

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COPELAND COMFORT CONTROL LP,
Petitioner,

v.

OLLNOVA TECHNOLOGIES LTD.,
Patent Owner.

IPR2023-00624
Patent 8,224,282 B2

Before BRIAN J. McNAMARA, ARTHUR M. PESLAK, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*.

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

I. INTRODUCTION

Copeland Comfort Control LP¹ (“Petitioner”) requests an *inter partes* review of claims 1–5, 7–11, 13–16, and 20–21 (“the challenged claims”) of U.S. Patent No. 8,224,282 B2 (“the ’282 patent,” Ex. 1001). Paper 2 (“Petition,” “Pet.”). Petitioner filed a Declaration of Dean P. Neikirk in support of the Petition. Ex. 1002. Patent Owner, Ollnova Technologies Ltd., filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply (“Prelim. Reply”) to address discretionary denial issues. Paper 10. Patent Owner filed a Preliminary Sur-reply (“Prelim. Sur-reply”). Paper 11.

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(a). *See* 37 C.F.R. § 42.4(a) (2021) (“The Board institutes the trial on behalf of the Director.”). Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

Considering the Petition, the Preliminary Response, the Preliminary Reply, and Preliminary Sur-reply, as well as all supporting evidence, we conclude that the information presented in the Petition establishes a reasonable likelihood that Petitioner would prevail in showing at least one claim of the ’282 patent is unpatentable. Pursuant to 35 U.S.C. § 314, we hereby institute an *inter partes* review of all challenged claims of the ’282 patent on all grounds stated in the Petition.

¹ Copeland Comfort Control LP is the legal successor to the original petitioner Emerson Electric Co. Paper 6, 1.

Our factual findings, claim construction, and legal conclusions at this stage of the proceeding are based on the evidentiary record developed thus far. This decision to institute trial is not a final decision as to the unpatentability of the claims for which *inter partes* review is instituted. Our final decision will be based on the full record developed during trial.

A. Related Matters

The parties identify the ‘282 patent as a subject of:

- 1) *Ollnova Technologies Ltd. v. Emerson Electric Co. et al.*, 4-22-cv-01387 (E.D. Mo.) (“the Parties’ district court litigation”);
- 2) *Ollnova Technologies Ltd. v. Ecobee, Inc.*, 2-22-cv-00072 (E.D. Tex.) (“the Ecobee litigation”); and
- 3) *Ollnova Technologies, Ltd. v. Carrier Global Corp.*, 9-22-cv-80388 (S.D. Fla.).

Pet. 2–3; Paper, 3, 1.

B. Real Parties-in-Interest

Petitioner identifies Copeland Comfort Control LP, Copeland LP, Copesub GP 1, LLC, Emerson Electric Co., and Verdant Environmental Technologies Inc. as real parties-in-interest. Paper 6, 1. Patent Owner identifies Ollnova Technologies Ltd. as the sole real party-in-interest. Paper 3, 2.

C. The ‘282 Patent

The ‘282 patent is titled “Method and Device to Manage Power of Wireless Multi-Sensor Devices.” Ex. 1001, code (54). The ‘282 patent issued on July 17, 2012, from Application No. 12/406,799, which was filed on March 18, 2009. *Id.* at codes (45), (21), (22). Application No.

12/406,799 claims priority to Provisional Application No. 61/037,739, filed March 19, 2008. *Id.* at code (60).

The '282 patent “generally relates to communications within a building automation system.” Ex. 1001, 1:15–16. Such a system “typically integrates and controls elements and services within a structure such as the heating, ventilation and air conditioning (HVAC) system, security services, fire systems and the like.” *Id.* at 1:20–23. The system “generally provides for communicating information between wireless devices and/or automation components” that “may be configured to optimize radio and/or data communications to extend battery life.” *Id.* at 2:23–28.

Figure 2 of the '282 patent is reproduced below:

