

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BMW OF NORTH AMERICA, LLC,
Petitioner,

v.

MICHIGAN MOTOR TECHNOLOGIES, LLC,
Patent Owner.

IPR2023-01031
Patent 8,909,482 B2

Before JAMES P. CALVE, NEIL T. POWELL, and SCOTT B. HOWARD,
Administrative Patent Judges.

HOWARD, *Administrative Patent Judge.*

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

I. INTRODUCTION

A. Background and Summary

BMW of North America, LLC¹ (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1, 2, 4–7, and 9–13 (“challenged claims”) of U.S. Patent No 8,909,482 B2 (Ex. 1001, “the ’482 patent”). Michigan Motor Technologies, LLC (“Patent Owner”) filed a Patent Owner Preliminary Response (Paper 11, “Prelim. Resp.”).

We have authority, acting on the designation of the Director, to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). *Inter partes* review may not be instituted unless “the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2018). “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.” 37 C.F.R. § 42.108(a) (2022).

For the reasons set forth below, upon considering the briefing and the evidence of record, we determine that the information presented in the Petition establishes a reasonable likelihood that Petitioner will prevail with respect to at least one of the challenged claims. Accordingly, we institute *inter partes* review on all of the challenged claims based on all of the grounds identified in the Petition.

¹ The Petition was originally filed by BMW of North America, LLC and Mercedes-Benz USA, LLC. This proceeding was terminated with respect to Mercedes-Benz. Paper 10 (Termination Order).

B. Real Parties in Interest

In the Petition,² Petitioner identifies Mercedes-Benz USA, LLC, BMW of North America LLC, Mercedes-Benz Intellectual Property GmbH & Co. KG, Mercedes-Benz AG, Mercedes-Benz Group AG, and Bayerische Motoren Werke AG as real parties in interest. Pet. 83

Patent Owner identifies Michigan Motor Technologies LLC as the real party in interest. Paper 4, 2 (Patent Owner’s Mandatory Notices).

C. Related Matters

The parties identify the following district court proceedings in which the ’482 patent is being asserted:

Michigan Motor Technologies LLC v. Mercedes-Benz USA, LLC, No. 1:22-cv-3957 (N.D. Ill.) and

Michigan Motor Technologies LLC v. Bayerische Motoren Werke AG, No. 1:22-cv-3804 (N.D. Ill.).

Pet. 83; Paper 4, 2.

We take Official Notice of a prior *inter partes* review involving the ’482 patent: *Volkswagen Group of America, Inc. v. Michigan Motor Technologies LLC*, IPR2020-00894 (“Volkswagen IPR”). We denied institution in that proceeding. *Volkswagen*, IPR2020-00894, Paper 11 (PTAB Oct. 1, 2020).

² Following the Termination with respect to Mercedes-Benz USA, LLC, Petitioner has not filed updated mandatory notices indicating that the real parties in interest have changed. See 37 C.F.R. § 42.8(a)(3) (requiring a party to file an updated mandatory notice with 21 days of a change in the real party in interest).

D. The '482 Patent

The '482 patent is entitled “Device for Measuring Power Consumption and Performance with Respect to the Environment of a Power-Consuming Unit” and is directed

to a device for measuring power consumptions and the respectful performance with the environment, from the measured power consumptions and from the residue production, in a power-consuming unit, a comfort unit (houses, communities, hotels and restaurants, spare time spaces, sport spaces, private and public motor vehicles, and goods vehicles, etc.) or a production unit.

Ex. 1001, code (54), 1:18–24. More specifically, the '482 patent is directed the calculation of an “‘ecological parameter’ from the measurements of power consumptions (direct consumptions) and of residues and wastes generated (indirect consumptions).” *Id.* at 1:25–29.

According to the '482 patent,

The function of the device of the invention is to measure the respectful performance or behaviour with the environment of a “power-consuming unit”. The “power-consuming unit” object of the measure of the possible different power manifestations consumed can be: a house, community (hotel, sports centre, residence, sport spaces, shops, department stores, leisure halls, office buildings and studies, administration centres, etc.), transformation centres, garages, warehouses, motor vehicles or transportation means, private or public.

Ex. 1001, 3:3–12. The device operates by comparing “the basic actual power flow required by the user for their comfort with” a normal or typical consumption based on “current regulations (e.g. UNE, ISO standards, etc.) and/or those recommended by official administrations of the place and/or statistic data of normal power consumptions and wastes.” *Id.* at 3:13–21. The comparison is made by calculating “an ecological parameter as an adjusted mean of the sum of deviations of each value of power consumption

measured with respect to its corresponding reference value.” *Id.* at 3:22–25. The ’482 patent states that the ecologic parameter (or ecocoms) is calculated applying the following formula:

$$Ecocoms(\%) = 1/n \sum_{i=1}^n (Cpdx \left(1 - \frac{Ei}{p \cdot Ct}\right) \times 100$$

where E_i is a measure of the flow of an actual input power statement, C_t is a measurement of preset flows, C_{pd} is an adjustment coefficient, “ n is the number of power sources or waste variables to be measured (with adjustment coefficient different from zero) and p the people who enjoy[] the comfort of the unit to be measured.” *Id.* at 5:27–6: 21.

E. Illustrative Claims

Claims 1 and 9 are independent claims and claim 1, reproduced below, is illustrative of the subject matter of the challenged claims.

1. A device for measuring power consumption and performance with respect to the environment of a power-consuming unit comprising

a data introduction module, which receives at least one power consumption value, measured by a measurement apparatus of the power-consuming unit;

an input device for inputting waste production data;

a display screen; and

a computer with a processor and a memory device having therein a plurality of instructions that, when executed by the processor, cause the processor to

(a) receive the at least one power consumption value from the data introduction module,

(b) receive the waste production data,

(c) calculate an ecological parameter based on the at least one power consumption value and the waste production data, and

(d) operate the display screen to display the calculated ecological parameter,

wherein the calculated ecological parameter is an adjusted mean of the sum of the deviations of the at least one power consumption value with respect to a reference value corresponding to the at least one power consumption value.

