger or power supply, including powering or charging one or multiple receivers or devices having small surface areas or volumes.” Ex. 1001, code (54), 1:54–58.

The ’349 patent discloses various embodiments of a system for wireless powering or charging of devices. Generally, “an inductive power transmitter employs a magnetic induction coil(s) transmitting energy to a receiving coil(s) in or on a device or product.” *Id.* at 4:4–7. Figure 1, reproduced below, illustrates such a system.

¹ Petitioner incorrectly identified Case No. 1:22-cv-00398. Pet. 1. Patent Owner identifies Case No. 1:22-cv-00433-JRJ (E.D. Tex.), which appears to be the original case number, before the case was transferred. Paper 5, 2.

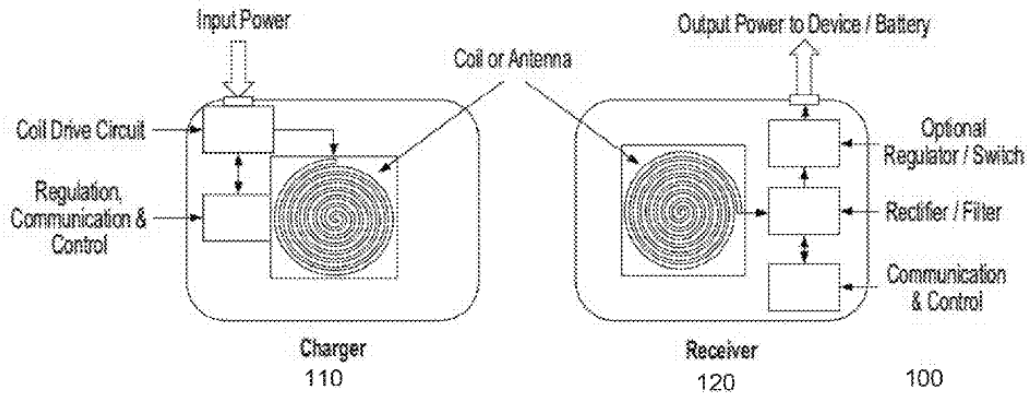


FIGURE 1

Figure 1, above, depicts a “wireless charger or power system 100,” which includes “a first charger or transmitter part 110 and a receiver 120 connected to a mobile or stationary device.” Ex. 1001, 6:17–20. Both the charger or transmitter part 100 and the receiver 120 also include a coil. *Id.* at Fig. 1.

The transmitter (or charger) coil may be “constructed of Litz wire or patterned printed circuit board (PCB).” *Id.* at 7:42–44. “[T]he charger can operate continuously, and any appropriate receiver coil placed on or near its surface will bring it to resonance and will begin receiving power.” *Id.* at 7:65–8:1. The ’349 patent describes various geometries for the charger coils. *Id.* at 7:28–8:57.

Figure 5, reproduced below, illustrates a charger geometry.

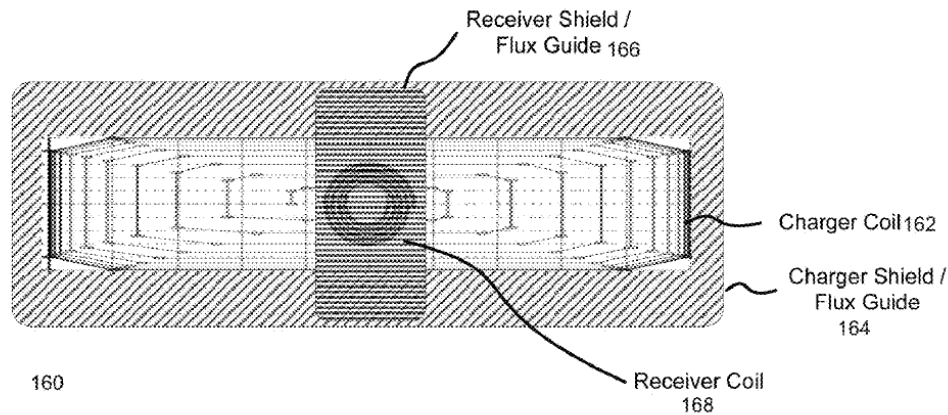


FIGURE 5

Figure 5, above, shows “geometry 160 whereby a charger coil 162 is placed on a magnetic flux guide/shielding layer 164 that extends beyond the edges of the coil.” *Id.* at 8:31–33. Additionally, receiver coil 168 “similarly has a magnetic flux/shielding layer 166 that extends beyond the size of the coil 168.” *Id.* at 8:33–35.

Figure 6, reproduced below, illustrates a return magnetic flux from a charger.

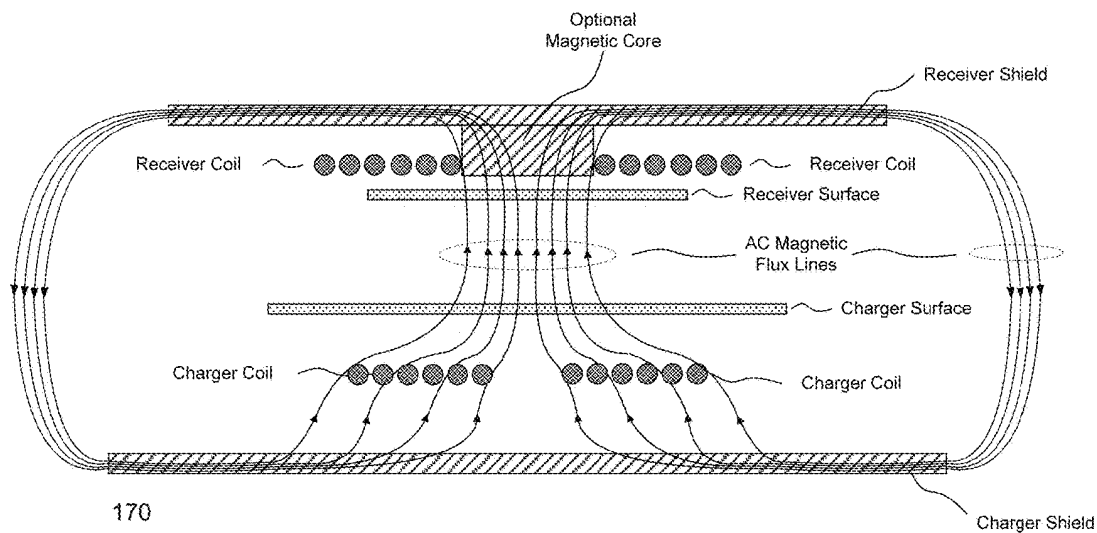


FIGURE 6

Figure 6, above, depicts, from top to bottom, a receiver shield, receiver coil, receiver surface, AC magnetic flux lines, charger surface, charger coil, and charger shield. The '349 patent further states that “the reluctance of the flux path in the receiver can be lowered by including high permeability material in the core of the receiver ring coil (similar to a solenoid).” Ex. 1001, 8:49–52. Additionally, a Litz wire receiver coil can be used. *Id.* at 8:54–57.

Figure 7, reproduced below, illustrates a wire wrapped around a core to create a solenoid type receiver.

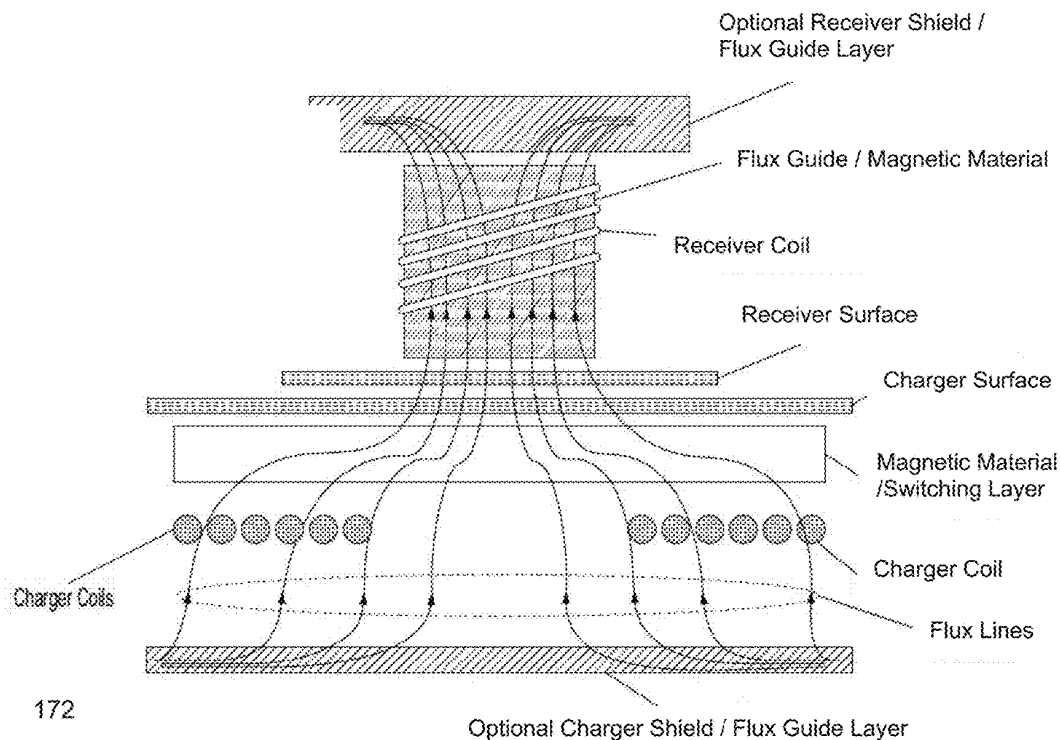


FIGURE 7

Figure 7, above, depicts, from top to bottom, an optional receiver shield/flux guide layer, flux guide/magnetic material, receiver coil, receiver surface, charger surface, magnetic material/switching layer, charger coil, flux lines, and optional charger shield/flux guide layer. Figure 7 shows Litz wire

wrapped around the core of the receiver coil to create a solenoid type receiver. *Id.* at 8:64–65.

Figure 8, reproduced below, illustrates a ferrite lower magnetic shield or flux guide.

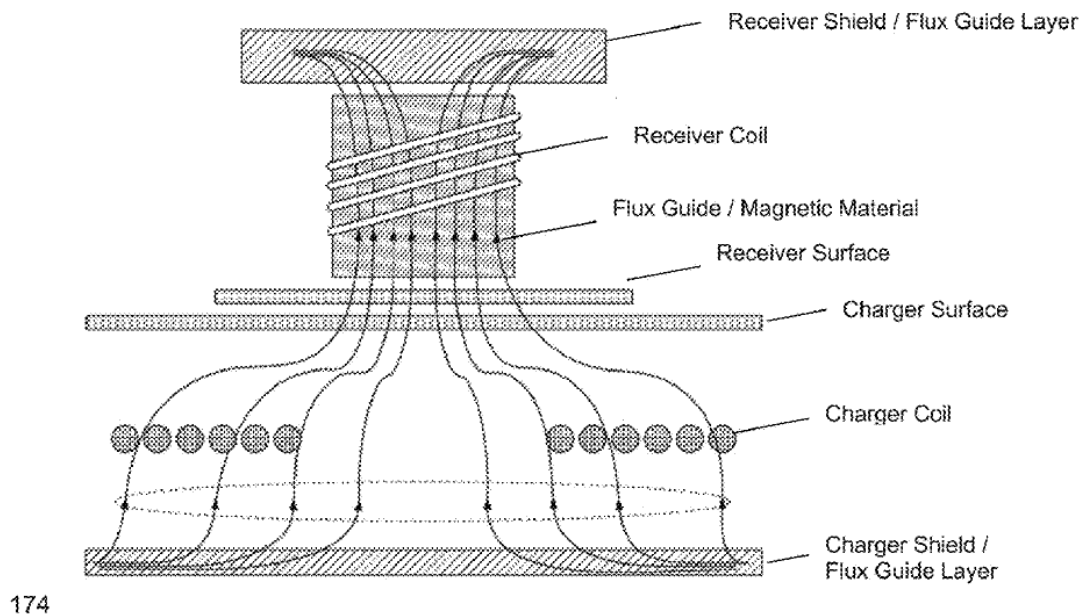


FIGURE 8

Figure 8, above, depicts, from top to bottom, a receiver shield/flux guide layer, receiver coil, flux guide/magnetic material, receiver surface, charger surface, charger coil, and charger shield/flux guide layer. Figure 8 shows an embodiment “with a thin (0.5 mm thick) ferrite lower magnetic shield/flux guide.” *Id.* at 9:11–13.

In addition, the ’349 patent describes that “the charger and or receiver can include means to provide more precise alignment between the charger and receiver coils or antennas.” *Id.* at 14:35–37. “These can include visual, physical, or magnetic means to assist the user in alignment of parts.” *Id.* at

14:37–38. “To implement more positioning freedom of the receiver on the charger, the size of the coils can also be mismatched.” *Id.* at 14:38–40.

D. Illustrative Claim

Independent claim 1 is reproduced below, with Petitioner’s identifiers in brackets.