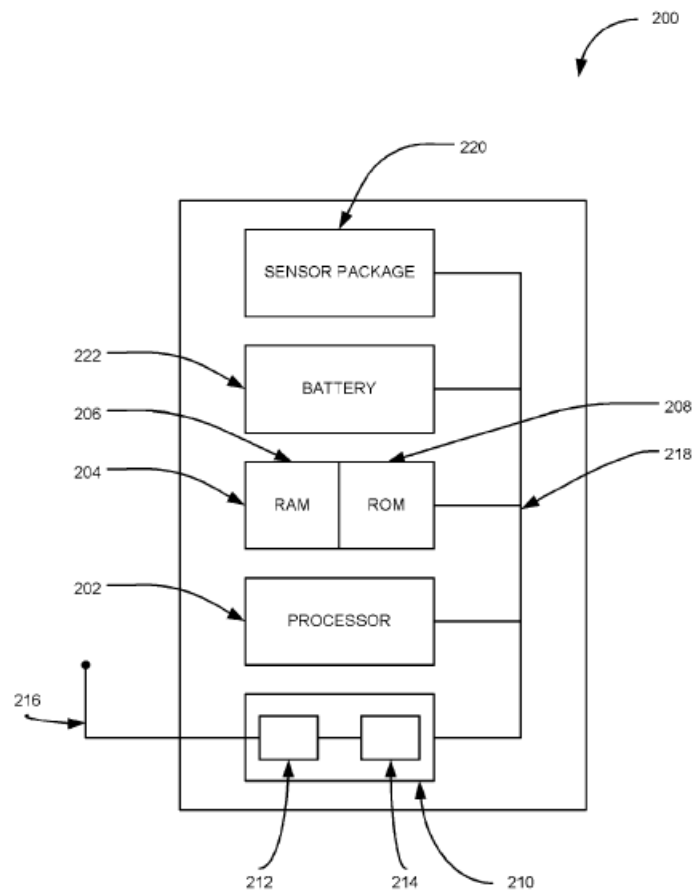


FIG. 2

Figure 2 is “an embodiment of a wireless device or automation component that may be utilized in connection with” a building automation system. Ex. 1001, 3:33–34. Automation component 200 shown in Figure 2 comprises processor 202 in communication with memory 204. *Id.* at 5:52–62. Automation component 200 further comprises communication component 210 that may implement wireless communications by means of wireless transmitter 212, receiver 214, and antenna 216. *Id.* at 5:66–6:6. Sensor package 220 can “sense or detect a variety of variables such as, for example, temperature, humidity, carbon dioxide, carbon monoxide, volatile organic compounds, etc.” *Id.* at 6:25–28.

D. Illustrative Claim

Claims 1, 7, 13, and 20 are independent. Claim 1 is reproduced with Petitioner’s annotations below:

- [1.pre] An automation component configured for wireless communication within a building automation system, the automation component comprising:
 - [1.a] a multi-sensor package configured to detect a plurality of variables and generate sensor data for each detected variable;
 - [1.b] a wireless communications component;
 - [1.c] a processor in communication with the wireless communications component and the sensor package;
 - [1.d] a memory in communication with the processor, the memory configured to store sensor data provided by the sensor package and computer readable instructions which are executable by the processor;
 - [1.e] wherein the computer readable instructions are programmed to:
 - receive sensor control information related to sensor data in control at a second automation component in communication with the building automation system; and
 - [1.f] communicate a portion of the stored sensor data corresponding to the received sensor control information to the second automation component.

Ex. 1001, 10:43–10:62.

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–5, 7–11, 20–21 would have been unpatentable on the following grounds (Pet. 6):

Claim(s) Challenged	35 U.S.C. §²	References/Basis
1–5, 7–11, 20–21	102/103(a)	McFarland ³
13–16	103(a)	McFarland, Kates-089 ⁴
1–5, 7–11, 20–21	103(a)	McFarland, Stoner ⁵
13–16	103(a)	McFarland, Stoner, Kates-089
1–5, 7–11, 20–21	103(a)	McFarland, Ahmed-629 ⁶
13–16	103(a)	McFarland, Kates-089, Ahmed-629
1–5, 7–11, 20–21	103(a)	McFarland, Stoner, Ahmed-629
13–16	103(a)	McFarland, Stoner, Kates-089, Ahmed-629
20–21	103(a)	Kates-089, Ahmed-625

II. ANALYSIS

A. Discretionary Denial of Institution Under 35 U.S.C. § 314(a)

Institution of *inter partes* review is discretionary. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F. 3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted but never compelled to institute an [*inter partes* review (IPR)]

² The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), included revisions to 35 U.S.C. §§ 102 and 103 that became effective after the effective filing date of the challenged claims. Therefore, we apply the pre-AIA version of 35 U.S.C. § 103.

³ U.S. Patent Publication No. 2007/0242688 A1 (Oct. 19, 2007). Ex. 1027 (“McFarland”).

⁴ U.S. Patent Publication No. 2006/071089 A1 (April 6, 2006). Ex. 1029 (“Kates-089”).

⁵ U.S. Patent No. 8,276,829 B2 (Oct. 2, 2012). Ex. 1030 (“Stoner”).