Ex. 1001, 6:38–61

F. Prior Art and Asserted Grounds

Petitioner asserts that claims 1, 2, 4–7, and 9–13 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §³	Reference(s)/Basis
1, 2, 4, 5	103(a)	Luff, ⁴ Amaratunga, ⁵ Seem ⁶
6	103(a)	Luff, Amaratunga, Seem, Zuta ⁷
7	103(a)	Luff, Amaratunga, Seem, Zuta, Breton ⁸
9–11	103(a)	Luff, Amaratunga,

³ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Because the ’482 patent claims the benefit of the filing date from an application filed before March 16, 2013, we apply the pre-AIA version of the statutory basis for unpatentability. *See* Ex. 1001, code (22).

⁴ US 8,170,886 B2, issued May 1, 2012 (Ex. 1005). Petitioner argues that Luff is entitled to the benefit of the filing date of U.S. Provisional Application No. 61/040,466 (Ex. 1010). Pet. 11–14. Patent Owner did not address Luff’s effective filing date. *See* Prelim. Resp. We determine that Petitioner has satisfied its burden to show that Luff is entitled to the filing date of the Luff provisional patent application. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1378, 1379–80 (Fed. Cir. 2015) (discussing the shifting burden of production).

⁵ US 2003/0061091 A1, published March 27, 2003 (Ex. 1006).

⁶ US 2003/0028350 A1, published February 6, 2003 (Ex. 1007).

⁷ US 2007/0262855 A1, published November 15, 2007 (Ex. 1008).

⁸ US 6,148,656, issued November 21, 2000 (Ex. 1009).

Claim(s) Challenged	35 U.S.C. § ³	Reference(s)/Basis
12, 13	103(a)	Luff, Amaratunga, Zuta, Breton

Petitioner also relies on the testimony of Glenn R. Bower, Ph.D. (Ex. 1003).

II. ANALYSIS

A. Legal Standards

In *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under 35 U.S.C. § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) if in evidence, “secondary considerations” of non-obviousness such as “commercial success, long-felt but unsolved needs, failure of others, etc.” *Id.* at 17–18. “While the sequence of these questions might be reordered in any particular case,” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the U.S. Court of Appeals for the Federal Circuit has repeatedly emphasized that “it is error to reach a conclusion of obviousness until all those factors are considered,” *WBIP, LLC v. Kohler*, 829 F.3d 1317, 1328 (Fed. Cir. 2016). Because Patent Owner does not address objective evidence of non-obviousness, we focus solely on the first three *Graham* factors.

B. Level of Ordinary Skill in the Art

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

obviousness is assessed. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

Factors pertinent to a determination of the level of ordinary skill in the art include “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Envtl. Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 696–697 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). “Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case.” *Id.*

Petitioner argues that a person having ordinary skill in the art would have had

a B.S. degree in Electrical Engineering or Mechanical Engineering (or equivalent), as well as at least 2-3 years of industry experience, including experience with statistical analysis, or, alternatively, at least an M.S. degree in Electrical Engineering or Mechanical Engineering and 1-2 years of industry experience, including experience with statistical analysis.

Pet. 9–10 (citing Ex. 1003 ¶¶ 49–50).

Patent Owner argues that a person having ordinary skill in the art would have had “(1) a B.S. in mechanical engineering or a closely related field with three or more years of experience in either programmable engine systems or engine control systems or (2) at least a M.S. in mechanical engineering.” Prelim. Resp. 8.

On one hand, Patent Owner presents only attorney argument, unsupported by any evidence. *See* Prelim. Resp. 8. Accordingly, we give it

no weight. *Elbit Systems of America, LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1359 (Fed. Cir. 2018) (“[a]ttorney argument is not evidence’ and cannot rebut other admitted evidence” (quoting *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017))); *Gemtron Corp. v. Saint-Gobain Corp.*, 572 F.3d 1371, 1380 (Fed. Cir. 2009) (unsworn attorney argument is not evidence).

On the other hand, Petitioner’s formulation is supported by conclusory testimony which does not provide supporting evidence or reasoning. *See* Ex. 1003 ¶¶ 49–50. We give such testimony little weight. *See* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Although we give Dr. Bower’s testimony little weight, it is consistent with the invention disclosed in the ’482 patent, which claims using a computer to calculate an ecological parameter based on power consumption and waste production data. Accordingly, for purposes of this Decision, we adopt Petitioner’s formulation of the person having ordinary skill in the art.⁹

C. Claim Construction

We apply the same claim construction standard used in the federal courts, in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), which is

⁹ If Patent Owner disagrees with Petitioner’s formulation of the level of skill in the art, it must do so in its Response. If a different level of skill would affect the outcome in this case, the parties must brief that issue as well. The failure of Patent Owner to describe how the different level of skill in the art is determinative will be a forfeiture of that argument. The parties are also encouraged to submit evidence, other than conclusory expert testimony, that supports their position.

articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). See 37 C.F.R. § 42.100(b). Under the *Phillips* standard, the “words of a claim ‘are generally given their ordinary and customary meaning,’” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1312–13.

Petitioner proposes a construction of “means for introducing values of waste production” as recited in claim 2. Pet. 10–11. Petitioner further argues that all other claim terms “should receive their plain and ordinary meaning, in the context of the ’482 patent specification, under the *Phillips* standard.” *Id.* at 10.

Patent Owner argues that all “claim terms be given their plain and ordinary meaning.” Prelim. Resp. 9.

For the purposes of this Decision, we need not expressly construe any claim terms. See *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe 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))).

D. Discretionary Denial – 325(d)

1. Legal Standard

Patent Owner urges us to exercise our discretion to deny institution of trial under 35 U.S.C. § 325(d). Prelim. Resp. 19–20. Under § 325(d), we have discretion to deny a petition that presents the same or substantially the same prior art or arguments as previously presented to the Office. In evaluating whether the factual predicate under § 325(d) is met, we consider a number of non-exclusive factors, as set forth in *Becton, Dickinson & Co. v.*

B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (Institution Decision) (precedential as to Section III.C.5, first paragraph) (“the *Becton Dickinson* factors”):

(a) the similarities and material differences between the asserted art and the prior art involved during examination;

(b) the cumulative nature of the asserted art and the prior art evaluated during examination;

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;

(d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;

(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

(f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, IPR2017-01586, Paper 8 at 17–18.