1. [1(a)] A system for inductive power transfer comprising:

[1(b)] a charger, wherein the charger is an inductive charger, and the charger includes:

[1(c)] a printed circuit board having a charger coil, wherein the charger coil has a substantially planar charger surface;

[1(d)] a substantially planar magnetic layer under the charger coil opposite the charger surface; and

[1(e)] a charger drive circuit, wherein the charger drive circuit includes a resonant capacitor and a FET switch to apply an alternating voltage to the charger coil; and

[1(f)] a first mobile device that includes a receiver to inductively receive power for the first mobile device, wherein the receiver includes:

[1(g)] a solenoid, wherein the solenoid includes:

[1(h)] a magnetic core having a relative magnetic permeability exceeding 1 and having first and second ends; and

[1(i)] Litz wire wrapped around a section of the magnetic core forming a wire wound section around the magnetic core, with the magnetic core extending beyond the wire wound section; and

[1(j)] a receiver electronic circuit, wherein the receiver electronic circuit includes a resonant capacitor and a rectifier; and

wherein:

[1(k)] the charger further includes a means for positioning the receiver in a power transfer position, proximate to the charger surface, to inductively transfer power to the receiver of the first mobile device;

[1(l)] the charger drive circuit is configured to drive the charger coil at one or more operating frequencies to inductively transfer power from the charger to the receiver when the receiver is positioned in the power transfer position, wherein when the receiver is positioned in the power transfer position, a tuned circuit, including the charger coil and the resonant capacitor of the charger drive circuit and the solenoid and the resonant capacitor of the receiver electronic circuit, has a resonant frequency that allows the charger to transfer the power to the receiver at the one or more operating frequencies;

[1(m)] the charger coil includes a conductor patterned to include multiple, substantially concentric turns for generating a magnetic flux through a first end of the solenoid when the receiver is placed in the power transfer position, wherein an outermost of the concentric turns defines a perimeter of a charger coil area;

[1(n)] the multiple concentric turns, when driven by the charger drive circuit, generate a magnetic field that is substantially perpendicular to the charger surface at a geometric center of the charger coil area,

[1(o)] the charger coil area is larger than an area of the first end and larger than an area of the second end of the magnetic core of the solenoid;

[1(p)] the magnetic layer of the charger extends beyond the charger coil area; and

[1(q)] when the receiver is in the power transfer position, the first end of the magnetic core is located proximate to the charger coil area above the charger surface to receive magnetic flux from the charger coil area and guide the magnetic flux in a closed magnetic loop from the charger coil area through the solenoid and return through the charger magnetic layer to the charger coil area to form the closed magnetic loop.

Ex. 1001, 23:24–24:22. Claim 26 is also independent, and recites similar limitations. *Id.* at 25:64–26:60.

E. Prior Art and Asserted Challenges to Patentability

Petitioner asserts that claims 1, 4, 5, 7, 10–12, and 26 are unpatentable based on the following challenges (Pet. 2–3):

Claims Challenged	35 U.S.C. § ²	Basis/References
1, 5, 7, 10–12, 26	103	Fells ³
4	103	Fells, Jung ⁴
1, 5, 7, 10–12, 26	103	Fells, Stoner, ⁵ Nakamura ⁶
4	103	Fells, Stoner, Nakamura, and Jung

² Leahy-Smith America Invents Act (“AIA”), Pub L. No. 112–29, 125 Stat. 284 (2011), revised 35 U.S.C. §§ 102 and 103 effective March 16, 2013. Because the earliest possible effective filing date of the ’349 patent is after March 16, 2013, patentability is governed by the AIA versions of §§ 102 and 103. *See* Pet. 3.

³ Fells et al., US 8,587,154 B2, issued Nov. 19, 2013 (Ex. 1005) (“Fells”). Petitioner contends Fells is prior art under at least 35 U.S.C. § 102(a)(2). Pet. 3.

⁴ Jung et al., US 9,178,376 B2, issued Nov. 3, 2015 (Ex. 1016). Petitioner contends Jung is prior art under at least 35 U.S.C. § 102(a)(2). Pet. 3.

⁵ Stoner, Jr. et al., US 8,912,686 B2, issued Dec. 16, 2014 (Ex. 1011) (“Stoner”). Petitioner contends Stoner is prior art under at least 35 U.S.C. § 102(a)(2). Pet. 3.

⁶ Nakamura et al., US 2005/0068019 A1, published Mar. 31, 2005 (Ex. 1010). Petitioner contends Nakamura is prior art under at least 35 U.S.C. §§ 102(a)(1) and 102(a)(2). Pet. 3.

In support of its proposed challenges, Petitioner relies on the Declaration of R. Jacob Baker, Ph.D. *See* Ex. 1002.

III. ANALYSIS

A. *Legal Standards*

A claim is unpatentable under 35 U.S.C. § 103(a) if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3)); *see also Intelligent Biosystems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016). At this preliminary stage, we determine whether the information presented in the Petition shows there is a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims would have been obvious.

B. Level of Ordinary Skill in the Art

Petitioner asserts a person of ordinary skill in the art “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.” Pet. 3–4 (citing Ex. 1002 ¶¶ 20–21). Petitioner further asserts that “[m]ore education can supplement practical experience and vice versa.” *Id.*

At this stage of the proceeding, Patent Owner does not challenge Petitioner’s definition. Prelim. Resp. 13.

We find Petitioner’s proposal is consistent with the level of ordinary skill in the art reflected by the prior art of record, and, therefore, adopt Petitioner’s proposed level of ordinary skill in the art for purposes of this Decision.

C. Claim Construction

Petitioner provides a construction for the term “means for positioning [the/a] receiver in a power transfer position, [which is] proximate to the charger surface, to inductively transfer power to the receiver [of the first mobile device],” as recited in limitations 1(k) and 26(e). Pet. 5 (bolding omitted). Petitioner contends this term should be construed as a means-plus-function term, and that the underlined portion identified above identifies the function. *Id.* at 5–6. Petitioner contends that the corresponding structure is described in the Specification and in dependent claims 24 and 25. *Id.* at 6 (citing Ex. 1001, 14:35–38 (“[T]he charger and/or receiver can include means to provide more precise alignment between the charger and receiver coils and antennas. These can include **visual, physical, or magnetic means**

to assist the user in alignment of parts.”); 25:56–63 (claim 24: “the means for position includes **one or more magnets** to position the receiver in the power transfer position”, claim 25: “means for positioning includes one or more members of a group consistent of **visual, physical, or magnetic means** to assist in the positioning the receiver in the power transfer position.”)).

Patent Owner “does not contest the Petitioner’s position on this term for the purposes of this preliminary response,” however, Patent Owner “suggests the following construction.” Prelim. Resp. 12. Patent Owner identifies the function as “to provide more precise alignment between the charger and receiver coils to position [the/a] receiver in a power transfer position, proximate to the charger surface, to inductively transfer power to the receiver [of the first mobile device].” *Id.* For the structure, Patent Owner identifies “visual, physical, or magnetic means to assist the user in alignment of parts.” *Id.*

Patent Owner also provides dictionary definitions for the terms “proximate” and “opposite” as used in limitations 1(k) and 1(q), and asserts that limitation 1(c) requires that the printed circuit board include a charger coil and that “the charger coil ‘has’ and therefore *defines* ‘a substantially planar charger surface.’” Prelim. Resp. 28 (bolding omitted), 32, 33.

At this stage of the proceeding, only terms that are in controversy need to be construed, and then only to the extent necessary 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))). After reviewing the parties’ arguments and evidence, at this stage of the proceeding we do not observe a dispute over the meanings of these terms that is necessary to resolve at this stage.⁷ Further discussion is provided below in connection with limitations 1(c), 1(d), 1(k), and 1(q). Accordingly, we determine that we do not need to expressly construe any term for purposes of this Decision.

D. Discretion to Deny Institution Under § 35 U.S.C. 314(a)

Patent Owner contends that the Board should deny institution under 35 U.S.C. § 314(a) because of the related district court litigation in the Eastern District of Texas.⁸ Prelim. Resp. 13–24; Sur-reply 1–5. In support of its arguments, Patent Owner cites the discretionary denial factors articulated in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (hereafter “*Fintiv*”). Prelim. Resp. 13–24; Sur-reply 1–5. Petitioner opposes. Pet. 92–95; Reply 1–5.

Under § 314(a), the Director has discretion to deny institution of an *inter partes* review, and that discretion has been delegated to the Board. *See* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director”). Under *Fintiv*, we consider the following factors to assess

⁷ We note that the parties appear to agree on the proposed structure for the “means for positioning” limitation (limitations 1(k) and 26(e)).

⁸ In the district court litigation, Patent Owner asserted claims against Petitioner for infringement of seven patents, including the ’349 patent. Ex. 2003, 1. Petitioner filed eighteen petitions challenging the validity of each of the seven patents. *See* IPR2023-01086–01102, -01124.

“whether efficiency, fairness, and the merits” favor discretionary denial in view of a parallel district court 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.

Fintiv, Paper 11 at 5–6. In evaluating the factors, we take “a holistic view of whether efficiency and integrity of the [patent] system are best served by denying or instituting review.” *Id.* at 6 (citing Patent Trial and Appeal Board Consolidated Trial Practice Guide, 58 & n.2 (Nov. 2019) (“CTPG”). The Director has also issued additional guidance on 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 Memo”).

We consider the facts and circumstances before us in view of the *Fintiv* factors below and determine that the circumstances presented here weigh against exercising discretion to deny institution of *inter partes* review.

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

Under the first *Fintiv* factor, we consider “whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted.” *Fintiv*, Paper 11 at 6. “A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts.” *Id.* Petitioner has filed a motion for a stay in the district court litigation, which has not been ruled upon. Prelim. Resp. 17.

Petitioner contends that this factor is neutral, “as there has been no actual denial of a stay.” Reply 3; *see also* Pet. 92. Patent Owner argues that this factor weighs heavily in favor of discretionary denial because the motion “will almost certainly be denied pre-institution” given the “timing and advanced stage of litigation.” Prelim. Resp. 17–19; *see also* Sur-reply 1.

We decline to speculate based on the record in this case whether the district court will grant a stay. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative) (“*Fintiv II*”). Therefore, we determine that this factor is neutral.

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

Under the second *Fintiv* factor, we consider the “proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision.” *Fintiv*, Paper 11 at 6. The district court has scheduled an August 5, 2024 trial date. Ex. 1024, 1 (Docket Control Order). Petitioner also provides median time-to-trial data from the Eastern District of Texas, which reflects that a median case would start approximately May 2024. Pet. 92 (citing Ex. 1023, 35); *see* Guidance Memo 8 (“Parties may present

evidence regarding the most recent statistics on median time-to-trial for civil actions in the district court in which the parallel litigation resides.”).

Petitioner argues that it is not dispositive if the trial date comes before the final written decision date, and that the Board has also considered other factors, such as diligence in filing the petition, a stipulation, investment in the litigation, and the merits. Pet. 93. Therefore, Petitioner contends this factor is neutral or weighs against discretionary denial. Reply 4; Pet. 92.

Patent Owner argues that the trial date is five to six months prior to the earliest expected date for a final written decision and, therefore, this factor weighs heavily in favor discretionary denial. Prelim. Resp. 19–20; *see also* Sur-reply 1–2.

The latest date for issuance of a final written decision in this proceeding is in January 2025, one year after we issue this decision instituting an *inter partes* review. 35 U.S.C. §§ 314(c), 316(a)(11); *see also* 37 C.F.R. § 42.100(c). We “generally take courts’ trial schedules at face value absent some strong evidence to the contrary.” *See Fintiv II*, Paper 15 at 13. However, the Director has cautioned the Board that “scheduled trial dates are unreliable and often change.” Guidance Memo 8. Therefore, the Director instructed the Board to consider additional supporting factors regarding trial dates, such as median time-to-trial statistics. *Id.* at 8–9. If the underlying litigation begins trial after the median amount of time to trial, it would occur in approximately May 2024. Therefore, because the trial in the district court litigation is scheduled to begin five months before our deadline to reach a final written decision, and considering the median time-to-trial statistics, this factor weighs in favor of discretionary denial. *Fintiv*, Paper 11

at 9. However, the Director cautions that “when other relevant factors weigh against exercising discretion to deny institution or are neutral, the proximity to trial should not alone outweigh all of those other factors.” *Id.* at 8.

Accordingly, in accordance with the Director’s Memo, we must consider the remaining factors below.

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

Under the third *Fintiv* factor, we consider the “investment in the parallel proceeding by the court and the parties” at the time of the institution decision. *Fintiv*, Paper 11 at 6, 9.

Petitioner argues that this factor weighs against denial because the district court litigation is in the early stages. Pet. 93. Petitioner contends that “[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 that there have not been any substantive orders. *Id.*; Reply 4–5. Petitioner also argues that the Petition, which dealt with “challenging long, convoluted claims,” was diligently filed in advance of the one-year bar date and within four months of Patent Owner’s infringement contentions being served in the district court litigation. Pet. 93; Reply 5.

Patent Owner argues 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. 20; *see also* Sur-reply 2. Additionally, Patent Owner argues that claim construction will have been briefed and argued by the time of the institution decision. Prelim. Resp. 20; *see also id.* at 21 (district court litigation timeline). Patent Owner

also argues that “Petitioner did not file its Petitions expeditiously” because “Petitioner waited many months after the district court complaint was filed to submit its Petitions.” *Id.* at 21. Therefore, Patent Owner argues that this factor “greatly weighs in favor of denying institution.” *Id.*

We have considered Patent Owner’s position, but it appears that considerable effort remains to be completed. Fact discovery is ongoing, expert discovery has not yet begun, claim construction is ongoing with a claim construction hearing scheduled for February 6, 2024, and dispositive motions are due April 29, 2024. Ex. 1024, 3. At this stage, there is no claim construction order, and no evidence in the record that the district court has issued any substantive orders relating to the ’349 patent. *See Fintiv*, Paper 11 at 10 (“If, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution.”). Moreover, there is no evidence in the record that the district court will construe any terms in the ’349 patent, and it is unclear from the present record how much investment has been made with respect to invalidity of the ’349 patent, in particular.