⁶ U.S. Patent Publication No. 2005/0268629 A1 (Dec. 8, 2005). Ex. 1036 (“Ahmed-625”).

proceeding.”); 35 U.S.C. § 314(a). Patent Owner contends that we should exercise our discretion under 35 U.S.C. § 314(a) to deny institution “in light of an active district court case [the Ecobee litigation] . . . involving the same patent, the same claims, and substantially the same prior art.” Prelim.

Resp. 1. Patent Owner contends that the case is set for trial on September 11, 2023, which is more than a year prior to the statutory deadline for the final written decision in this case. *Id.*

We consider the advanced state of a parallel district court action as a factor that may weigh in favor of denying a petition under § 314(a). *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential). The following factors inform our assessment of “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding”:

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

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential). When considering these factors, we “[t]ake a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

The Director has issued additional guidance on the application of *Fintiv*. See Katherine K. Vidal, *Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation* (June 21, 2022) (“*Fintiv* Memo”). Ex. 1049. The *Fintiv* Memo provides, *inter alia*, that “the PTAB will not discretionarily deny institution of an IPR . . . in view of parallel district court litigation where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.” *Id.* at 7.

For the reasons stated below, we do not exercise our discretion to deny institution in light of either the Parties’ district court litigation or the Ecobee litigation.

Ecobee Litigation

Fintiv Factor 1

There appears to be no dispute that the district court has not stayed the Ecobee litigation nor is there any evidence that the district court will enter a stay if we institute this proceeding. Prelim. Resp. 4; Prelim. Reply 1.

We find that this factor weighs somewhat in favor of exercising our discretion to deny institution.

Fintiv Factor 2

Patent Owner contends that trial in the Ecobee litigation is currently scheduled to commence on September 11, 2023, which is over a year prior to the due date for a final written decision in this matter. Prelim. Resp. 3 (citing Ex. 2001). Petitioner does not specifically address this factor for the Ecobee litigation. See Prelim. Reply 1.

We find that this factor weighs somewhat in favor of exercising our discretion to deny institution.

Fintiv Factor 3

Patent Owner contends that “the district court issued its claim construction order on April 10” and “fact discovery and expert discovery have been completed.” Prelim. Resp. 7 (citing Ex. 2001, 3; Ex. 2002). Petitioner contends that it “is not related to ecobee” and “[Patent Owner] does not suggest that it has invested meaningful resources into litigation involving Petitioner.” Prelim. Reply 1.

Because there is no evidence that Petitioner is related to Ecobee and is not participating in the Ecobee litigation, we find that this factor is neutral.

Fintiv Factor 4

In the Ecobee litigation, Patent Owner asserts claims 1, 3, 6, and 21. Prelim. Resp. 7–8. According to Patent Owner, the Ecobee litigation “involves two of the four independent claims addressed in the Petition.” *Id.* at 8. Patent Owner further contends that the Ecobee litigation “addresses substantially similar references as those asserted in the Petition.” *Id.* (citing Ex. 2005, 1–2). Specifically, Patent Owner contends that “ecobee asserts McFarland (U.S. 2006/0028997) which names the same inventor and is substantially similar to McFarland (U.S. 2007/0242688) asserted in the Petition.” *Id.* (citing Ex. 2005, 30, 75–111). Patent Owner next contends that “ecobee asserts Ahmed (U.S. 2004/0008651) and Ahmed (U.S. 2004/0144849) which name the same inventor and are substantially similar to Ahmed (U.S. 2005/0268629) asserted in the Petition.” *Id.* (citing Ex. 2005, 27, 54–74). Patent Owner next contends that “ecobee asserts Kates (U.S. 2005/0275530) and names the same inventor and is substantially

similar to Kates (U.S. 2006/0071089) asserted in the Petition.” *Id.* (citing Ex. 2005, 34, 112–226). According to Patent Owner, there is also substantial overlap with respect to Petitioner’s invalidity arguments and evidence, which will be addressed during the forthcoming trial” in the Ecobee litigation. *Id.*

Petitioner contends the Ecobee litigation “will address only challenged claims 1, 3, and 21” but “claims 2, 4, 5, 7–11, 13–16, and 20 are unasserted in that case.” Prelim. Reply 2. Petitioner further contends that “[m]ost, if not all, of the prior art in this IPR is different from the art in the *ecobee Case*.” *Id.* Petitioner further contends that “a simple side-by-side comparison of McFarland and Kates-089 with the ecobee McFarland and Kates references (Exs. 1050, 1051) confirms that, while these references each share a common inventor, . . . the references have nothing else in common.” *Id.* According to Petitioner, “[t]he ecobee Kates and McFarland references have completely different specifications, and do not include any of the figures or quotes cited in the Petition.” *Id.*

Patent Owner, in turn, contends that “the defendant’s invalidity expert report in the district court case addresses [] substantially the same Ahmed prior art reference asserted in the Petition.” Prelim. Sur-reply 1.