In performing an analysis under § 325(d), “the Board uses the following two-part framework:

(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. . . . If, after review of [*Becton, Dickinson*] factors (a), (b), and (d), it is determined that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8, 10 (PTAB Feb. 13, 2020) (Institution Decision) (precedential) (footnote omitted). Consequently, we first turn to an analysis of *Becton-Dickinson* factors (a), (b), and (d) to determine whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office. Only if we determine that the same or substantially the same prior art or arguments were previously presented to the Office do we turn to *Becton Dickinson* factors (c), (e), and (f).

2. *Part One of the Advanced Bionics Analysis*

Becton Dickinson factors (a), (b), and (d) require us to determine, respectively: (a) “the similarities and material differences between the asserted art and the prior art involved during examination;” (b) “the cumulative nature of the asserted art and the prior art evaluated during examination,” and (d) “the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art.” *Becton, Dickinson*, IPR2017-01586, Paper 8 at 17.

Patent Owner argues that “Petitioner has asserted the same primary reference, Luff, as in the Volkswagen IPR, as well as the same combining references Zuta and Breton.” Prelim. Resp. 20.¹⁰ Patent Owner further argues that “[t]he two newly introduced asserted references, Amaratunga and Seem, are substantially similar and cumulative of the references asserted in the denied Volkswagen IPR.” *Id.*

¹⁰ Patent Owner italicizes the names of prior art references. Here and elsewhere, we have removed the italics.

Petitioner argues that “this Petition relies on art not considered during the prosecution of the ’482 patent. None of the prior art references relied on in this Petition were considered during the prosecution of the ’482 patent.” Pet. 22. Petitioner further argues that although “the Luff, Breton, and Zuta references were cited in [the Volkswagen] IPR petition, that petition did not rely on the Amaratunga or Seem references, or those references in combination with Luff, Breton, and Zuta, as cited in this Petition.” *Id.* at 23. According to Petitioner, “[t]his is not trivial, because the Amaratunga and Seem references disclose systems and methods for including waste production data in the calculation of an ecological parameter, as claimed by the ’482 patent, and the particular formula for calculating that parameter.” *Id.*

We are persuaded by Petitioner’s argument. As the parties agree, the petitioner in the Volkswagen IPR relied on Luff. *See* Pet. 23; Prelim. Resp. 20. In that proceeding, we denied institution because the petition did not sufficiently show that Luff teaches or suggests “waste production data” as recited in claims 1 and 9. *Volkswagen*, IPR2020-00894, Paper 11 at 11–14.

However, neither Amaratunga nor Seem were considered during the prosecution of the ’482 patent or the Volkswagen IPR. Pet. 23; Prelim. Resp. 22. Moreover, Petitioner relies on Amaratunga in combination with Luff to teach “waste production data,” the limitation we found missing in the Volkswagen IPR. *See* Pet. 39–41. Additionally, to the extent Petitioner relies on Luff, Petitioner is relying on a different section of the reference than was raised in the Volkswagen IPR. *Compare* Pet. 39–41 (relying on 5:57–6:26), *with Volkswagen*, IPR2020-00894, Paper 2 (relying on 9:24–31, 17:65–18:3). The Office never considered this combination either during the prosecution of the ’482 patent or during the Volkswagen IPR.

Furthermore, we do not agree with Patent Owner that Amaratunga and Seem are substantially the same and cumulative to references asserted in the Volkswagen IPR. Patent Owner neither identifies how the references are cumulative of Amaratunga and Seem nor why the references are cumulative Amaratunga and Seem. Although, at a very high level, Amaratunga and Seem involve the same technology as the references asserted in the Volkswagen IPR, that is not enough. The issue is not just whether the same elements can be found in each of the references, but whether the elements function the same way. Patent Owner does not provide any explanation as to how both Amaratunga and Seem operate or how their operations are substantially the same as the operations disclosed by the references asserted in the Volkswagen IPR. *See* Prelim. Resp. 20. Accordingly, we are not persuaded by Patent Owner that Amaratunga and Seem are substantially the same as references the Office previously considered.

3. *Conclusion*

Because we find that the evidence of record demonstrates that *Becton Dickinson* factors (a), (b), and (d) have not been satisfied, we find that the same or substantially the same art or arguments were not previously presented. Thus, our analysis ends at this point, and we need not proceed to part two of the *Advanced Bionics* framework. *See Advanced Bionics*, IPR2019-01469, Paper 6 at 8. We consequently decline to exercise our discretion to deny institution based on 35 U.S.C. § 325(d).

E. Discretionary Denial – Parallel Proceedings

Patent Owner argues that we should exercise our discretion and deny institution based on the district court proceedings. *See* Prelim. Resp. 17–19. Petitioner disagrees. *See* Pet. 28–29.

Under § 314(a), the Director has discretion to deny institution of an *inter partes* review. *See Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an [*inter partes* review] proceeding.”).

In *NHK*, the Board denied institution relying, in part, on § 314(a) because the parallel district court proceeding was scheduled to finish before the Board reached a final decision. *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential) (Decision on Institution). “*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.” *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 3 (PTAB Mar. 20, 2020) (precedential) (Order). When determining whether to exercise discretion to deny institution under *NHK* due to an earlier trial date, we consider the following factors (“*Fintiv* factors”):

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

Id. at 6. “These factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.* In evaluating these factors, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* (citing CTPG 58 (November 2019)).

On June 21, 2022, the Director issued an Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings With Parallel District Court Litigation (“Interim *Fintiv* Guidance”).¹¹ The Interim *Fintiv* Guidance provides “several clarifications” to “the PTAB’s current application of *Fintiv* to discretionary denial where there is parallel litigation” in response to comments received from stakeholders in response to a Request for Comments. Interim *Fintiv* Guidance 2.

1. Factor 1: Whether a Stay Exists or Is Likely to Be Granted if a Proceeding Is Instituted

Neither party addresses this factor in their papers. *See* Pet. 28–29; Prelim Resp. 17–19.