Moreover, given the number of claims asserted against Petitioner across seven patents in the district court litigation, as well as the length of some of the claims,⁹ we also find that Petitioner was diligent in filing the Petition, which was filed within four months of service of infringement contentions, and approximately eight months after the Complaint was filed. *See* Exs. 1021, 1025, 2003; *see Fintiv*, Paper 11 at 11 (stating that “it is often

⁹ *See* Section II.D, setting forth claim 1 of the ’349 patent.

reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding.”).

On balance, given the level of investment by the parties and the district court, as well as Petitioner’s diligence in filing its Petition, we find that this factor weighs against exercising discretion to deny institution.

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

This factor evaluates “concerns of inefficiency and the possibility of conflicting decisions” when substantially identical prior art arguments are submitted in both the district court and the *inter partes* review proceedings. *Fintiv*, Paper 11 at 12. In particular, “if the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel processing, this fact has favored denial.” *Id.* (citing *Next Caller, Inc. et al. v. Trust ID, Inc. et al.*, IPR2019-00963, Paper 8 at 11–12 (PTAB Oct. 28, 2019) (same grounds asserted in both cases); *ZTE (USA) Inc. v. Fractus, S.A.*, IPR2018-01451, Paper 12 at 20 (PTAB Feb. 19, 2019) (same prior art and identical evidence and arguments in both cases)).

Petitioner argues that this factor weighs against discretionary denial. Pet. 94; Reply 1–2. Petitioner has submitted a 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 ’349 patent in this Petition based on (i) any of the same instituted grounds or (ii) any prior art reference that forms the basis of any instituted ground.” Reply 2. Further, Petitioner submitted evidence that Patent Owner narrowed the number of asserted claims in the district court litigation to thirty-two claims from the seven asserted patents, and is required by mid-February 2024 to further

reduce that number to no more than a total of sixteen claims from the seven asserted patents. *Id.* at 1 (citing Exs. 1201, 1202). Petitioner argues that currently, claims 5, 7, 10–12, and 26 in this Petition will not be addressed in the district court litigation. *Id.*

Patent Owner argues that Petitioner’s stipulation “does not eliminate the substantial overlap with the district court case.” Sur-reply 2. Patent Owner argues that “institution of the IPR petitions would result in published prior art in validity assertions being made before both the district court and the PTAB.” *Id.* at 3. Patent Owner also argues that Petitioner’s reliance on the reduction of claims accused of infringement in the district court litigation is a “diversion” because “Petitioner continues to seek to challenge the patents on published prior art validity grounds before both the district court and the PTAB.” *Id.* at 3–5. Patent Owner, too, provides a stipulation that it will “not seek to resurrect or make new infringement claims as to any claims in this IPR petition which have been or will be removed from Patent Owner’s infringement case in the district court case per the district court focusing order, against Samsung or its products.” *Id.* at 4.

Petitioner’s stipulation is broader than the stipulation in *Sand Revolution* and narrower than the stipulation in *Sotera*. *Sand Revolution II, LLC, v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24, 12 (PTAB June 16, 2020) (informative) (“Petitioner will not pursue the same grounds in the district court litigation”); *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12, 19 (PTAB Dec. 1, 2020) (precedential as to § II.A) (Petitioner stipulates not to pursue “any ground raised or that could have been reasonably raised”). Although Petitioner’s

stipulation is not as strong as the stipulation in *Sotera*,¹⁰ a *Sotera* stipulation obviates the need for any *Fintiv* factor weighing. We decline to hold the fact that Petitioner did not file a *Sotera* stipulation against Petitioner in an analysis that only occurs when a *Sotera* stipulation is not filed. Further, by stipulating not to pursue the challenged claims of the '349 patent based on (1) any instituted grounds and (2) any prior art reference that forms the basis of any instituted ground (i.e., Fells, Jung, Stoner, Nakamura), Petitioner has effectively removed any potential issue overlap with the district court litigation. In other words, the patentability issues addressed in this proceeding (i.e., relating to the grounds presented and/or prior art challenges) will not be addressed in the district court litigation. This is highly relevant to this factor, because when both *NHK* and *Fintiv* discussed prevention of duplication, it was with respect to duplication of the parties' and courts' work with respect to the specific grounds of invalidity common in both proceedings. *NHK Spring Co. Ltd. V. Intri-Plex Techs. Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB 2018) (precedential) (additionally denying institution under 35 U.S.C. § 314(a) where "Petitioner asserts the same prior art and arguments" in the district court trial, implicating an "inefficient use of Board resources"); *Fintiv*, Paper 11 at 12 ("if the petition includes materially different grounds, arguments, and/or evidence . . . this

¹⁰ The Guidance Memo provides that "[c]onsistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB." Guidance Memo, 3 (footnote omitted).

fact has tended to weigh against exercising discretion to deny institution”). In the present case, Petitioner’s stipulation serves to limit it to “materially different grounds, argument, and/or evidence” in the district court versus this proceeding, which *Fintiv* instructs us to “weigh against exercising discretion to deny institution.” In addition, the lack of overlap is further supported because at most, only claims 1, 4, and 13 from the ’349 patent¹¹ will be addressed in the district court litigation. *See* Reply 1.

Patent Owner’s stipulation does not persuade us otherwise; Patent Owner has already been ordered by the district court to narrow the asserted claims. *See* Ex. 1202, 1–2. We do not see any significance to Patent Owner’s stipulation not to resurrect claims that have already been withdrawn from the district court litigation. Indeed, it is unlikely that this would even be permitted by the district court. *See id.* at 2 (“the patent claimant shall serve a Final Election of Asserted Claims, which shall identify no more than five asserted claims per patent *from among the ten previously identified claims* and no more than a total of 16 claims”) (emphasis added).

Thus, we determine this factor weighs against exercising discretion to deny institution.

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

The parties in this proceeding are identical to the parties in the related district court litigation. Therefore, this factor weighs in favor of exercising discretion to deny institution.

¹¹ Claim 13 is challenged in IPR2023-01090.

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

Under this factor, we consider “other circumstances that impact the Board’s exercise of discretion, including the merits.” *Fintiv*, Paper 11 at 6. For example, if the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution. *Fintiv*, 14–15. By contrast, if the merits of the grounds raised in the petition are a closer call, then that fact has favored denying institution when other factors favoring denial are present. *Id.* at 15.

The Guidance Memo states that:

Where the information presented at the institution stage is merely sufficient to meet the statutory institution threshold, the PTAB has the authority, where warranted to exercise discretion to deny institution in view of the other *Fintiv* factors. In contrast, where the PTAB determines that the information presented at the institution stage presents a compelling unpatentability challenge, that determination alone demonstrates that the PTAB should not discretionarily deny institution under *Fintiv*.

Guidance Memo 4–5. The application of the Guidance Memo is further guided by the precedential decisions in *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102, 49–50 (Oct. 4, 2022) (precedential) and *CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 (Feb. 27, 2023) (precedential). We are instructed to consider compelling merits under the sixth *Fintiv* factor only after a determination that the first five *Fintiv* factors favor discretionary denial. *CommScope*, Paper 23 at 4–5.

On balance, we determine that *Fintiv* factors 1–5 do not favor discretionary denial. Specifically, we determine that Petitioner’s stipulation,

reasonable diligence in filing the Petition, and the limited extent of the parties' and district court's investment in the district court litigation outweigh the projected trial date. *See* Guidance Memo 8 (“[W]hen analyzing the proximity of the court's trial date under factor two of *Fintiv*, when other relevant factors weigh against exercising discretion to deny institution or are neutral, the proximity to trial should not alone outweigh all of those other factors.”). As a result, we need not decide whether Petitioner presents a compelling unpatentability challenge. *See CommScope*, Paper 23 at 4–5.

7. *Conclusion on Discretionary Denial Under § 314(a)*

We have considered the circumstances and facts before us in view of the *Fintiv* factors. Our analysis is fact driven and no single factor is determinative under § 314(a). Based on the circumstances presented, we determine that, as a whole, the factors weigh against exercising discretion to deny institution of the Petition.

E. Notice Ranking Multiple Petitions

Petitioner filed two concurrent petitions (IPR2023-01089 and IPR2023-01090) challenging the patentability of the '349 patent. Claims 1, 4, 5, 7, 10–12, and 26 are challenged in this Petition, and claims 8, 13, and 15–18 are challenged in IPR2023-01090. Consistent with the Board's practice for handling parallel petitions provided in the Consolidated Trial Practice Guide (“CTPG” or “Trial Practice Guide”),¹² Petitioner filed a Notice Regarding Multiple Petitions (Paper 3, “Notice”). *See* CTPG 59–60.

¹² Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Patent Owner did not file a response to Petitioner's Notice or address Petitioner's Notice in its Preliminary Response.

In the Notice, Petitioner states that “[t]here was no practicable way to fit the challenges in a single petition” due to the length of the claims and the substantially different features in the dependent claims. Notice 3.

Therefore, “Petitioner had to separate the challenges into two petitions—which challenge different claims of the ’349 patent—in order to ensure the grounds associated with each challenged claim contain the necessary specificity as to how the prior art meets the recited limitations within the word limit[s].” *Id.* Petitioner argues that “the level of detail included in the petitions is appropriate.” *Id.* at 5. Petitioner also states that, based on the overlapping prior art references and concurrent filing of the petitions, “a relatively small amount of effort is required by the parties and the Board to address the prior art and claim limitations across the multiple petitions.” *Id.* at 4–5. Petitioner also asserts that there was no timing advantage gained because both petitions were filed concurrently. *Id.* at 5.

The Trial Practice Guide provides that “multiple petitions by a petitioner are not necessary in the vast majority of cases” but acknowledges that “there may be circumstances in which more than one petition is necessary.” CTPG 59–60. In light of the circumstances presented here, we find persuasive Petitioner's reasons for filing two parallel petitions, particularly because the petitions challenge different claims of the ’349 patent. In effect, the two petitions were filed instead of one merely because our Rules have page limit restrictions. 37 C.F.R. § 42.24(a)(1)(i) (setting a limit of 14,000 words); *see also* Federal Register, Vol. 77, No. 157, at 48635

(Aug. 14, 2012) (the USPTO suggesting in response to comment 91 that “the filing of multiple petitions directed to subsets of related claims should be considered” when the proceeding is complex). Under these circumstances, conducting two related *inter partes* reviews will not stress the Board’s finite resources or unduly burden the Board or Patent Owner. Although we have discretion to deny a parallel petition under 35 U.S.C. § 314(a) (*see* CTPG 61), we decline to exercise that discretion here.

F. Ground 1: Alleged Obviousness Over Fells

Petitioner contends claims 1, 5, 7, 10–12, and 26 would have been obvious over Fells. Pet. 7–76. Patent Owner disputes Petitioner’s contentions. Prelim. Resp. 24–39. Having considered the arguments and evidence before us, we find that the record establishes a reasonable likelihood that Petitioner would prevail on at least one claim in these asserted grounds of unpatentability.

1. Fells (Ex. 1005)

Fells is titled “Inductive Power Supply” and generally describes an inductive power transfer system that includes a primary unit and a secondary device. Ex. 1005, codes (54), (57). Fells states:

To make recharging more convenient a recharging pad has been proposed in which there is a surface upon which devices may be placed in order to receive power wirelessly. This removes the need to physically connect a power cable to the portable device. It may also be designed such that a range of different models and types of device[s] can share the same charger. Further, it may be large enough to accommodate more than one device, so that multiple devices can be recharged simultaneously. However, it is particularly advantageous if it is possible to simply drop the device onto the pad without having regard for the position or orientation of the device on the pad.

Id. at 1:4–15. Fells discloses various embodiments for transferring power from a charger to a portable device.

Figure 1, reproduced below, shows a system for transferring power from a charger to a portable device:

Fig. 1

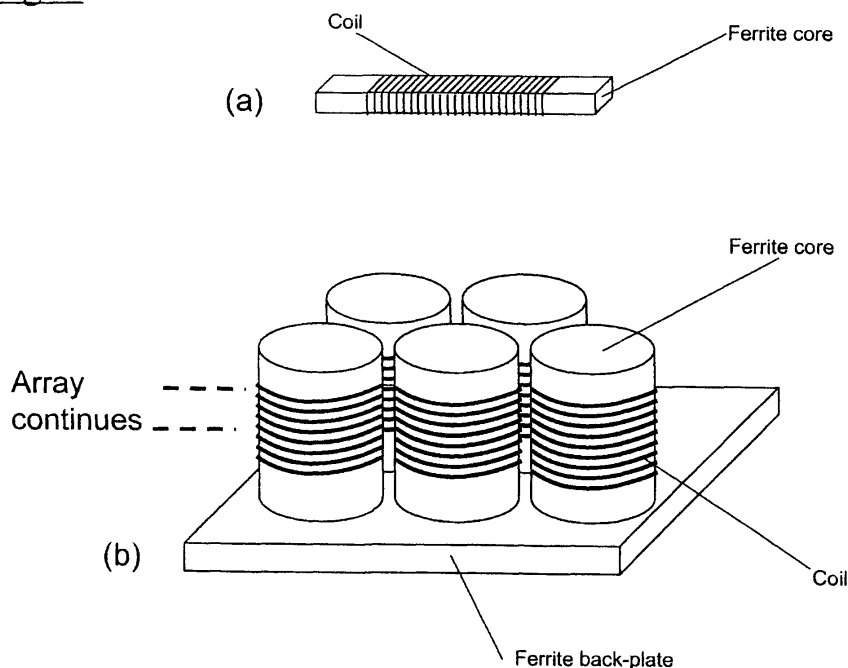


Figure 1(a), above, shows a power receiver with a ferrite core and coil wound around the core. Figure 1(b), above, shows part of a charging pad for transmitting power to the receiver. “The pad consists of an array of coils, each wound around a ferrite core. These cores are attached to a ferrite backplate. A charging surface is formed across the ends of the cores, such that the coil axes are perpendicular to the charging surface.” *Id.* at 6:61–65.