We do not agree with Patent Owner that there is substantial overlap between the Petitioner’s grounds and the issues in the Ecobee litigation. First, of the 16 challenged claims, only 3 are at issue in the Ecobee litigation and the Ecobee litigation does not involve independent claims 7, 13, and 20 which are at issue in this proceeding. Second, our comparison of the McFarland reference asserted by Petitioner (Ex. 1027) with the McFarland reference asserted by Ecobee (Ex. 1050) for example, does not reveal

substantial overlap in the disclosure of the two references. *See, e.g.*, Ex. 1050, Figs. 1–7; Ex. 1027, Figs. 1–5. Further, Patent Owner provides no analysis concerning where Exhibit 1050 contains overlapping disclosure with the portions of Exhibit 1027 relied on by Petitioner in this proceeding.

We find that there is minimal overlap between the issues raised in this proceeding and the issues in the Ecobee litigation due to the differing claims challenged in this proceeding including 3 additional independent claims as well as the differences in the prior art references noted by Petitioner. Patent Owner relies, *inter alia*, on the Board’s decision in *Fitbit, Inc. v. Philips North America, LLC*, IPR2020-00828, Paper 13 (PTAB Nov. 13, 2020) to support its contention that “the Board routinely denies institution under *Fintiv*, even where the petitioner is not involved in the district court litigation.” Prelim. Resp. 9. We note that *Fitbit* is not a precedential decision but more importantly, in that case, the Board found “that there is likely to be substantial overlap between the issues raised in the Petition” and in a district court proceeding that did not involve the petitioner. *Fitbit*, Paper 13 at 15. Consequently, we find that this factor weighs heavily in favor of not exercising our discretion to deny institution.

Fintiv Factor 5

Petitioner contends that it “is unrelated to, and not coordinating with, ecobee” and is uninvolved with the Ecobee litigation. Prelim. Reply. 3. There is no dispute that Petitioner is not a defendant in the Ecobee litigation and there is no evidence that Petitioner is related to Ecobee. Prelim. Resp. 9; Prelim. Reply 3. We, thus, find that this factor weighs in favor of not exercising our discretion to deny institution.

Fintiv Factor 6

Patent Owner contends that “it cannot be said that the Petition presents a compelling unpatentability challenge” because “the majority of Petitioner’s grounds are based entirely on alleged obviousness.” Prelim. Resp. 10. Petitioner contends that its grounds include anticipation and its “obviousness grounds are also compelling.” Prelim. Reply 3. We need not reach the question of whether Petitioner’s grounds are compelling because *Fintiv* factors 1–5 do not weigh in favor of exercising our discretion to deny institution.

Conclusion – Ecobee Litigation

After considering all of the evidence before us and the parties’ respective contentions, we conclude that the efficiency and integrity of the system will not be best served by denying institution based on the state of the Ecobee litigation because Petitioner is not a party to the case, is not related to Ecobee, and there is minimal overlap between the issues in this proceeding and the Ecobee litigation.

The Parties’ District Court Litigation

Petitioner stipulates that if this IPR is instituted, it “will not assert invalidity in district court on any ground that Petitioner has raised or reasonably could have raised during this IPR.” Prelim. Reply 2. Based on this stipulation, we do not exercise our discretion to deny institution based on the Parties’ district court litigation. *Fintiv* Memo at 7.

B. Overview

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter 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) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations).⁷ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

C. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art “would have had a minimum of a bachelor’s degree in electrical engineering, or a related field, along with at least two years of professional experience in sensors, controls, and/or wireless communications.” Pet. 10–11 (citing Ex. 1002 ¶¶ 45–49). Petitioner further contends that “[a]dditional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education.” *Id.*

Patent Owner does not address the level of ordinary skill in the art. *See* Prelim. Resp.

For the purposes of this Decision, we apply Petitioner’s level of skill in the art because it appears consistent with the problems addressed in the ‘282 patent and the prior art.

D. Claim Construction

We apply the same claim construction standard used by Article III federal courts and the International Trade Commission, both of which follow

⁷ No evidence of secondary considerations has been presented at this stage of the proceeding.