According to Patent Owner, in each of the pending district court proceedings, “[t]he ’482 has been invalidated as ineligible under 35 U.S.C. § 101 by two district courts, in concurrent litigations.” Prelim. Resp. 17–18. Given that invalidity determination, we do not believe that the district court will grant a stay while we make our independent patentability determination based on a different statutory basis. Accordingly, this factor weighs in favor of denying institution.

¹¹ Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

2. *Factor 2: Proximity of the Court’s Trial Date to the Board’s Projected Statutory Deadline*

Petitioner argues that no trial date has been set. Pet. 28. However, given the invalidity determination, we find that argument inapposite. The District Court has determined the claims invalid and there is no reason to believe that there will be an additional invalidity trial. As the District Court has completed its consideration of the ’482 patent, we determine this factor weighs in favor of denying institution.

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

Neither party addresses the District Courts’ investments in the parallel proceedings. See Pet. 28–29; Prelim Resp. 17–19. However, given that the District Court held the claims invalid under section 101, we find the District Courts’ investment to be substantial. Accordingly, this factor weighs in favor of denying of institution.

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

Petitioner has stipulated that “if the Board institutes *inter partes* review, Petitioner will not seek resolution in the District Court of any ground of invalidity for the ’482 Patent that utilizes the same combination of prior art reference relied upon in the grounds of the instant petition.” Pet. 29.

Normally, such a stipulation would marginally weigh against exercising our discretion to deny institution. See *Sand Revolution II, LLC v. Cont’l Internmadl Grp. LLC*, IPR2019-01393, Paper 24 at 11–12 (PTAB June 16, 2020) (Informative). However, in view of the particular circumstances presented here—the challenged patent has already been found to be invalid by another tribunal—we determine this factor favors discretionarily denying institution.

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

Because Petitioner is the defendant in the district court proceeding (Paper 4, 2), this factor weighs somewhat in favor of exercising our discretion to deny institution, given the timing discussed above regarding factor 2. *Fintiv*, Paper 11 at 13–14.

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

Factor 6 concerns other circumstances and recognizes that a decision whether to exercise discretion under § 314(a) to deny institution should rest on “a balanced assessment of all the relevant circumstances in the case, including the merits.” *Fintiv*, IPR2020-00019, Paper 11 at 14; Interim *Fintiv* Guidance at 4. 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*, IPR2020-00019, Paper at 14–15.

Also, Congress gave the Office “significant power to revisit and revise earlier patent grants” as a way to “improve patent quality and restore confidence in the presumption of validity that comes with issued patents.” *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 272 (2016) (quoting H.R. Rep. No. 112-98, pt. 1, at 45, 48). “Consistent with Congress’s giving the Office the authority to revisit issued patents, the PTAB will not deny institution based on *Fintiv* if there is compelling evidence of unpatentability.” Interim *Fintiv* Guidance at 5; *see id.* at 2, 4, 9.

If factors one through five do not favor discretionary denial, “the Board shall decline to discretionarily deny under *Fintiv* without reaching the compelling merits analysis.” *CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 4–5 (PTAB Feb. 27, 2023) (precedential,

decision upon Director Review). But if factors one through five favor discretionary denial, “the Board shall then assess compelling merits.” *Id.* at 5; *see also Volvo Penta v. Brunswick Corp.*, IPR2022-01366, Paper 15 at 4–5 (PTAB May 2, 2023) (Director Review) (holding that the PTAB must perform a compelling merits analysis even when the District Court has already invalidated the challenged claims under 101, but the decision is still pending appeal if the Board determines that Fintiv factors 1–5 favor exercise of discretion to deny institution.)

Here, on balance, factors one through five favor discretionary denial. *See supra* §§ II.E.1–II.E.5 (finding that five factors favor discretionary denial and one factor does not favor discretionary denial). Because factors one through five favor discretionary denial, we assess compelling merits. *See CommScope*, IPR2022-01242, Paper 23 at 5. To provide better context when doing so, however, we assess compelling merits after addressing the patentability issues. *See* § II.H, *infra*. Based on the current record and for the reasons explained below, we determine that Petitioner presents compelling evidence of unpatentability for at least one challenged claim. *See* § II.H, *infra*.

Patent Owner presents other circumstances that we should consider. For instance, Patent Owner argues that “given that the District Court has already invalidated the patent, [Patent Owner] offered a covenant not to sue [Petitioner] on the ’482 Patent in return for dismissing this IPR Petition.” Prelim. Resp. 18. Patent Owner also argues that “[a] settlement and dismissal of the related district court action is expected long before a Final Written Decision is expected, in February 2025.” *Id.*

Patent Owner’s arguments are inapposite. We are aware of no cases in which the Board exercised its discretion to deny institution where a patent

owner has provided a covenant not to sue. Although a covenant not to sue may be sufficient to show there is no case or controversy before an Article III court (*see Janssen Pharm. N.V. v. Apotex. Inc.*, 540 F.3d 1353 (Fed. Cir. 2008)), we have no such standing requirement. *See* 35 U.S.C. § 311(a) (“Subject to the provisions of this chapter, a person who is not the owner of a patent may file with the Office a petition to institute an *inter partes* review of the patent.”). Moreover, Patent Owner’s argument is speculative in that it has offered, but not given, the covenant not to sue.

Similarly, Patent Owner’s argument that this case will settle is speculative. Although Patent Owner may wish to settle, and to do so in an expeditious matter, it cannot force Petitioner to settle. Until there is a settlement agreement and a motion to terminate, we need not consider a party’s desire.¹²

7. *Balancing the Fintiv Factors*

Based on our assessment of compelling merits as discussed in more detail below (*see* Section II.H, *infra*), we decline to exercise our discretion under § 314(a) to deny institution in view of the district court proceedings. *See* Interim *Fintiv* Guidance at 2, 4–5, 9.

¹² Patent Owner could have ended the proceeding unilaterally by statutorily disclaiming the challenged claims. *See* 37 C.F.R. § 42.107(3) (“The patent owner may file a statutory disclaimer under 35 U.S.C. 253(a) in compliance with § 1.321(a) of this chapter, disclaiming one or more claims in the patent. No *inter partes* review will be instituted based on disclaimed claims.”). Similarly, Patent Owner could have unilaterally filed a request for adverse judgment. *See* 37 C.F.R. § 42.73(b). Patent Owner has chosen not to take those unilateral actions to end this proceeding. *See* Prelim. Resp.