“Preferably Litz wire is used for both the primary and secondary coils.” *Id.* at 7:3–4.

Figure 2, reproduced below, also shows a system for transferring power from a charger to a portable device:

Fig. 2

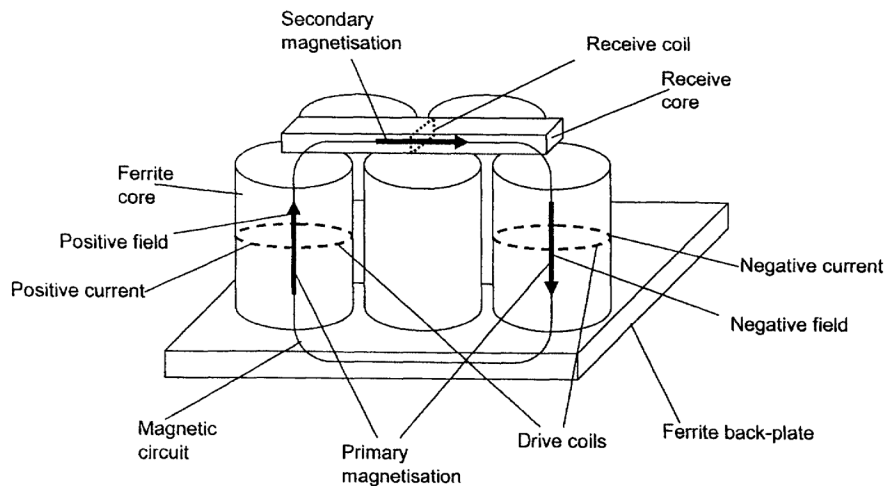


Figure 2, above, shows “the magnetic circuit formed when the power receiver is placed on the charging surface.” *Id.* at 7:9–10. Fells describes that “[a] coil in proximity to one end of the receiver is driven with current in a positive sense and a coil in proximity to the other end is driven in a negative sense.” *Id.* at 7:10–13. “The field is concentrated in the ferrite and forms a magnetic circuit from the first coil, through the receiver core, through the second coil and through the ferrite backplate to complete the circuit.” *Id.* at 7:13–16.

Figure 4, reproduced below, shows a configuration for transferring power to a power receiver.

Fig. 4

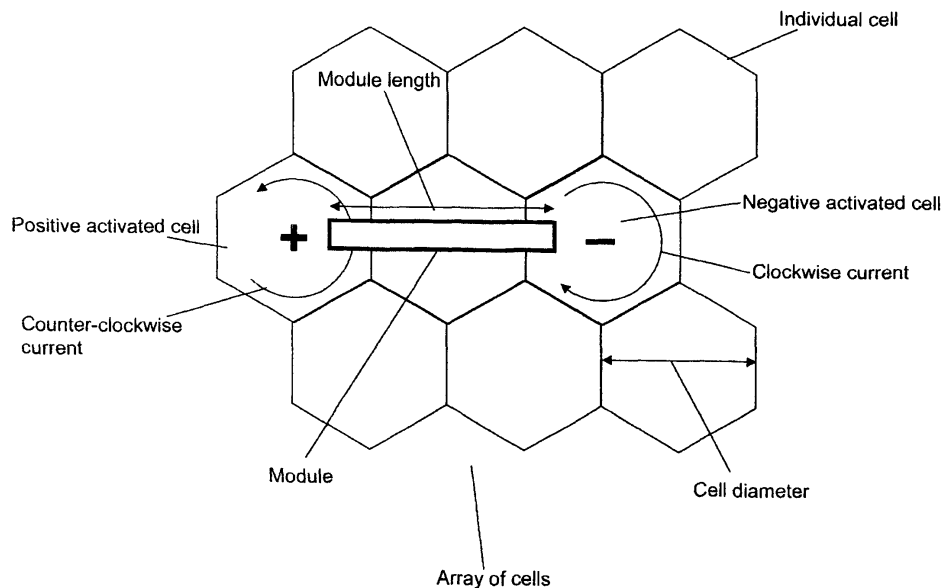


Figure 4, above, “illustrates the dimensional relationship between the power receiver and the charger coils.” *Id.* at 7:31–32. The coil positions are represented by hexagonal cells, and the energized coils are represented by a “+” for current flowing in a counter clockwise direction and a “-” for current flowing in a clockwise direction. *Id.* at 7:32–36.

Figure 16, reproduced below, shows a charger formed using a PCB implementation.

Fig. 16

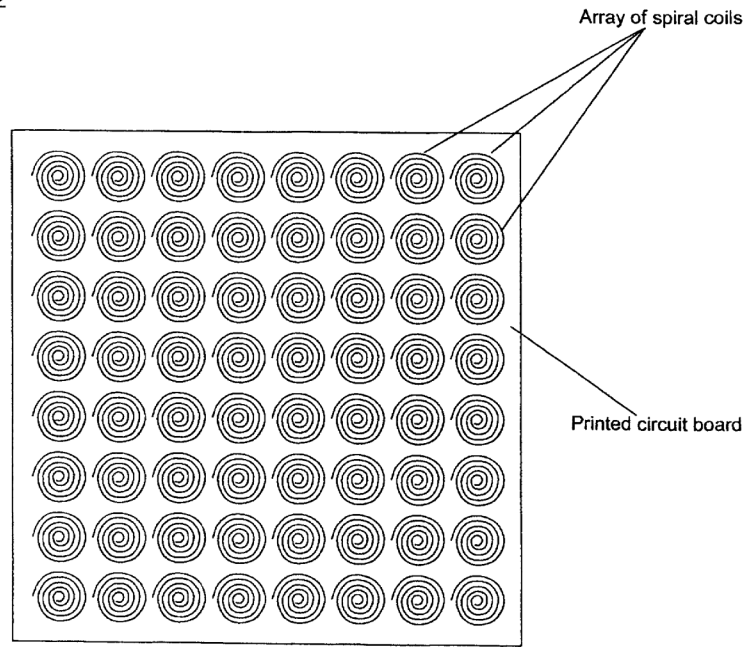


Figure 16, above, shows an array of planar spiral coils used to generate vertical fields. *Id.* at 10:27–28. “A ferrite back plate would typically be [used] to complete the magnetic circuit.” *Id.* at 10:31–32.

Figure 17, reproduced below, shows another charger configuration using a PCB implementation.

Fig. 17

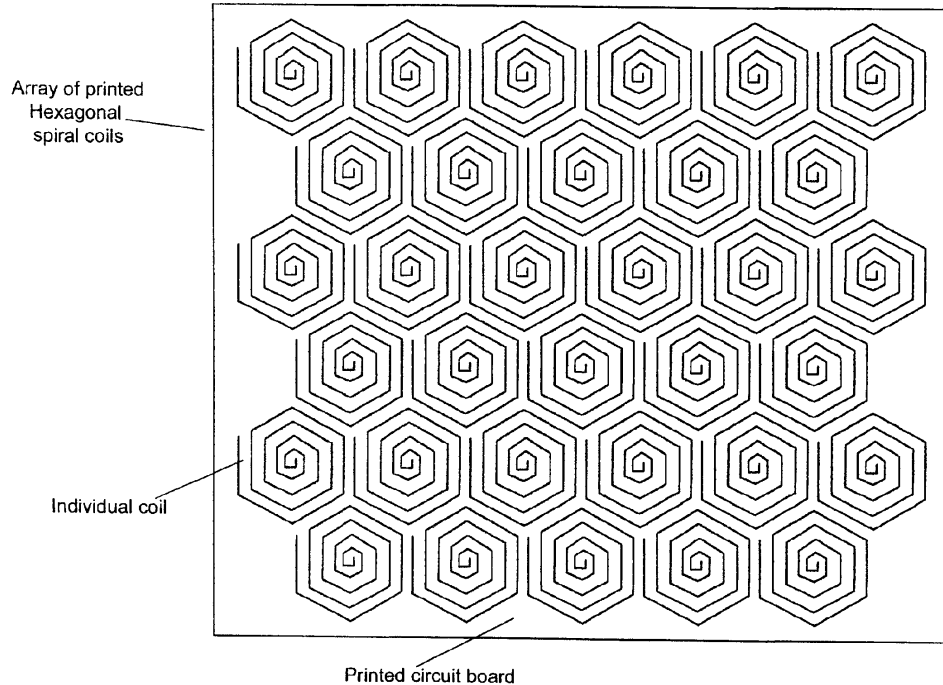


Figure 17, above, shows an array of hexagonal coils which are close-packed together. *Id.* at 10:35–37.

Figure 18, reproduced below, shows a hybrid charger system that allows two different types of receivers within the portable device to be used. *Id.* at 10:38–40.

Fig. 18

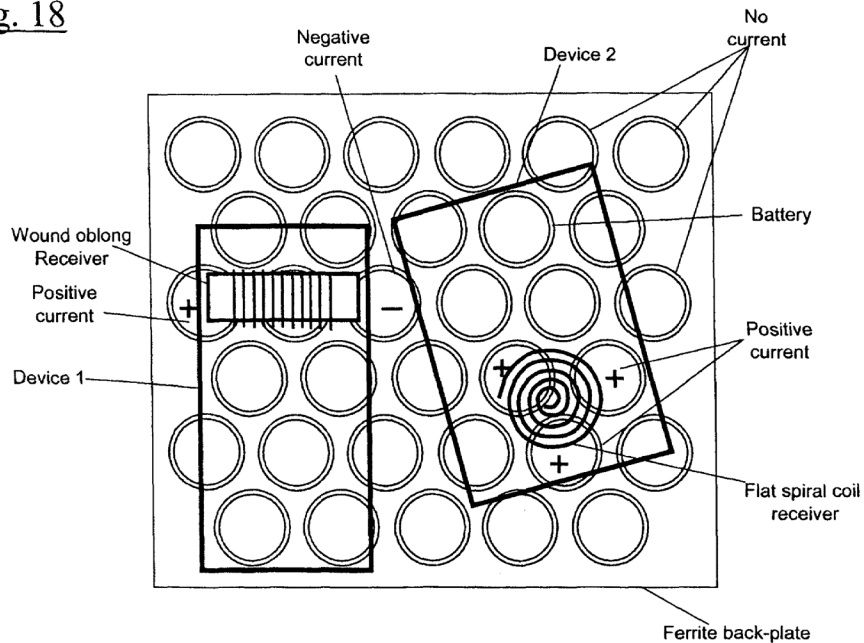


Figure 18, above, shows device 1 with a horizontal coil axis wound around magnetic material, and device 2 with a flat spiral coil as its power receiver. *Id.* at 10:40–42.

Figure 23, reproduced below, shows another charger configuration, that is described as “a simpler and lower cost alternative to a flat pad charger.” *Id.* at 11:45–46.

Fig. 23

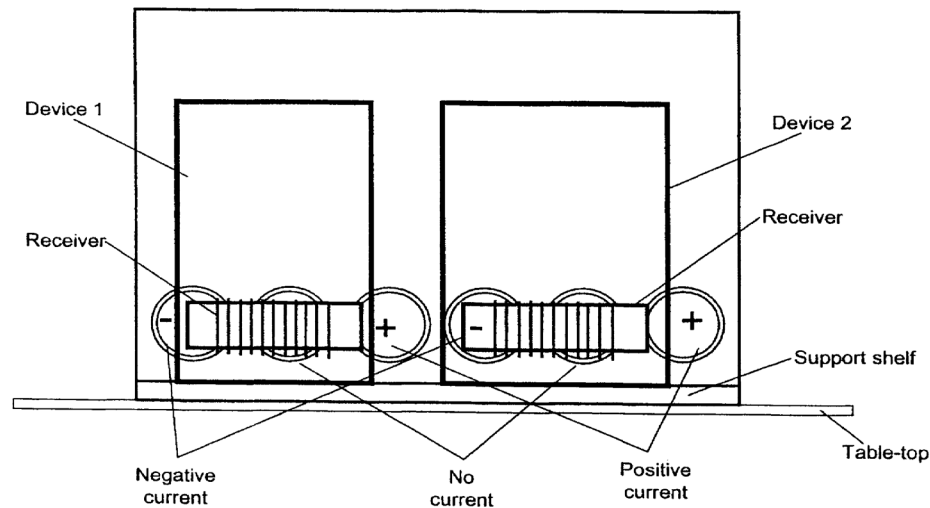


Figure 23, above, shows a charger in the form of a shelf such that the device stands upright on a ledge, with a single line of charger coils. *Id.* at 11:46–48. “The receiver is positioned in the portable device a set distance away from the bottom edge. Thus, there is always alignment in one dimension.” *Id.* at 11:48–51. “Depending on which part of the shelf the device is placed, different coils are accordingly activated. The shelf allows devices to be placed anywhere along a line.” *Id.* at 11:51–54. Fells further states:

Wound Litz-wire primaries are the ultimate solution for low primary losses. Wound components with or without ferrite cores can be used. Ferrite cores can be added to give a small shape-factor benefit (if cost-effective) and to produce an even flatter coupling factor. However, overall cost and manufacturability is less attractive. Other planar coil technologies such as PCB coils or watch-spring coils can be

used to reduce cost, but typically exhibit higher losses (lower coil Qs).