Phillips v. AWH Corp., 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b) (2021). This claim construction standard includes construing claims in accordance with “the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Petitioner contends that “[a]ll claim terms should be construed according to their plain and ordinary meaning as would have been understood by a [person of ordinary skill in the art] in view of the specification.” Pet. 11 (citing Ex. 1002 ¶ 50).

Patent Owner does not address claim construction in the Preliminary Response.

After review of the present record, we determine that no claim term requires express construction for purposes of this Decision. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘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))).

E. Ground 1: Alleged Anticipation/Obviousness of Claims 1–5, 7–11, and 20–21 over McFarland

Petitioner contends claims 1–5, 7–11, and 20–21 would have been anticipated and/or obvious over McFarland. Pet. 13–44. Petitioner supports its contentions with the Declaration of Dr. Neikirk. Ex. 1002. Patent Owner does not address Petitioner’s contentions. *See* Prelim. Resp. 1–10.

We begin with a brief summary of McFarland and then address Petitioner’s contentions.

1. *McFarland (Ex. 1027)*

McFarland is titled “Dynamic Value Reporting for Wireless Automated Systems.” Ex. 1027, code (54). McFarland discloses a wireless automation system that uses dynamic value reporting to “communicate[] data among and between devices related to changes in a value of a monitored condition and/or measured parameter (e.g., a wireless sensor for monitoring environmental temperature.” *Id.* ¶ 16.

Figure 1 of McFarland is reproduced below:

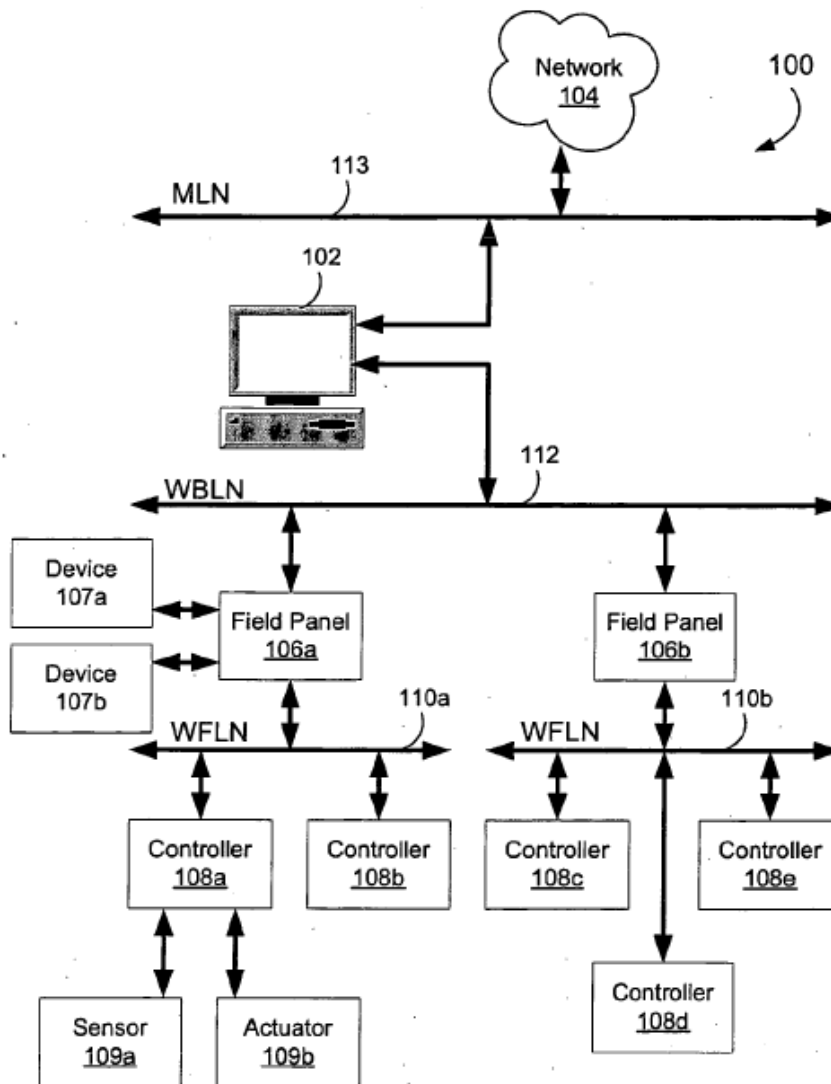


Figure 1

Figure 1 “is a block diagram for an example of a wireless automation system 100 configured for and/or using dynamic value reporting.” Ex. 1027 ¶ 19. System 100 “includes a supervisory control system or workstation 102, one or more field panels 106a, 106b and one or more controllers 108a-108e.” *Id.* ¶ 24. “Controller[s] 108a-108e . . . correspond[] to an associated localized, standard building control subsystem such as a space temperature control, air quality control, lighting control, hazard detection, security, combinations thereof, or the like.” *Id.* Controllers 108a-108e may communicate with sensors 109a or actuators 109b using “two-way wireless communication protocol.” *Id.*