F. Luff, Amaratunga, and Seem

Petitioner argues that claims 1, 2, 4, and 5 would have been obvious over Luff, Amaratunga, and Seem. Pet. 29–65. Based on the current record, we are persuaded that Petitioner has established a reasonable likelihood of prevailing on this asserted obviousness ground with respect to at least claim 1.

1. Overview of Luff

Luff is titled “Systems, Methods, and Apparatus to Generate an Energy Consumption Index” and is directed “to the measurement of energy consumption and, more particularly, to systems, methods, and apparatus to generate an energy consumption index.” Ex. 1005, code (54), 1:14–16. More specifically, Luff is directed to a system that collects resource consumption data, based on the activities of person(s) and/or household(s). *Id.* at 4:43–5:8. For example, as shown in Luff Figure 3 (not reproduced), a Home Resource Consumption Measurement (“HRCM”) is obtained by collecting energy consumption associated with various appliances. *Id.* at Fig. 3, 7:40–67. Additionally, the user can manually enter or adjust resource consumption information. *Id.* at 9:24–31.

2. Overview of Amaratunga

Amaratunga is titled “Systems and Methods for Making Prediction on Energy Consumption of Energy-Consuming Systems or Sites” and is directed to “to systems and methods for making prediction on energy consumption of energy consuming sites.” Ex. 1006, code (54), ¶ 2. Amaratunga teaches systems and methods for “measur[ing]. . . energy consumed by energy consuming systems or an energy-consuming site” and “compar[ing] the real energy usage of the systems or site against expected or predicted values.” *Id.* at code (57). Relevant to this proceeding,

Amaratunga discloses a “waste information unit 230” that measures “waste amounts for [an] energy consuming site.” *Id.* ¶ 35.

3. *Overview of Seem*

Seem is titled “Method of Intelligent Data Analysis to Detect Abnormal Use of Utilities in Buildings” and is directed to “managing consumption of utilities, such as electricity, natural gas and water; and more particularly to detecting the occurrence of abnormal usage.” Ex. 1007, code (54), ¶ 4. Seem recites formulas for computing a robust estimate of a mean value and standard deviation that “quantify the severity of the abnormal utility usage represented by the corresponding outlier.” *Id.* ¶ 40; *see also id.* at ¶¶ 36–39. “These values can be plotted to provide a graphical indication as to that severity by which the building operator is able to determine whether investigation of the cause is warranted.” *Id.* ¶ 40.

4. *Analysis of Claim 1*

a) *Undisputed Limitations*

The preamble¹³ of claim 1 recites “[a] device for measuring power consumption and performance with respect to the environment of a power-consuming unit.” Ex. 1001, 6:38–40. Petitioner argues Luff teaches the preamble. Pet. 34–36; *see also* Ex. 1003 ¶¶ 89–92. Specifically, Petitioner argues that Luff teaches a “‘Home Resource Consumption Management (HRCM) device’ that ‘receives information from a number of meters . . . associated with a household,’ ‘aggregates resource consumption data,’ and reports the raw and/or processed data to a ‘data collector,’ i.e., collectively, a

¹³ Because, as discussed below, Petitioner has sufficiently shown that Luff teaches the preamble, we need not determine whether the preamble is limiting. *See Nidec*, 868 F.3d at 1017.

device for measuring power consumption.” Pet. 34 (quoting Ex. 1005, 3:30–36, 7:35–58) (citing Ex. 1010 ¶¶ 35–54). Petitioner further argues that Luff teaches an energy index generator which is used for “measuring power consumption performance with respect to the environment.” *Id.* (citing Ex. 1005, 13:26–34, 14:30–33; Ex. 1010 ¶¶ 35–61). According to Petitioner, “the HRCM, data collector, and energy index generator disclose a device for measuring power consumption and performance relative to the environment.” *Id.* at 34–35.

Claim 1 further recites “a data introduction module, which receives at least one power consumption value, measured by a measurement apparatus of the power-consuming unit.” Ex. 1001, 6:41–43. Petitioner argues Luff teaches this limitation. Pet. 36–39; *see also* Ex. 1003 ¶¶ 93–96.

Specifically, Petitioner argues Luff teaches that the HRCM receives information from a number of meters, including at least one power consumption value. Pet. 37. This includes “‘home energy values . . . from appliances’—such as a furnace, air conditioner, microwave, television, or personal computer—‘associated with a measured household,’ i.e., the power consumption values and measurements apparatuses are of the power-consuming unit.” *Id.* (quoting Ex. 1005, 7:41–44) (citing Ex. 1010 ¶ 20). Petitioner further argues that Luff teaches that the HRCM may be integrated into the data collector software “such that the data collector directly receives information from a number of meters associated with a household, i.e., a data introduction module, which receives at least one power consumption value, measured by a measurement apparatus of the power-consuming unit.” *Id.* at 38 (citing Ex. 1005, 8:50–51).

Claim 1 further recites “an input device for inputting waste production data.” Ex. 1001, 6:44. Petitioner argues that the combination of Luff and

Amaratunga teach this limitation.¹⁴ Pet. 39–41; *see also* Ex. 1003 ¶¶97–102. Specifically, Petitioner argues that Luff teaches receiving data, such as by using a barcode scanner that reads UPC code and indicates “an amount waste associated with the use of the product (e.g., landfill space requirements[]),’ i.e., the volume of space required to store the waste produced by the product, which corresponds to the amount of waste produced or the waste production data.” Pet. 39–40 (alteration in original) (quoting Ex. 1005, 5:57–6:26) (citing Ex. 1010 ¶ 31; Ex. 1003 ¶¶ 97–102). Petitioner also argues that Amaratunga teaches “a Data Processing Module 20 that receives ‘by-product and waste information from a by-product and waste information unit 230.’” *Id.* at 40 (quoting Ex. 1006 ¶ 32). According to Petitioner, a person having ordinary skill in the art would have combined Luff’s input mechanism with Amaratunga’s collection of waste data. *Id.* at 41 (citing Ex. 1006 ¶ 19; Ex. 1002 ¶¶ 97–102).