Id. at 11:56–64. Further, “[a] ferrite back-plate may be used behind the vertical cores to act as a flux return path, and this improves the coupling factor.” *Id.* at 11:67–12:2. “The permeable material from which the cores and/or back-plate are manufactured is preferably Mn–Zn ferrite, but other magnetic materials . . . could be used.” *Id.* at 12:3–8.

2. *Analysis of Independent Claims 1 and 26*

Petitioner contends that Fells teaches each limitation of independent claims 1 and 26. Pet. 7–63. In support, Petitioner identifies certain passages and figures in the references and explains their significance with respect to the corresponding claim limitation. *Id.*

a) *1(a): A system for inductive power transfer comprising:*

Petitioner contends that Fells “discloses ‘an **inductive power transfer system** including a primary unit and a secondary device,’ where the primary unit includes a ‘power transfer surface’ and ‘field generators’ (e.g., primary coils) and where the secondary device (which can be a mobile device) includes a ‘power receiver having a secondary coil.’” Pet. 7 (citing Ex. 1005, code (57)). According to Petitioner, Fells discloses various configurations of such an inductive power transfer system, and a person of ordinary skill in the art would have understood “that the various arrangements, materials, configurations, etc. described in connection with the exemplary figures are related to a ‘system’ like that claimed” and that Fells’ “system is described as versatile in configuration, where different arrangements/features are described to be related to each other (where

applicable).” *Id.* at 7–10 (citing, e.g., Ex. 1002 ¶¶ 94–98, Ex. 1005, Figs. 1–27).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches the recited elements for purposes of institution.¹³

b) 1(b): a charger, wherein the charger is an inductive charger, and the charger includes:

26(a): A charger for inductive charging, the charger comprising:

Petitioner contends that Fells’ system includes a primary unit (charger) that transfers power to the secondary unit (mobile device) via electromagnetic induction. Pet. 10. According to Petitioner, Fells “discloses a ‘**charger**’ by a portion of the primary unit including one or more of the charging coil(s) and associated circuitry/components discussed herein.” *Id.* at 11 (citing Ex. 1002 ¶¶ 101–103). Petitioner contends that a “charger” is exemplified in, for example, Figure 23 of Fells. *Id.* at 11–12.

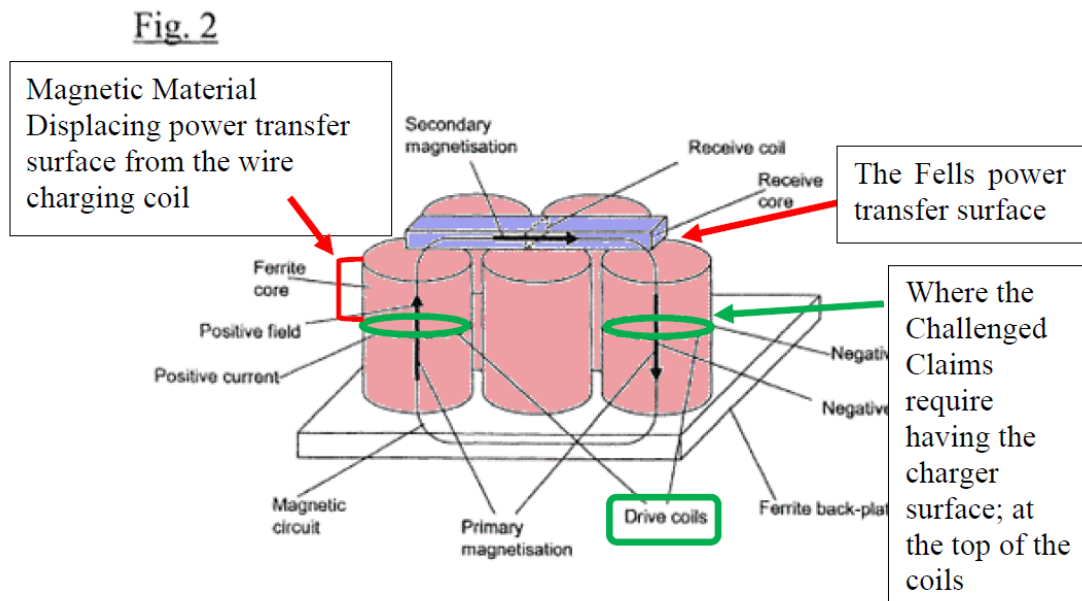
At this stage, Patent Owner does not dispute Petitioner’s contentions. *See* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitation 1(b) and the recited elements in claim 26 for purposes of institution.

¹³ Petitioner does not argue that the preamble limits claim 1 or 26. Although we find that the evidence supports that the prior art teaches the preamble, we make no determination at this stage of the proceeding whether the preamble of claim 1 or 26 is limiting.

- c) 1(c)/26(b): *a printed circuit board having a charger coil, wherein the charger coil has a substantially planar charger surface;*

Petitioner contends that Fells’ “‘charger’ can include one or more planar primary coils (‘**charger coil** [having] **a substantially planar charger surface**’) on a ‘**printed circuit board**’ (PCB).” Pet. 12. Petitioner contends that Fells’ charger “can be formed ‘using a **PCB** implementation’ where ‘an array of *planar spiral coils* [are] used to generate the vertical fields.” *Id.* (citing Ex. 1005, 10:26–28; 10:28–37; 11:45–64; Figs. 16, 17, 23; claim 1 (“a primary unit comprising: a power transfer *surface* capable of enabling inductive coupling with said secondary device . . .”); Ex. 1002 ¶¶ 105–106).

Patent Owner disputes that Fells teaches this limitation. Prelim. Resp. 28–30. Patent Owner contends that the limitation requires that “**the charger coil ‘has’ and therefore defines ‘a substantially planar charger surface.’**” *Id.* at 28; *see also id.* at 31. According to Patent Owner, “[t]he *power transfer surface* of Fells, in contrast from that of the claimed invention, is displaced from the charging coils of Fells by at least some portion of the ‘ferrite core’ material shown . . . throughout the Fells reference.” *Id.* For example, Patent Owner provides the following annotated version of Fells’ Figure 2:



Prelim. Resp. 29. Patent Owner’s annotated Figure 2, above, depicts Fells’ ferrite cores in red, drive coils in green, and power transfer surface in purple. *Id.* Patent Owner indicates with a red arrow pointed at the ferrite core that the ferrite cores are “Magnetic Material Displacing power transfer surface from the wire charging coil” and with a green arrow pointed at the drive coils “Where the Challenged Claims require having the charger surface; at the top of the coils.” *Id.*

Patent Owner contends that other implementations (i.e., Figures) relied upon by Petitioner “would be configured with the same magnetic material that displaces the charging surface from the charger coils, as each of the other embodiments.” Prelim. Resp. 30. Patent Owner argues that “the Petition shows *no* embodiment in Fells without intervening magnetic material displacing the charging surface from the charger coils.” *Id.*

Petitioner has sufficiently shown that Fells teaches this limitation for purposes of institution. Patent Owner takes the position that “has” as used in this claim limitation is not open-ended, i.e., that no magnetic material can be between the recited “charger coil” and “charger surface.” Prelim. Resp. 28. However, Patent Owner does not present substantive arguments supporting this interpretation. To the contrary, in footnote 6 of the Preliminary Response, Patent Owner acknowledges that the embodiment disclosed in Figure 7 of the ’349 patent *includes* an intervening magnetic layer between the charger coil and surface. *Id.* at 35, n. 6. However, Patent Owner simply states that this is *not* the claimed embodiment. *Id.* Patent Owner essentially asks us to scour the Specification and claims to find support for Patent Owner’s interpretation. We decline to do so, or to adopt Patent Owner’s interpretation on an incomplete record. The parties may wish to develop this issue further during trial. *See, e.g., Crystal Semiconductor Corp. v. TriTech Microelectronics, Int’l, Inc.*, 246 F.3d 1336, 1348 (Fed. Cir. 2001) (examining the claim in its full context and in light of the specification to determine whether the transition “having” limited the claim to its recited elements); *Lampi Corp. v. American Power Products, Inc.*, 228 F.3d 1365, 1375–1376 (Fed. Cir. 2009) (same).

Regardless, however, Fells discloses that use of magnetic cores is optional. Fells states that “[a]lthough it is preferable to use magnetic cores for the array of coils in the charger, it is not essential. It is possible to omit these cores to get a lighter and cheaper system, but at the expense of reduced magnetic efficiency.” Ex. 1005, 11:22–25. In addition, in the discussion of the embodiment disclosed in Figure 23 (relied on by Petitioner to teach this

limitation), Fells states that “[w]ound components *with or without ferrite cores* can be used. *Ferrite cores can be added* to give a small shape-factor benefit (if cost-effective) and to produce an even flatter coupling factor. However, overall cost and manufacturability is less attractive . . . Other planar coil technologies such as PCB coils or watch-spring coils can be used.” *Id.* at 11:56–62 (emphasis added); Pet. 12. Petitioner cites to both of these sections of Fells, and relies on Fells’ Figures 16, 17, and 23 in the Petition to teach this limitation. *See* Pet. 8, 12–13. As shown above in Section III.F.1 (description of Fells), Figures 16 and 17 show a charger using a PCB implementation with an array of planar coils used to generate the vertical fields. Ex. 1005, 10:26–37.

Accordingly, on this record, we disagree with Patent Owner’s arguments that Fells’ charger surface is “displaced from” the charging coils, or that the Petition shows no embodiment in Fells without intervening magnetic material displacing the charging surface from the charger coils.

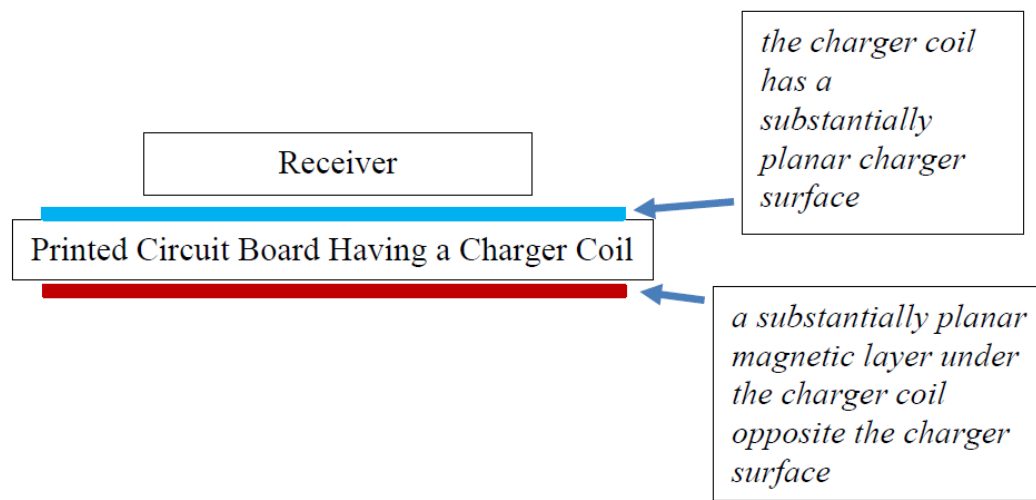
Therefore, based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(c) and 26(b) for purposes of institution.

d) 1(d)/26(c): a substantially planar magnetic layer under the charger coil opposite the charger surface; and,

Petitioner contends that Fells’ charger “can include a ferrite backplate (**‘substantially planar magnetic layer’**) under the primary coil(s) (**‘charger coil(s)’**) that is **‘opposite to the charger surface’** since it is positioned under the surface of the primary coil(s) that generate the magnetic field used to inductively transfer power.” Pet. 13–14 (citing Ex. 1005, 10:26–34 (PCB planar spiral coil implemented charger of Fig. 16 where “[a]

ferrite back plate would typically be required to complete the magnetic circuit”), 11:65–12:9, 6:57–63, 7:9–21, 8:26–32, Figs. 3, 8, 16–18, 23; Ex. 1002 ¶ 108).

Similar to the arguments set forth for limitation 1(c)/26(b), Patent Owner argues that Fells’ vertical magnetic cores displace Fells’ ferrite back plate, and therefore, Fells’ ferrite backplate is not “under the charger coil opposite the charger surface.” Prelim. Resp. 31–32. Patent Owner provides an annotated figure to support its arguments:



Prelim. Resp. 31. Patent Owner’s annotated figure, above, shows a receiver, a blue line indicating the charger surface, the printed circuit board having a charger coil, and a red line indicating the magnetic layer.