Figure 2 of McFarland is reproduced below:

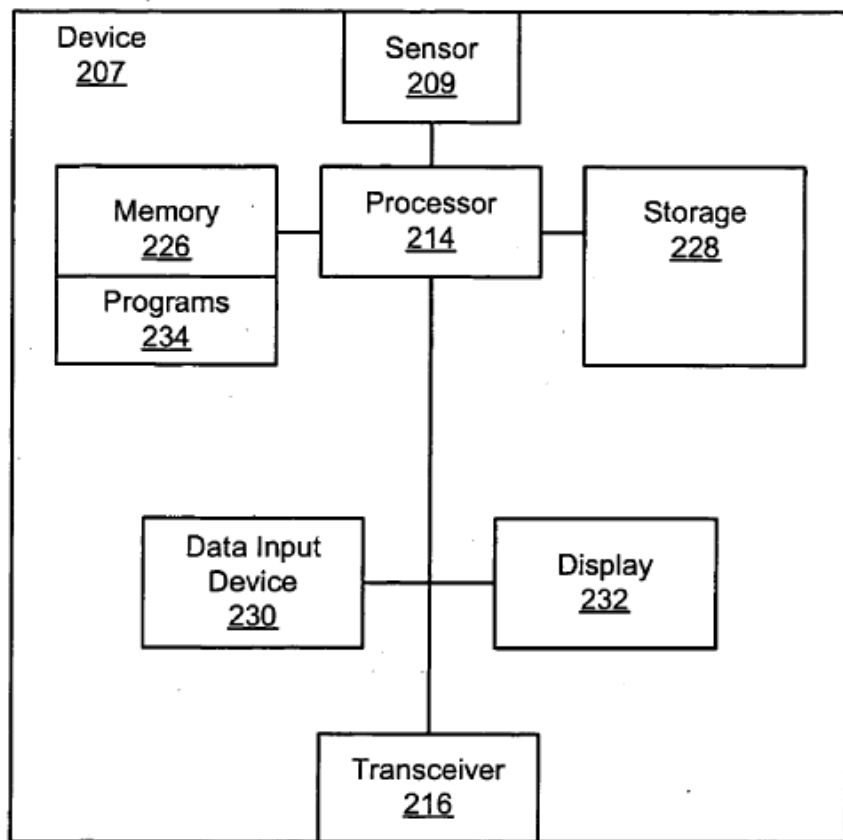


Figure 2

Figure 2 is “a block diagram of an automation device 207 for a wireless automation system using dynamic value reporting.” Ex. 1027 ¶ 36. Device 207 “includes a processor 214, a transceiver 216, and a sensor 209.” *Id.* ¶ 38. Processor 214 “implements a control process for the device 207 . . . based on a signal that is read from and/or provided by the sensor 209, such as a measured value of a parameter, an indicator of a sensed condition and/or status of an event.” *Id.* Transceiver 216 “wirelessly communicates information using one or a combination of one-way and/or two-way wireless communications.” *Id.* ¶ 42. Sensor 209 “is configured as any of a temperature sensor, humidity sensor, fire sensor, pressure sensor, smoke sensor, occupancy sensor, air quality sensor, gas sensor, O₂, CO₂, or CO sensor, accelerometer, velocity sensor, [and] combination thereof.” *Id.* ¶ 43.

2. *Independent Claim 1*

Petitioner provides a limitation-by-limitation analysis of independent claim 1, mapping each claim limitation to McFarland. Pet. 16–31.

Although Patent Owner does not dispute Petitioner’s contentions at this stage of the proceeding, Petitioner has the burden to establish a reasonable likelihood that claim 1 is unpatentable. Consequently, we now analyze Petitioner’s contentions.⁸

[1.pre] An automation component configured for wireless communication within a building automation system, the automation component comprising:

Petitioner contends that McFarland discloses a “wireless automation device[]” that “performs two-way wireless communication with controllers within a ‘building automation system’ without human interaction.” Pet. 16–18 (citing Ex. 1002 ¶¶ 66–68; Ex. 1027 ¶¶ 6, 8, 16, 19–21, 24, 36, 37, 60–

⁸ For ease of reference, we utilize Petitioner’s claim annotations.