Claim 1 further recites “a display screen.” Ex. 1001, 6:45. Petitioner argues Luff teaches that limitation. Pet. 42; *see also* Ex. 1003 ¶¶ 103–104. Specifically, Petitioner argues Luff teaches using a liquid crystal display monitor to provide output to the user. Pet. 42 (citing Ex. 1005, 18:25–29, 30:53–55; Ex. 1010 ¶ 110; Ex. 1003 ¶¶ 103–104).

Claim 1 further recites “a computer with a processor and a memory device having therein a plurality of instructions that, when executed by the processor, cause the processor to.” Ex. 1001, 6:46–48. Petitioner argues Luff teaches this limitation. Pet. 42–43; *see also* Ex. 1003 ¶¶ 105–107.

¹⁴ Patent Owner does not dispute that the combination Luff and Amaratunga teaches this limitation. However, as discussed below, Patent Owner argues that a person having ordinary skill in the art would not have combined the references. *See* Section II.F.4.(b), *infra*.

Specifically, Petitioner argues that Luff teaches “that its data collector and HRCM may be implemented by a ‘processor system’ that may be a computer and executes ‘machine readable instructions.’” Pet. 42 (citing Ex. 1005, 1:66-2:3, 30:13-23; Ex. 1010 ¶¶ 107-113). Petitioner further argues that Luff teaches that the processor includes various types of memory which is used to store the machine readable instructions. *Id.* (citing Ex. 1005, 30:23-48; Ex. 1010 ¶ 107-113; Ex. 1003 ¶ 105-107).

Claim 1 further recites “(a) receive the at least one power consumption value from the data introduction module.” Ex. 1001, 6:49-50. Petitioner argues Luff teaches that limitation. Pet. 43-45; *see also* Ex. 1003 ¶¶ 108-113. Specifically, Petitioner argues that “Luff teaches that the data collector receives data from Luff’s meters (i.e., power consumption values) transmitted to the data collector by the HRCM.” Pet. 43-44 (citing Ex. 1005, 6:57-64, 8:28-47; Ex. 1010 ¶ 45). Therefore, according to Petitioner, “Luff’s data collector discloses a plurality of instructions that, when executed by its processor, cause the data collector to receive the at least one power consumption value from the data introduction module, the HRCM.” *Id.* at 44 (citing Ex. 1003 ¶¶ 108-113).

Claim 1 further recites “(b) receive the waste production data.” Ex. 1001, 6:51. Petitioner argues that the combination of Luff and Amaratunga teaches this limitation. Pet. 46-48; *see also* Ex. 1003 ¶¶ 114-124. Specifically, Petitioner argues Luff teaches that the plurality of instructions causes the processor to receive waste production data from various inputs. Pet. 46-47 (citing Ex. 1003 ¶¶ 114-124; Ex. 1005, 5:57-6:26, 8:45-47, 30:13-23; Ex. 1010 ¶¶ 31, 38, 45, 107-113). Petitioner further argues that a person having ordinary skill in the art would combine that feature from Luff with Amaratunga’s teaching regarding a waste

information unit that provides waste amount data.¹⁵ *Id.* at 47–48 (citing Ex. 1006 ¶ 35; Ex. 1003 ¶¶ 114–124).

Claim 1 further recites “(c) calculate an ecological parameter based on the at least one power consumption value and the waste production data.” Ex. 1001, 6:52–54. Petitioner argues that combination of Luff and Amaratunga teaches that limitation. Pet. 48–51; *see also* Ex. 1003 ¶¶ 125–131. Specifically, Petitioner argues that Luff “teaches ‘machine readable instructions,’ i.e., a plurality of instructions, ‘that may be executed to generate a household energy consumption index,’ i.e., calculate an ecological parameter.” Pet. 49 (quoting Ex. 1005, 1:58-60) (citing Ex. 1010 ¶¶ 83–88). According to Petitioner, this household energy consumption index is based on power consumption values and waste production data. *Id.* at 49–51 (citing Ex. 1005 Fig. 9; Ex. 1010 Fig. 9; Ex. 1006 ¶ 35; Ex. 1003 ¶¶ 125–131).

Claim 1 further recites “(d) operate the display screen to display the calculated ecological parameter.” Ex. 1001, 6:55–56. Petitioner argues Luff teaches that limitation. Pet. 51–53; *see also* Ex. 1003 ¶¶ 132–135. Specifically, Petitioner argues that Luff teaches “a plurality of instructions that, when executed by the processor, cause the processor to operate the display screen to display the calculated ecological parameter.” Pet. 51 (citing Ex. 1003 ¶¶ 132–135); *see also id.* at 51–52 (Luff teaches displaying

¹⁵ For this and the other limitations involving the combination of Luff and Amaratunga, Patent Owner does not dispute that the combination of the references teaches the limitation. However, as discussed below, Patent Owner argues that a person having ordinary skill in the art would not have combined the references. *See* Section II.F.4.(b), *infra*.

the household energy index (citing Ex. 1005, 24:9–12, Fig. 9; Ex. 1010 ¶¶ 83–88, Fig. 9)).