According to Patent Owner, the term “opposite” as used in the claim¹⁴ “necessitates that the magnetic layer be positioned as shown in the figure above, ‘opposite’ the planar charger surface with the only intervening thing being the charger coil.” Prelim. Resp. 31. Therefore, Patent Owner argues, the Petition fails to show limitation 1[d] because “the vertical magnetic cores of the Fells system displaces” the ferrite back plate. *Id.* at 32.

As discussed above in connection with limitation 1[c], Fells discloses that the magnetic cores are “not essential” and that “[w]ound components with or without ferrite cores can be used” and “[o]ther planar coil technologies such as PCB coils or watch-spring coils can be used.” Ex. 1005, 11:23, 11:57–62, Fig. 23. Fells also discloses embodiments, relied upon by Petitioner, with PCB implemented planar coils. *Id.* at e.g., Figs. 16, 17, 10:26–37; Pet. 23–24. Consequently, we disagree with Patent Owner that Fells’ magnetic cores “displace” the ferrite back plate.

Therefore, based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(d) and 26(c) for purposes of institution.

- e) 1(e)/26(d): a charger drive circuit, wherein the charger drive circuit includes a resonant capacitor and a FET switch to apply an alternating voltage to the charger coil; and*

Petitioner contends that Fells discloses a relationship between the charger coils and the power receiver (i.e., the mobile device), such that the

¹⁴ Patent Owner provides a dictionary definition for the term “opposite” as meaning “situated in a corresponding position with relation to an intervening thing.” Prelim. Resp. 31. We do not discern any dispute over the meaning of the term “opposite,” at this stage of the proceeding. To the extent that there is a dispute, the parties may develop those issues during trial.

receiver can be powered by activating multiple coils even when placed in different positions. Pet. 15–17 (citing, e.g., Ex. 1005, Figs. 4–8; 7:25–8:9). Petitioner also contends that Fells’ charger includes driver circuitry, including components for sensing the position of the device coil and switching/activating appropriate primary coils on the charging pad, which requires AC voltage signals. *Id.* at 18 (citing Ex. 1005, Figs. 9, 13, 6:27, 31–32, 8:10–13, 9:46–48; Ex. 1003 ¶ 115); *see also id.* at 19. Petitioner also relies on Figure 26 of Fells, which Petitioner contends describes a configuration where “[a] resonant capacitor may be placed at either the driver side or the coil side of the switch,” and a “FET” switch may be used. *Id.* at 20 (citing Ex. 1005, Fig. 26, 13:57–59, 14:32–35).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(e) and 26(d) for purposes of institution.

f) 1(f): a first mobile device that includes a receiver to inductively receive power for the first mobile device, wherein the receiver includes:

26(e): . . . a receiver . . . , wherein the receiver is included in a mobile device to inductively receive power for the mobile device, and the receiver includes:

Petitioner contends that Fells’ system inductively charges a mobile device via a power receiver in the device. Pet. 21–24 (citing, e.g., Ex. 1005, Figs. 1, 2, 5–8, 18–23, 6:57–60 (“FIG 1(a) shows a power receiver suitable for embedding in a portable device”), 6:25–26 (“FIG. 8 shows portable

devices being charged . . .”). Petitioner contends that the mobile device’s “receiver” inductively receives power from the charger coils. *Id.*

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(f) and 26(e) for purposes of institution.

g) 1(g)/26(f): a solenoid, wherein the solenoid includes:

Petitioner contends that Fells discloses that the power receiver in the mobile device can be configured in different ways, including as a “solenoid,” consistent with that described in the ’349 patent. Pet. 25–26 (citing, e.g., Ex. 1001, Figs. 7–10; Ex. 1005, Figs. 1(a), 19, 21).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(g) and 26(f) for purposes of institution.

h) 1(h)/26(g): a magnetic core having a relative magnet permeability exceeding 1 and having first and second ends:

Petitioner contends that the mobile device receiver in Fells includes a secondary coil formed of a solenoid including a magnetic core that has first and second ends and facilitates the inductive charging of the mobile device. Pet 27 (citing, e.g., Ex. 1005, Fig. 1(a), 6:57–60 (receiver “has a ferrite core and coil wound around the core”), 12:3–8 (discussing that the “permeable material” of the primary cores can be “Mn–Zn ferrite, but other magnetic materials . . . could be used”), 11:15–21 (referring to the “high effective permeability”). Petitioner contends that a person of ordinary skill in the art “would have understood that a magnetic core with ‘high effective

permeability’ necessarily discloses a ‘magnetic core having a relative magnetic permeability exceeding 1,’ because it was known ferrite material-based cores would have a relative permeability over 1, especially given the permeability of air is close to 1.” *Id.* at 28 (citing, e.g., Ex. 1002 ¶¶ 143, 144); *see also id.* at 29–30).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(h) and 26(g) for purposes of institution.

- i) 1(i)/26(h): Litz wire wrapped around a section of the magnetic core forming a wire wound section around the magnetic core, with the magnetic core extending beyond the wire wound section; and*

Petitioner contends that Fells’ magnetic core of the receiver “solenoid” is wrapped with a wire wound section, and that Fells discloses that “[p]referably Litz wire is used for both the primary and secondary coils.” Pet. 30 (citing, e.g., Ex. 1005, Figs. 18–20, 22, 23, 7:3–4) (emphasis omitted). Petitioner contends that Fells describes secondary core/coil configurations where “the magnetic core extend[s] beyond the wire wound section” of the magnetic core. *Id.* at 30–31 (citing, e.g., Ex. 1005, Figs. 1, 18–20, 22, 23, 11:1–4 (“It is preferable that the coil winding does not go all the way to the ends of the magnetic material.”)) (emphasis omitted).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(i) and 26(h) for purposes of institution.

- j) 1(j)/26(i): a receiver electronic circuit, wherein the receiver electronic circuit includes a resonant capacitor and a rectifier; and

Petitioner contends that Figure 14 of Fells teaches this limitation. Pet. 32–33. Figure 14, which shows a block diagram of the electronics within the portable device, is reproduced below.

Fig. 14

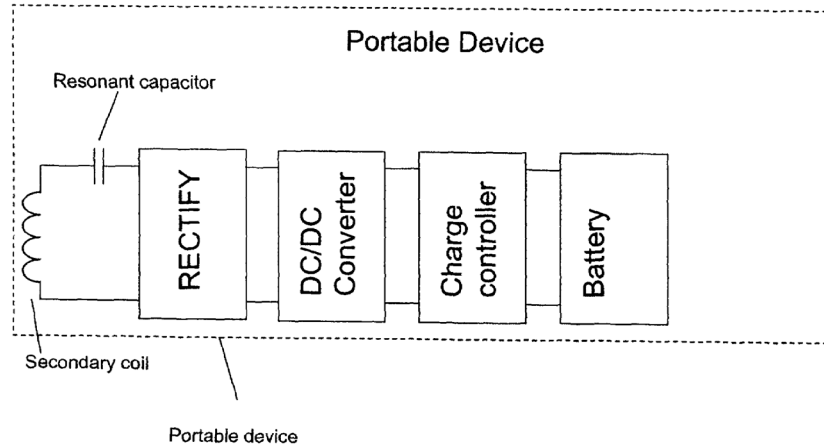


Figure 14 of Fells, above, shows a circuit that includes a rectifier and a resonant capacitor. *See, e.g., Ex. 1005, 9:54–10:6.*

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(j) and 26(i) for purposes of institution.

- k) 1(k): the charger further includes a means for positioning the receiver in a power transfer position, proximate to the charger

surface, to inductively transfer power to the receiver of the first mobile device;

26(e): means for positioning a receiver in a power transfer position, which is proximate to the charger surface, to inductively transfer power to the receiver . . .

Petitioner contends that Fells “discloses charger configurations that ensure mobile devices placed proximate to the charger surface are aligned to facilitate the inductive transfer of power to the ‘receiver.’” Pet. 33.

Petitioner relies on the configuration depicted in Figure 23, which “describes a variation to a horizontal flat pad charger, where the charger is configured to sit upright (at a slight angle) to allow mobile device(s) to be placed thereon (**‘proximate to the charger surface’**).” *Id.* Petitioner contends that Fells’ charger “can thus be configured ‘in the form of a shelf’ so the device stands slightly tilted [sic] back and upright on a ledge so that ‘there is **always alignment in one dimension**’ with the ‘receiver positioned in the portable device a set distance away from the bottom edge.’” *Id.* at 34 (citing Ex. 1005, 11:45–51). Petitioner contends that Fells “discloses the **‘charger’** including a **‘means for positioning’** (e.g., ‘support shelf’ (FIG. 23) or ‘ledge’ (11:46–51) is a physical mechanism/means to assist the user in alignment of the mobile devices on the charger) as claimed.” *Id.* at 35 (citing Ex. 1002 ¶ 157).

Petitioner also contends that it would have been obvious to a person of ordinary skill in the art to modify Fells’ charger with other forms of physical/visual mechanisms to assist alignment. Pet. 35 (citing Ex. 1002 ¶ 158). Petitioner asserts that such forms of mechanical, magnetic, or visual-based mechanisms to guide a user’s placement of power receiving

devices (e.g., mobile devices) on an inductive charging system was well-known. *Id.* (citing Ex. 1002 ¶ 159; Ex. 1010 (Nakamura), Figs. 8, 9, ¶¶ 102–103; Ex. 1011 (Stoner), code (57), Figs. 1–4, 8, 11, 1:6–46, 2:14–4:62, 5:38–7:34, 10:46–12:35). According to Petitioner, a person of ordinary skill in the art would have been motivated to consider and implement well-known mechanisms for aiding a user in aligning the mobile devices onto the charger of Fells’ system, and such modifications with these known alignment aid mechanisms would have provided benefits and advantages beyond those provided by Fells’ shelf application in Figure 23, and thus would have improved Fells’ system. *Id.* at 35–36 (citing Ex. 1003 ¶¶ 160–164). Petitioner asserts that the modification would have involved applying known technologies/techniques consistent with those taught by Fells to yield the predictable result of providing an efficient inductive charging system consistent with that contemplated by Fells. *Id.* at 36 (citing Ex. 1002 ¶ 165).

Patent Owner argues that the embodiment in Fells’ Figure 23 only provides alignment “in one dimension.” Prelim. Resp. 32. According to Patent Owner, “[m]eans for positioning requires ‘*more precise alignment*,’ for example, a specific alignment position in three dimensions—a specific position.” *Id.* at 32–33. Therefore, Patent Owner argues, “Fells support shelf *only* controls the vertical position, and thus it is not a corresponding means for positioning as required.” *Id.* at 33. Patent Owner also argues that Fells teaches away from this limitation because it is “designed toward freedom of positioning” and there is “no corollary concept in Fells of claim element 1[k].” *Id.* at 37. Patent Owner refers to Figure 8 of Fells, arguing that “Fells freedom of positioning provides a myriad of positions for the

devices being charged” and thus “teaches away from a ‘means for positioning’ at a precise location.” *Id.* at 38.

Petitioner has sufficiently shown that Fells teaches this limitation for purposes of institution. As discussed in Section III.C (Claim Construction), Patent Owner does not dispute Petitioner’s proposed construction for the “means for positioning,” but also provides another construction. Petitioner’s contentions as to Fells are sufficient under either construction. Under Petitioner’s proposed construction,” Fells’ shelf in the embodiment shown in Figure 23 provides the structure (a physical means to assist the user in alignment of parts) and the function (a means for positioning the receiver in a power transfer position, which is proximate to the charger surface, to inductively transfer power to the receiver). Similarly, under Patent Owner’s proposed construction, Fells’ shelf likewise provides the structure (physical means to assist the user in alignment of parts) and function (to provide more precise alignment between the charger and receiver coils to position the receiver in a power transfer position, proximate to the charger surface, to inductively transfer power to the receiver). Fells discloses that “[t]here is always alignment in one dimension.” Ex. 1005, 11:51. Based on the disclosure in Fells, specifically the embodiment disclosed in Figure 23 and associated description (i.e., Ex. 1005, 11:45–55), we disagree that Fells teaches away. Moreover, Patent Owner’s arguments that the claims require “more precise alignment” in “three dimensions” are not only narrower than the claim language and appear to import limitations into the claim, but are also narrower than and different from Patent Owner’s proposed construction for the term.

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(k) and 26(e) for purposes of institution.