62, Fig. 5). Petitioner does not address whether the preamble is limiting.
See id.

We reviewed the evidence cited by Petitioner and find it sufficiently discloses the subject matter of the preamble. Therefore, we need not address whether the preamble is limiting.

[1.a] a multi-sensor package configured to detect a plurality of variables and generate sensor data for each detected variable;

Petitioner contends that McFarland's sensor 209 corresponds to the recited multi-sensor package because it is disclosed as "a 'combination[]' micro-electro-mechanical sensor that detects multiple variables (e.g., temperature and humidity)" and "generates and outputs sensor data for each measured variable as 'a measured value' or 'indicator.'" Pet. 18–19 (citing Ex. 1002 ¶¶ 70–74; Ex. 1003, 110; Ex. 1027 ¶¶ 39, 43, 45, 47, Figs. 2, 3; *see also id.* at 19–22 (citing Ex. 1027 ¶¶ 38, 39, 40, 43, 45, 47)).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[1.b] a wireless communication component;

Petitioner contends that McFarland's transceiver 216 satisfies this limitation. Pet. 22 (citing Ex. 1002 ¶¶ 75–77; Ex. 1027 ¶¶ 8, 38–42, 46, 52–54, 60, Figs. 2, 5).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[1.c] a processor in communication with the wireless communications component and the sensor package;

Petitioner contends McFarland discloses processor 214 "that 'interfaces' with and 'controls' the 'transceiver,' and 'read[s]' sensor 209, which is 'responsive to' 'logic executed by the processor 214.'" Pet. 23–24

(citing Ex. 1002 ¶¶ 78–80; Ex. 1027 ¶¶ 38–40, 43, 44, 46–48, 52, 60, 61, Figs. 2, 4, 5).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[1.d] a memory in communication with the processor, the memory configured to store sensor data provided by the sensor package and computer readable instructions which are executable by the processor;

Petitioner contends that McFarland’s memory 226 “communicates with the ‘processor’ and stores current and prior readings of ‘indicator[s]’ generated by sensor 209 and ‘programs’ executed by processor 214.” Pet. 24–25 (citing Ex. 1002 ¶¶ 81–83; Ex. 1027 ¶¶ 38–40, 47, Fig. 2).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[1.e] wherein the computer readable instructions are programmed to: receive sensor control information related to sensor data in control at a second automation component with the building automation system; and

Petitioner contends that McFarland’s “‘controller 508’ (represented in Fig. 1, by controller 108a) . . . is a second automation component in communication with the ‘wireless automation device.’” Pet. 26 (citing Ex. 1002 ¶¶ 84–86; Ex. 1027 ¶¶ 26–26, 60). Petitioner further contends “[t]he ‘wireless automation device’ receives sensor control information from the controller including ‘instructions’—e.g., a ‘report instruction’—that causes the wireless automation device to ‘sense and report a current indicator . . . or other requested information’ for a sensor—e.g., temperature or humidity.” *Id.* (citing Ex. 1027 ¶¶ 25, 43, 60–62). Petitioner next contends that “[c]ontrol processes are ‘specific to the sensor’; e.g., if one of ‘a plurality of different types of sensors’ is currently in use (e.g., temperature and not humidity), humidity data ‘may be stored but unused’ during that control

process.” *Id.* (citing Ex. 1027 ¶¶ 39–40). Petitioner further contends that “[w]hen controller 508 receives information about ‘the sensed condition,’ then based on the current control process, the controller ‘provides an appropriate control signal to [an] actuator’ to ‘drive the sensed condition to a ‘set point.’” *Id.* (citing Ex. 1027 ¶¶ 25–26). According to Petitioner, “[t]he sensor data is in control at the controller because it is used to control the actuator to reach the set point.” *Id.* Further, Petitioner asserts that “the ‘report instruction’ is sensor control information because the ‘controller’ implements a sensor-specific control operation to obtain an ‘event reported by a sensor,’ including sensor values and other data, to ‘control[] the operation of one or more actuators.” *Id.* (citing Ex. 1002 ¶¶ 87–88).