Claim 1 further recites “wherein the calculated ecological parameter is an adjusted mean of the sum of the deviations of the at least one power consumption value with respect to a reference value corresponding to the at least one power consumption value.” Ex. 1001, 6:57–61. Petitioner argues that the combination of Luff and Seem teaches this limitation. Pet. 53–55; *see also* Ex. 1003 ¶¶ 136–143. Specifically, Petitioner argues Seem teaches a robust estimate of a standard deviation:

Particularly, Seem discloses a “robust estimate of the standard deviations (s_{robust}),” *i.e.*, an adjusted mean of the sum of the deviations calculated via the expression shown above, where x is a set of periodic utility measurements, x_j is the utility usage during period j , n is the total number of utility measurements, n_{out} is the number of outlier utility measurements, and $\bar{x}_{\text{robust}}$ is a robust estimate of the mean utility usage. Ex. 1007 at ¶¶ 0026, 0028, 0036, 0039. Seem teaches having a sum of deviations (the numerator), with respect to a reference value (the robust mean $\bar{x}_{\text{robust}}$) and taking an adjusted mean of that sum (dividing the sum by the number of measurements in the set with the outliers removed). *Id.*

Pet. 54. According to Petitioner, “[t]he robust estimate[] of the . . . standard deviation’ quantifies ‘the severity of the abnormal utility usage,’ *i.e.*, it is a mean sum of deviations of at least one power consumption value (the utility usage) to a reference value corresponding to the at least one power consumption value (the normal utility usage).” *Id.* (alteration in original) (citing Ex. 1007 ¶ 40; Ex. 1003 ¶¶ 136–143). Petitioner further that a person

having ordinary skill in the art would have used Seem's formulas with Luff's ecological parameter.¹⁶ *See id.* at 54–55; Ex. 1003 ¶¶ 136–143.

After reviewing Petitioner's arguments and information regarding the limitations identified above, including the Bower Declaration, which are not addressed by Patent Owner at this stage (*see* Prelim. Resp.), we are persuaded that Petitioner sufficiently demonstrates, for purposes of this Decision, that the combination of Luff, Amaratunga, and Seem teaches each of the limitations recited in this section.

b) Reason to Combine Luff and Amaratunga

Petitioner relies on Luff for the majority of the limitations recited in claim 1. *See* Pet. 34–55. As discussed above, Petitioner relies on Amaratunga for its disclosure relating to the entry of waste production data. *See id.* at 39–41. Petitioner further argues that a person having ordinary skill in the art would have combined the teachings of Luff and Amaratunga. *See* Pet. 29–31.

Based on the current record, we are sufficiently persuaded by Petitioner's argument that a person having ordinary skill in the art would have combined Luff's teaching with the relevant teachings from Amaratunga. Amaratunga teaches the importance of accounting for all forms of energy to provide a true assessment of efficiency and consumption: "The expenditures for such other forms of energy must be taken into consideration to provide a true assessment of the energy efficiency of the energy-consuming site." Ex. 1006 ¶ 19; *see also* Ex. 1003 ¶ 81.

¹⁶ Patent Owner does not dispute that the combination Luff and Seem teaches this limitation. However, as discussed below, Patent Owner argues that a person having ordinary skill in the art would not have combined the references. *See* Section II.F.4.(c), *infra*.

Amaratunga further teaches that waste data must be part of the data that is used:

The by-products and waste amounts for energy-consuming site 100 may similarly influence the energy amounts used. The by-products and waste amount data are provided by a by-product and waste information unit 230 that can measure by-products and waste amounts. For example, if a by-product of an energy-consuming site 100 comprises heat and if large amounts of heat above an expected amount of by-product heat are produced, a possible inefficient energy use exists. The expected amount of byproduct heat may be an output provided by the energy-consumption predicting system 10 of the present invention. The energy-consumption predicting system 10 will advise an energy user of such an occurrence.

Ex. 1006 ¶ 35 (emphasis added); Ex. 1003 ¶ 81. Petitioner has sufficiently shown that a person having ordinary skill in the art would have combined Luff's energy consumption index with Amaratunga's use of waste production data to ensure that there is a true assessment of energy efficiency. *See* Ex. 1003 ¶¶ 80–83. Moreover, the person having ordinary skill in the art would have a reasonable expectation of success. Ex. 1003 ¶ 83.

Patent Owner argues that “Luff is directed to generation of an ‘energy consumption index.’” Prelim. Resp. 21 (citing Ex. 1005, code (57)). Patent Owner also argues that Amaratunga discloses a single substantive paragraph regarding collecting waste product information. *Id.* at 21–22 (citing Ex. 1006 ¶ 35). “Therefore,” according to Patent Owner, a person having ordinary skill in the art “would not combine Luff and Amaratunga to render obvious claim 1, and therefore claims 2 and 4-5 reciting ‘calculate an ecological parameter based on the at least one power consumption value and the waste production data.’” *Id.* at 32.

We do not agree with Patent Owner’s argument. “The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain.” *In re Heck*, 699 F.2d 1331, 1332-33 (Fed. Cir. 1983). For example, even if the relevant feature is only mentioned in a discussion of prior attempts in the background of the invention, it must still be considered. *See Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 800 (Fed. Cir. 2021). It is therefore of no matter that the waste production data is only discussed in detail in a single paragraph of Amaratunga.

Patent Owner also argues that Petitioner is using improper hindsight to find the claimed “ecological parameter.” Prelim Resp. 22–23.

We disagree. Arguments addressing a reason to combine must be supported by “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (citations omitted), *cited with approval in KSR*, 550 U.S. at 418. Here, for the reasons discussed above, Petitioner has sufficiently shown articulated reasoning based on the references to support a legal conclusion of obviousness. Accordingly, based on the current record, there is no improper use of hindsight.

c) Reason to Combine Luff, Amaratunga, and Seem

Petitioner relies on Seem for its teaching of adjusted mean sum of the deviations. *See* Pet. 31–32; 53–55. Petitioner argues that a person having ordinary skill in the art would have combined Luff with Seem’s teaching. Pet. 31–33.

Based on the current record, we are sufficiently persuaded by Petitioner’s argument that a person having ordinary skill in the art would

have combined Luff's teaching with the relevant teachings from Seem. Seem discusses a "need for robust data analysis methods to automatically determine if the current energy use is significantly different than previous energy patterns and if so, alert the building operator or mechanics to investigate and correct the problem." Ex. 1007 ¶ 12. One way Seem does this is with a calculation of estimates of the mean and standard deviation to determine how far outlier deviate from the remainder of the sample set. *See id.* at ¶¶ 36–40; Ex. 1003 ¶¶ 85–86. Those robust estimates "quantify the severity of the abnormal utility usage represented by the corresponding outlier. These values can be plotted to provide a graphical indication as to that severity by which the building operator is able to determine whether investigation of the cause is warranted." Ex. 1007 ¶ 40. A person having ordinary skill in the art would have been motivated to apply that teaching with Luff in order to more quickly and efficiently identify whether current energy use is significantly outside the range of normal energy use in the Luff system. Ex. 1003 ¶¶ 85–88. Additionally, a person having ordinary skill in the art would have had a reasonable expectation of success. *Id.* ¶ 87.