- l) 1(l)/26(j): the charger drive circuit is configured to drive the charger coil at one or more operating frequencies to inductively transfer power from the charger to the receiver when the receiver is positioned in the power transfer position, wherein when the receiver is positioned in the power transfer position, a tuned circuit, including the charger coil and the resonant capacitor of the charger drive circuit and the solenoid and the resonant capacitor of the receiver electronic circuit, has a resonant frequency that allows the charger to transfer the power to the receiver at the one or more operating frequencies;*

Petitioner contends that Fells' charger drive circuit (*see* limitation 1(e)) above, drives the charger coils to inductively transfer power from the charger to the receiver when the receiver is positioned in the power transfer position. Pet. 37 (citing, e.g., the contentions for limitations 1(a)–1(k); Ex. 1005, Figs. 10–12). Petitioner contends that a person of ordinary skill in the art “would have understood that the ‘resonance capacitor’ in the ‘charger’ would have caused the ‘charger drive circuit’ to ‘drive the charger coil at one or more operating frequencies to inductively transfer power’ to the mobile device receiver.” *Id.* at 38 (citing the contentions for limitation 1(e); Ex. 1002 ¶ 169) (emphasis omitted). Petitioner further contends that a person of ordinary skill in the art would have “understood that the power is transferred from the charger to the receiver at the resonant frequency designed for efficient power transfer.” *Id.* (citing Ex. 1003 ¶ 170; Ex. 1005, 8:33–41). Petitioner also argues that Fells' system operates such that “a

tuned circuit” is formed. *Id.* at 38–39 (citing, e.g., contentions for limitations 1(e)–1(j); Ex. 1002 ¶ 171; Ex. 1005, 9:46–67, 25:40–26:32).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(l) and 26(j) for purposes of institution.

m) 1(m)/26(k): the charger coil includes a conductor patterned to include multiple, substantially concentric turns for generating a magnetic flux through a first end of the solenoid when the receiver is placed in the power transfer position, wherein the outmost of the concentric turns defines a perimeter of a charger coil area;

Petitioner contends that Fells’ charger coils can be planar coils, which includes a “conductor patterned to include multiple, substantially concentric turns.” Pet. 39–40 (citing, e.g., Ex. 1005, Figs. 16–17, 10:26–36). Petitioner further contends that, as exemplified in Figures 16, 17, and 23, “an outermost of the concentric turns” of the conductor in a charger coil “defines a perimeter of a charger coil area.” *Id.* at 39–41. Petitioner contends that such charger coils “generat[e] a magnetic flux through a first end of the solenoid when the receiver is placed in the power transfer position.” *Id.* at 42 (citing, e.g., contentions for limitations 1(c), 1(f)–1(l); Ex. 1005, 1:55–57 (“magnetic flux from at least one field generator flows through the secondary coil, supplying power to the secondary device”)).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(m) and 26(k) for purposes of institution.

- n) 1(n)/26(l): the multiple concentric turns, when driven by the charger drive circuit, generate a magnetic field that is substantially perpendicular to the charger surface at a geometric center of the charger coil area,*

Petitioner contends that the charger coil, including planar spiral type coils with “substantially concentric turns,” is “driven by the charger drive[r] circuit.” Pet. 44 (citing, e.g., contentions for limitations (a)–(m)). Petitioner further contends that, when driven, “generate a magnetic field that is substantially perpendicular to the charger surface at a geometric center of the charger coil area.” *Id.* at 44–46 (citing, e.g., Ex. 1005, 1:41–49 (“a plurality of field generators, each able to generate a field substantially perpendicular to the power transfer surface”, 1:55–57 (“magnetic flux from at least one field generator flows through the secondary coil”), 7:9–21, Fig. 2; Ex. 1002 ¶¶ 180–182); *see also id.* at 47–49.

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(n) and 26(l) for purposes of institution.

- o) 1(o)/26(m): the charger coil area is larger than an area of the first end and larger than an area of the second end of the magnetic core of the solenoid;*

Petitioner contends that Fells discloses configurations, including those relating to coil and receiver configurations, charger configurations, and dimensional relationships between charger coils and power receiver, which teach this limitation. Pet. 49–53 (citing, e.g., Ex. 1005, 7:22–24, 7:31–8:9, 10:60–12:8, 12:15–19, 13:14–14:31, Figs. 1, 7, 9, 10, 16, 17, 19, 21, 23; Ex. 1002 ¶¶ 185–191). In addition, Petitioner argues that to the extent that Fells

does not disclose this limitation, it would have been obvious to a person of ordinary skill in the art to configure/implement a mobile device with a power receiver having a solenoid having a magnetic core with ends having an area smaller than the charger coil area. *Id.* at 53–57 (citing, e.g., Ex. 1002 ¶¶ 192–194; Ex. 1005, Figs. 5–8, 18, 23).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(o) and 26(m) for purposes of institution.

p) 1(p)/26(n): the magnetic layer of the charger extends beyond the charger coil area; and

Petitioner contends that, although Fells does not expressly state the dimensions of the ferrite backplate, it “shows examples of the backplate that are clearly beyond the charger coil area (of not just one charger coil, but others in the charger).” Pet. 57–58 (citing, e.g., Ex. 1005, Figs. 1(b), 2, 3; Ex. 1002 ¶¶ 196–197). In addition, Petitioner contends that it would have been obvious to a person of ordinary skill in the art to consider and implement a ferrite backplate that extends beyond the “charger coil area” to ensure the charger coil has a magnetic layer to “complete the magnetic circuit” that is “formed when the power receiver is placed on the charging surface.” *Id.* at 59 (citing Ex. 1005, 7:9–16; Ex. 1002 ¶ 198).

At this stage, Patent Owner does not dispute Petitioner’s contentions. *See Prelim. Resp.* Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(p) and 26(n) for purposes of institution.

- q) 1(q)/26(o): when the receiver is in the power transfer position, the first end of the magnetic core is located proximate to the charger coil area above the charger surface to receive magnetic flux from the charger coil area and guide the magnetic flux in a closed magnetic loop from the charger coil area through the solenoid and return through the charger magnetic layer to the charger coil area to form the closed magnetic loop.*

Petitioner contends that a person of ordinary skill in the art would have understood that when Fells' receiver (i.e., the mobile device) is in the "power transfer position" (as discussed in association with limitation 1(k)/26(e) above), "inductive power transfer takes place between the charger coil(s) and the receiver coil, consistent with that known in the art, resulting in magnetic flux flowing between the charger coils and the magnetic core of the receiver solenoid." Pet. 60 (citing Ex. 1002 ¶ 201). Petitioner additionally relies on the configurations in Fells in Figures 2, 4 and 23 to support the contentions for this limitation. *Id.* at 60–63.

Patent Owner argues that this limitation requires the configuration shown in Figure 8 of the '349 patent, which Patent Owner contends has "no additional magnetic material between the charger coil and the receiver." Prelim. Resp. 35. Patent Owner contends that a person of ordinary skill in the art would understand that "proximate" means "next to or immediately preceding or following or very near." *Id.* at 36 (citing Ex. 2004).

We disagree with Patent Owner's arguments for the same reasons as discussed above for limitations 1(c) and 1(d). Further, we do not discern any dispute over the meaning of the term "proximate" at this stage of the proceeding. To the extent that there is a dispute, the parties may develop those issues during trial.

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Fells teaches limitations 1(q) and 26(o) for purposes of institution.

r) Conclusion for Independent Claims 1 and 26

Based on our review and consideration of the current record, we determine that Petitioner has adequately shown that Fells describes the limitations in claims 1 and 26 for purposes of institution. Accordingly, we determine, on the current record and for purposes of this Decision, that the information presented in the Petition demonstrates a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103 over Fells.

3. Dependent Claims 5, 7, and 10–12

Petitioner contends that dependent claims 5, 7, 10–12, which depend from claim 1, would have been obvious over Fells. Pet. 64–76. In support, Petitioner identifies certain passages and figures in Fells and explains their significance with respect to the corresponding claim limitations. *Id.*

Patent Owner does not separately challenge Petitioner’s analysis of these claims in its Preliminary Response. *See* Prelim. Resp. Because we determine above that Petitioner demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the ’349 patent, we institute *inter partes* review on all claims and grounds. *See* 37 C.F.R. § 42.108(a).

G. Ground 2: Alleged Obviousness over Fells and Jung

Petitioner contends that claim 4, which depends from claim 1, would have been obvious over Fells and Jung. Pet. 76–85. In support, Petitioner

identifies certain passages and figures in Fells and Jung and explains their significance with respect to the corresponding claim limitations. *Id.*

Patent Owner does not separately challenge Petitioner’s analysis of these claims in its Preliminary Response. *See* Prelim. Resp. 43. Because we determine above that Petitioner demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the ’349 patent, we institute *inter partes* review on all claims and grounds, including Ground 2. *See* 37 C.F.R. § 42.108(a).

H. Ground 3: Alleged Obviousness Over Fells, Stoner, and Nakamura

Petitioner contends claims 1, 5, 7, 10–12, and 26 would have been obvious over Fells, Stoner, and Nakamura. Pet. 86–88. Patent Owner disputes Petitioner’s contentions. Prelim. Resp. 39–43. Having considered the arguments and evidence before us, we find that the record establishes a reasonable likelihood that Petitioner would prevail on at least one claim in these asserted grounds of unpatentability.

1. Stoner (Ex. 1011)

Stoner is titled “Wireless Power System and Method with Improved Alignment,” and is generally directed to a wireless power system “for aligning a portable device with an inductive power supply, and more particularly to such systems that use magnetic attraction to align a portable device on an induction charging service.” Ex. 1011, code (54), 1:6–10. Figure 2(b), reproduced below, shows a physical configuration of an embodiment of the DC coil drive system.

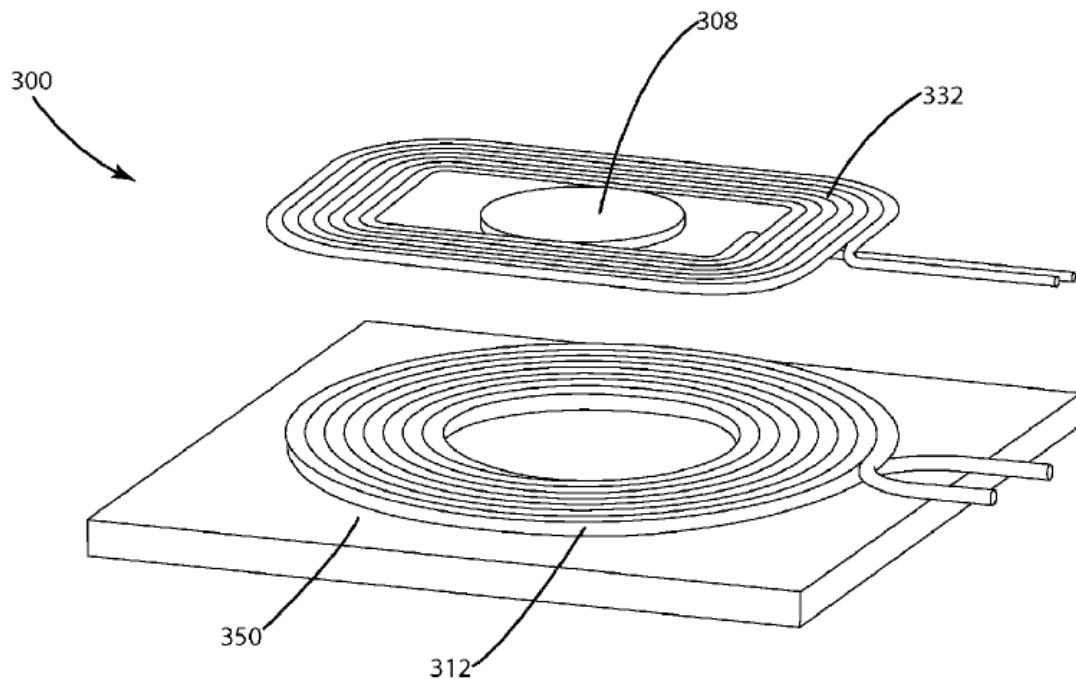


Fig. 2B

Figure 2(b), above, shows DC coil drive system 300, including inductive power supply that includes primary inductor 312 and primary shielding 350, and an electronic portable device with secondary inductor 332 and secondary magnet 308. Primary inductor 312 may also include primary magnets. *Id.* at 8:37–39.

2. *Nakamura (Ex. 1010)*

Nakamura is titled “Power Supply System” and is generally directed to “a power supply system that supplies power to mobile electronic equipment.” Ex. 1010, code (54), ¶ 3. Stoner discloses embodiments to enable positioning of the mobile electronic equipment on the power transmission apparatus. *Id.* ¶¶ 102, 103. Figure 8, reproduced below, shows an embodiment of a power supply system.

FIG. 8

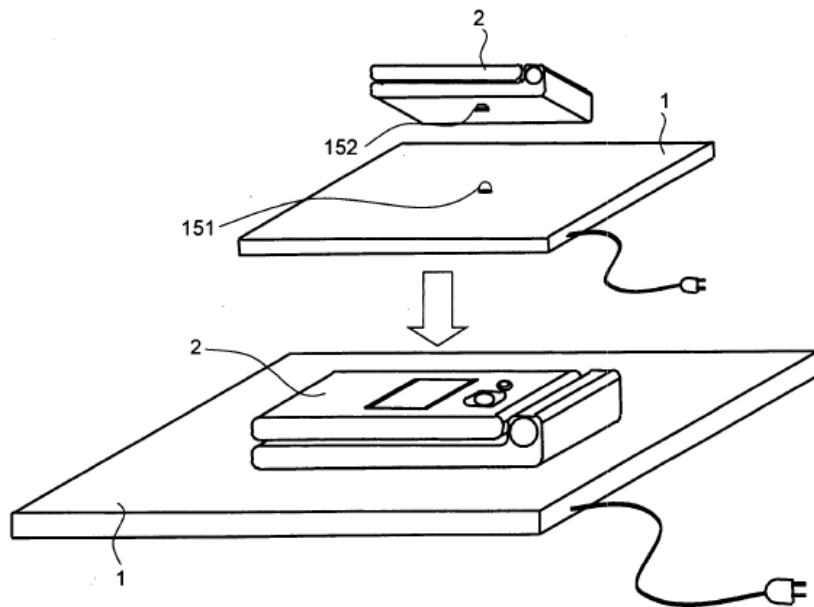


Figure 8, above, shows a state where power transmission apparatus 1 and portable telephone 2 are separated away from each other and a state where portable telephone 2 is placed on the power transmission apparatus 1. *Id.* ¶ 102. There is a protrusion 151 on the power transmission apparatus 1, and a depression 152 on the portable telephone 152, such that the protrusion 151 and depression 152 are engaged with each other to enable positioning of the power transmission apparatus 1 and the portable telephone 2. *Id.*

Figure 9, reproduced below, shows another embodiment of power supply system.

FIG. 9

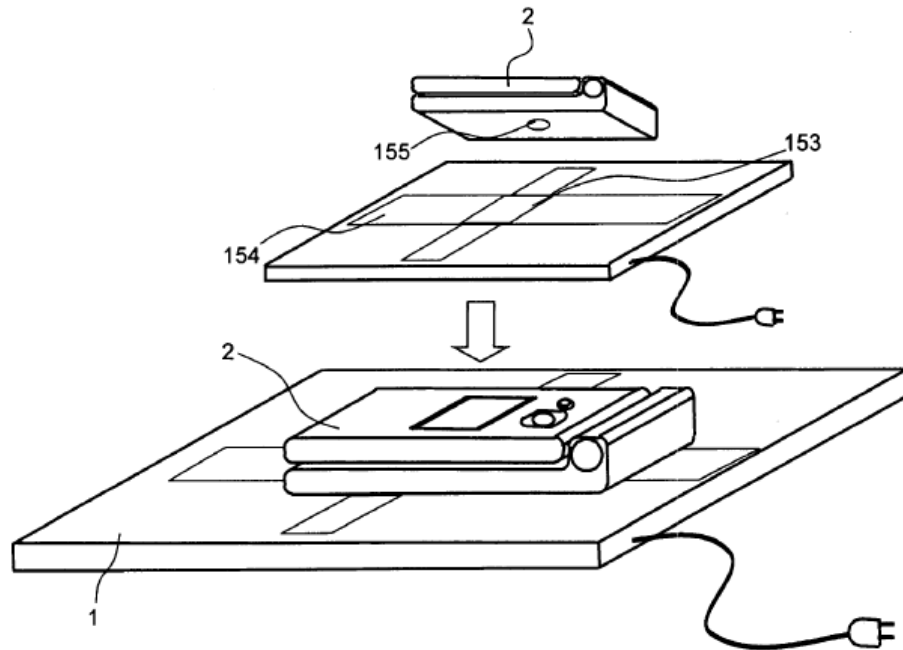


Figure 9, above, similarly shows a state where power transmission apparatus 1 and portable telephone 2 are separated away from each other and a state where portable telephone 2 is placed on the power transmission apparatus 1. *Id.* ¶ 103. A mark 153 indicating a chargeable region and an auxiliary mark 154 for positioning are provided on the power transmission apparatus 1, and a mark 155 for positioning is provided on the portable telephone 2. *Id.* The portable telephone 2 is placed on the power transmission apparatus 1 so that the mark 155 of the portable telephone is included in the chargeable region. *Id.*

3. Analysis

Petitioner's contentions are the same as those set forth above for Ground 1 (obviousness over Fells), except for limitations 1(k) and 26(e).

Although Petitioner refers to Stone and Nakamura in its analysis of limitation 1(k) in Ground 1 (*see* Pet. 35) to establish what was known in the art, both references are explicitly included in the combination in Ground 3. Specifically, Petitioner contends that a person of ordinary skill in the art “would have been motivated to consider the teachings/suggestions from Stoner and Nakamura to modify Fells to include [a] magnetic and/or visual-based mechanism for assisting a user to align/position the receiver of the mobile device,” to teach the “means for positioning” limitation. Pet. 86. Petitioner contends that the same motivation, rationale, skills, knowledge, and expectation of success as explained in Ground 1 for limitation 1(k) applies. *Id.* For example, Petitioner contends that a person of ordinary skill in the art would have been motivated to modify Fells’ “charger to include similar alignment assistance mechanisms/means to ensure proper and efficient coupling occurs when the mobile device is placed on the charger surface.” *Id.* at 87 (citing Ex. 1002 ¶ 245).

Patent Owner argues that a person of ordinary skill in the art would not have combined Fells with Nakamura or Stoner “because Fells is directed to a system with *positional freedom* whereas Stoner and Nakamura are directed towards *specific position* chargers (thus they are counter to one another).” Prelim. Resp. 40. According to Patent Owner, “Fells is designed so that each device being charged can be placed freely on the charging surface of Fells and the corresponding charging coils of Fells detect the receiver and then energize the correct coils that line up with the placement of the receiver.” *Id.* “By contrast,” argues Patent Owner, “each of Stoner and Nakamura describe the centralized alignment of one charger and one

receiver, which is further differentiated by Fells in that it is always at least two charging coils that are energized.” *Id.* According to Patent Owner, “[t]he design and purpose of Fells would be defeated if the receiver was or needed to be aligned with just one coil (as is required by both Stoner and Nakamura).” *Id.*; *see also id.* at 41.

Patent Owner also argues that “Stoner and Nakamura have geometric differences in their coils in comparison to Fells that run counter to combining them with Fells.” Prelim. Resp. 42. For example, argues Patent Owner, “Stoner exclusively describes the use of a planar coil for both the charger and the receiver, with the two coils . . . aligning at a common center point based on Stoner’s alignment system,” which “is incompatible with the multiple charger coil geometry of Fells, because the design of Fells energizes multiple (at least two) ‘charger coils’ at any one time for charging a device.” *Id.* (citing Ex. 1005, Fig. 18). Patent Owner also argues that “Nakamura teaches a charger/receiver pairing with two solenoid coil types wrapped around magnetic cores for the transfer of power,” and “[t]he Petition makes no showing as to how this Nakamura coil geometry would be combined with that of Fells dispersed, multi-charger coil design for position freedom.” *Id.* at 42–43 (citing Ex. 1010, Fig. 2B).

Petitioner has sufficiently shown that the combination of Fells, Stoner, and Nakamura teaches this limitation and has provided sufficient rationale for combining the references, for purposes of institution. Petitioner proposes modifying Fells to include magnetic and/or visual-based mechanisms for assisting a user to align/position the receiver of the mobile device, as taught by Stoner and Nakamura, respectively. We do not understand Petitioner’s

proposed combination to rely on the bodily incorporation of Stoner and Nakamura. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. . . . Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”); *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1343 (Fed. Cir. 2020) (“[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference”). We also note that, although Fells discloses that it is “particularly advantageous . . . to simply drop the device onto the pad without having regard for the position or orientation of the device on the pad,” Fells also clearly discloses embodiments that do not allow for such “positional freedom,” as Patent Owner argues. *See* Ex. 1005, Fig. 23.

Accordingly, we determine that Petitioner has demonstrated a reasonable likelihood that claims 1, 5, 7, 10–12, and 26 are unpatentable under 35 U.S.C. § 103 over Fells, Stoner, and Nakamura.

I. Ground 4: Alleged Obviousness over Fells, Stoner, Nakamura, and Jung

Petitioner contends that claim 4, which depends from claim 1, would have been obvious over Fells, Stoner, Nakamura, and Jung. Pet. 88–89. In support, Petitioner identifies certain passages and figures in Fells, Stoner, Nakamura, and Jung and explains their significance with respect to the corresponding claim limitations. *Id.* Petitioner’s contentions are essentially the same as those set forth above for Grounds 1–3. *Id.*

Patent Owner does not separately challenge Petitioner's analysis of these claims in its Preliminary Response. Prelim. Resp. 43. Because we determine above that Petitioner demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the '349 patent, we institute *inter partes* review on all claims and grounds, including Ground 4. *See* 37 C.F.R. § 42.108(a).

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition, Preliminary Response, Preliminary Reply, and Preliminary Sur-reply, we determine Petitioner has established a reasonable likelihood of prevailing on its assertion that at least one claim of the '349 patent is unpatentable on at least one ground, and we institute an *inter partes* review on all the challenged claims and challenges presented in the Petition. *See* 37 C.F.R. § 42.108(a) ("When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim").

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to the challenged claims of the '349 patent and all challenges of unpatentability presented in the Petition; and

FURTHER ORDERED that *inter partes* review is commenced on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD,
Petitioner,

v.

MOJO MOBILITY INC.,
Patent Owner.

IPR2023-01089
Patent 11,292,349 B2

FITZPATRICK, *Administrative Patent Judge*, concurring.

I concur in the majority’s decision to grant the Petition because, in my view, the Petition has compelling merits in relation to at least one of the challenged claims. “[T]he compelling merits standard is a higher standard than the standard for institution set by statute.” *Commscope Techs. LLC v. Dali Wireless Inc.*, No. IPR2022-01242, Paper 23 at 3 (PTAB Feb. 27, 2023) (precedential) (“*Commscope*”); *see also* 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.”

Commscope at 3 (quotation marks and citation omitted). Put another way, the compelling merits standard is satisfied where “it is highly likely that the petitioner would prevail with respect to at least one challenged claim.” *Id.* at 4 (citation omitted). In my view, the same evidence and arguments identified in the majority opinion as showing a reasonable likelihood of Petitioner prevailing on Ground 1 claim 1 also demonstrate that the same challenge to claim 1 has compelling merits.

However, I disagree with the majority opinion’s determination that, as a whole, the *Fintiv* factors weigh against discretionary denial of the Petition. *See Apple Inc. v. Fintiv, Inc.*, No. IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). I am of the opposite opinion—that the *Fintiv* factors favor denial. Hence, I would apply the compelling merits standard. *See Commscope* at 5 (“In circumstances where . . . the Board’s analysis of *Fintiv* factors 1–5 favors denial of institution, the Board shall then assess compelling merits.”).

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

The majority opinion finds this factor to be neutral. I agree for the reasons identified in the majority opinion.

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

The majority opinion finds this factor favors discretionary denial because trial in the district court litigation is scheduled to begin five months before our deadline to reach a final written decision. I agree, but I would place much more weight on this factor.

In *NHK Spring Co. v. Intrix-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)¹ where institution would have led to a final written decision approximately six months prior to 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.”

I would weigh this factor *heavily* in favor of discretionary denial.

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

The majority opinion finds this factor weighs against discretionary denial. I agree, but I would place less weight on this factor.

¹ 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).”).

Understandably, Petitioner stresses what remains to take place in the litigation while Patent Owner stresses what has already transpired. Pet. 93; Reply 4–5; Prelim. Resp. 20–21. The majority opinion correctly notes “that considerable effort remains to be completed.” *Supra*. However, this does not mean that significant investments have not already been made. They have. For example, 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. 20; *see* 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 of the institution decision. Prelim. Resp. 20; *see* Reply 4–5 (not disputing this argument).

I find this factor to be not very significant unless it is lopsided in one direction, which is not the situation here.

In sum, I find this factor weighs slightly against discretionary denial.

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

The majority opinion finds this factor weighs against discretionary denial. I agree in view of Petitioner’s 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 ’349 patent in this Petition based on (i) any of the same instituted grounds or (ii) any prior art reference that forms the basis of any instituted ground.” Reply 2. However, I do not agree that the stipulation goes as far as the majority opinion

characterizes it. Specifically, I do not agree that the stipulation limits invalidity challenges of the same claims in the district court litigation to those involving “materially different grounds, argument, and/or evidence.” *Supra*. For example, it does not preclude challenges based on redundant or cumulative references, should they exist.

In sum, I find this factor weighs moderately against discretionary denial.

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

The majority opinion finds this factor weighs in favor of discretionary denial. I agree for the reason identified in the majority opinion, namely, that the parties in this proceeding are identical to the parties in the related district court litigation.

*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 district court litigation involves seven patents asserted by Patent Owner. *See* Pet. 1 (listing the seven patents). Petitioner filed the instant Petition, along with seventeen additional IPR petitions, to challenge collectively various claims of the same seven patents. *See* Prelim. Resp. 1 n.1 (listing all eighteen petitions). The district court litigation can resolve the entire seven-patent dispute between the parties.

It strikes me as inefficient to conduct, in parallel with the district court litigation, multiple *inter partes* reviews of the same seven patents. This is particularly the case here where the best available evidence indicates that the district court litigation will go to trial approximately five months prior to a final written decision in the instant *inter partes* review and five to six months before a final written decision will be entered in any of the remaining *inter partes* reviews, if also instituted. Thus, I find this additional reason favors discretionary denial.

Conclusion

I believe, as a whole, the *Fintiv* factors weigh in favor of discretionary denial of the Petition, with factors 2, 5, and 6 weighing in favor of discretionary denial (factor 2 heavily so) and factors 3 and 4 weighing against it. However, as I believe the Petition contains a compelling merits challenge, I concur with the ultimate decision to grant the Petition. *See Commscope* at 4 (“[T]he PTAB will not deny institution based on *Fintiv* if there is compelling evidence of unpatentability.”) (quotation marks and citation omitted).

IPR2023-01089
Patent 11,292,349 B2

For PETITIONER:

Joseph Palys
Naveen Modi
PAUL HASTINGS LLP
josephpalys@paulhastings.com
naveenmodi@paulhastings.com

For PATENT OWNER:

Steve Pollinger
Ryan McBeth
George Fishback
MCKOOL SMITH, P.C.
spollinger@mckoolsmith.com
rmcbeth@mckoolsmith.com
gfishback@mckoolsmith.com