Patent Owner argues "Seem is directed to determining abnormalities of usage in utilities in a building, not in determining an 'ecological parameter based on the at least one power consumption value and the waste production data' as recited in claims 1–2 and 4–5 of the '482 patent." Prelim. Resp. 22. Patent Owner further argues that Seem "merely supplies a mathematical equation of a sum of squared deviations related to utility usage, ([Ex. 1007 ¶ 4]), but nothing more than that related to calculation of an 'ecological parameter.'" Prelim. Resp. 22. According to Patent Owner, "[a person having ordinary skill in the art] would not look to Seem to supply the limitations missing in Luff and Amaratunga." *Id.*

We do not agree with Patent Owner’s argument. “The question in an obviousness inquiry is whether it would have been obvious to a person of ordinary skill in the art to combine the relevant disclosures of the two references, not whether each individual reference discloses all of the necessary elements.” *Game & Tech Co. v. Wargaming Grp. Ltd.*, 942 F.3d 1343, 1352 (Fed. Cir. 2019) (citing *Cohesive Techs., Inc. v. Waters Corp.*, 543 F.3d 1351, 1364 (Fed. Cir. 2008)). Because Petitioner is not using Seem to show that the prior art teaches an ecological parameter (*see* Pet. 48–51), it is inapposite that Seem does not teach one. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (citations omitted) (“The test for obviousness is not whether . . . the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”).

d) Conclusion Regarding Claim 1

Based on the current record, there is a reasonable likelihood that Petitioner will prevail in demonstrating that claim 1 is unpatentable as obvious in view of Luff, Amaratunga, and Seem.

5. Analysis of Claims 2, 4, and 5

Because Petitioner demonstrates a reasonable likelihood of success in proving that at least one claim of the ’482 patent is unpatentable, we institute on all grounds and all claims raised in the Petition. *See* 37 C.F.R. § 42.108(a). Therefore, at this stage of the proceeding, it is not necessary for us to provide an assessment of every challenge raised by Petitioner, especially, as in this case, when Patent Owner does not separately argue those claims. *See* Prelim. Resp. 21–23. Those challenges, in our view, are best left for trial after full development of the record.

G. Remaining Grounds

Petitioner also asserts various other challenges against claims 6, 7, and 9–13. See Pet. 65–82. Besides relying on the arguments addressed above and further arguing that the additional references do not cure the alleged deficiencies, Patent Owner does not separately address the merits of Petitioner’s other prior art challenges. See Prelim. Resp. 23–25. Because, as discussed above, Petitioner meets the threshold for institution by demonstrating a reasonable likelihood that at least claim 1 is unpatentable as obvious, we need not decide whether Petitioner’s other challenges demonstrate the same. Those challenges, in our view, are best left for trial after full development of the record.

H. Compelling Merits Analysis

“Compelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” Interim *Fintiv* Guidance 4. “A challenge can only ‘plainly lead to a conclusion that one or more claims are unpatentable’ if it is highly likely that the petitioner would prevail with respect to at least one challenged claim.” *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102 at 49 (Oct. 4, 2022) (precedential) (citation omitted) (quoting Interim *Fintiv* Guidance 4).

Based on the current record, it is highly likely that Petitioner will prevail with respect to at least independent claim 1. Supported by Dr. Bower’s testimony, Petitioner explains how the combined disclosures in Luff, Amaratunga, and Seem teach each limitation recited in claim 1. See Pet. 34–56; Ex. 1003 ¶¶ 89–143; § II.F.4(a), *supra*. Based on the current record, Patent Owner does not identify any limitation plausibly missing from the cited prior art. See Prelim. Resp. 21–23; § II.F.4(a), *supra*. And Patent

Owner does not present any testimony undermining Dr. Bower's testimony. At this stage of the proceeding, Patent Owner's arguments do not cast any doubt on Petitioner's showing that Luff, Amaratunga, and Seem teach each of the recited limitations in claim 1. *See* Prelim. Resp. 21–23; § II.F.4(a), *supra*.

Further, Petitioner provides sound reasons why a person having ordinary skill in the art would have combined the teachings of Luff, Amaratunga, and Seem in the way Petitioner proposes and would have had a reasonable expectation of success. *See* Pet. 29–33; Ex. 1003 ¶¶ 80–88. Although Patent Owner presented arguments why a person having ordinary skill in the art would not have combined the references, those arguments do not cast any doubt on Petitioner's showing. *See* § II.F.4.(b), (c), *supra*. Specifically, Patent Owner's arguments were inconsistent with precedential decisions of the United States Court of Appeals for the Federal Circuit. *See id.* And Patent Owner did not cite any cases that successfully applied its theories. *See* Prelim. Resp. 21–23.

Additionally, Patent Owner does not present any evidence or argument regarding objective indicia of nonobviousness. *See* Prelim. Resp. 21–23.

In short, Petitioner presents compelling evidence of unpatentability because the evidence in the current record, if unrebutted during trial, would “plainly lead to a conclusion” that claim 1 is unpatentable by “a preponderance of the evidence.” *See* Interim *Fintiv* Guidance 4.

III. CONCLUSION

Following § 314, we have determined that the totality of the information presented at this stage shows there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims

challenged in the Petition, and we institute on all grounds raised and all claims challenged in the Petition. Additionally, we decline to exercise our discretion under §§ 314(a) and 325(d) to deny institution.

Our factual findings, conclusions of law, and determinations at this stage of the proceeding are preliminary, and based on the evidentiary record developed thus far. This is not a final decision as to the patentability of claims for which *inter partes* review is instituted. Our final decision will be based on the record as fully developed during trial.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1, 2, 4–7, and 9–13 of the '482 patent on the unpatentability grounds asserted in the Petition; and

FURTHER ORDERED that 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, which commences on the entry date of this decision.

IPR2023-01031

Patent 8,909,482 B2

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