Neither party submits a construction for “sensor data in control at a second automation component.” Petitioner’s support for the contention that McFarland discloses that sensor data is in control at the controller is based on Dr. Niekirk’s testimony. Dr. Niekirk testifies:

Based on the information about “the ‘sensed condition’ relayed by the wireless automation device in response to this instruction [from controller 508], the controller 508 “provides an appropriate control signal to [an] actuator” that “drive[s] the sensed condition” to a ‘set point.” [Ex. 1027], [0025]–[0026]. *This behavior illustrates that the communicated sensor data is disclosed to be “‘in control’” at the controller, the sensor data dictates how the controller will in turn control the actuator to achieve the desired set point of the sensed condition.*

Ex. 1002 ¶ 87 (emphasis added).

We note that McFarland’s controller 108 “is programmed with the set points and a code setting forth *instructions that are executed by the controller for controlling the actuators* to drive the sensed condition to be with the set point.” Ex. 1027 ¶ 26 (emphasis added). McFarland’s

controller 508 processes information “according to a control algorithm for the system and for the device.” *Id.* ¶ 61. From this disclosure, it appears McFarland’s sensor data is input to McFarland’s controller and the controller processes that data according to an algorithm to control the actuators. At this stage of the proceeding, it appears that Petitioner is relying on an implicit construction of “sensor data in control at a second automaton device” that “the sensor data *is used* by the second automation device to effect control.” The parties are invited to address this issue in their briefing during trial.

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[1.f]: communicate a portion of the stored sensor data corresponding to the received sensor control information to the second automation component.

Petitioner contends that McFarland “discloses that, in response to a ‘report’ command from the controller, the wireless automation device, executes a ‘program’ by sending corresponding reports including a portion of the stored sensor information such as ‘a current value or indicator’ or ‘prior measurements’ or other requested information.” Pet. 29 (citing Ex. 1002 ¶¶ 89–91; Ex. 1027 ¶¶ 23, 38–40, 47, 53–54, 62).

Summary of Claim 1

For the foregoing reasons, we determine that Petitioner establishes a reasonable likelihood that claim 1 would have been unpatentable over McFarland.

3. Independent Claim 7

Claim 7 contains limitations substantially similar in relevant aspects to corresponding limitations of claim 1. Ex. 1001, 11:15–37, 11:57–12:12. For limitations [7.pre]–[7.d], Petitioner relies on substantially the same

disclosure from McFarland for claim 7 as for claim 1. Pet. 35–40. For limitations [7.e], [7.f], and [7.g], Petitioner provides citations to additional disclosure from McFarland.

[7.e] wherein the computer readable instructions are programmed to: receive status data related to sensor data in control at a second automation component in communication with the building automation system;

Petitioner relies on its contentions for limitation [1.e]. Pet. 36. Petitioner specifically contends that McFarland’s “automation device ‘receives’ a ‘status for the . . . sensor’ from the controller” which, according to Petitioner is “information specifying the ‘condition’ or ‘event’ data that the device must transmit back to the controller to be used for controlling the system.” *Id.* (citing Ex. 1002 ¶ 111; Ex. 1027 ¶¶ 18, 59, 61, 62). Petitioner further contends McFarland “receives and implements ‘difference limit’ and ‘threshold’ set points, which are also used in process control algorithms to evaluate conditions for reporting.” *Id.* at 36–37 (citing Ex. 1002 ¶ 112; Ex. 1027 ¶¶ 58, 61).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[7.f] determine the sensor data in control at the second automation component based on the received status data; and

Petitioner relies on its contentions for limitations [1.pre] and [1.e]. Pet. 38. Petitioner specifically contends that McFarland “discloses that the wireless automation device stores multiple control processes, only some of which are used at a given time.” *Id.* (citing Ex. 1027 ¶ 39). Petitioner further contends that “when the device receives ‘information’ from the controller, such as ‘control instructions, communications settings or other information,’ the device ‘respond[s] to [the] control commands’ and takes ‘appropriate responsive action[s].’” *Id.* (citing Ex. 1002 ¶¶ 113–115; Ex.

1027 ¶¶ 3, 20, 40, 60). According to Petitioner, because status data is received by the device specifying “information to be transmitted to the controller, this not only renders obvious, but discloses that when the device receives the ‘status for the . . . sensor’ from the controller . . . the ‘appropriate responsive action’ taken by the device . . . is a determination of the sensor information that is in control at the controller.” *Id.* (citing Ex. 1002 ¶ 116; Ex. 1027 ¶¶ 18, 59, 61, 62).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[7.g] communicate the stored sensor data corresponding to the sensor data in control at the second automation component.

Petitioner relies on its contentions for limitation [1.f]. Pet. 39. Petitioner specifically contends that McFarland “discloses that the wireless automation device sends reports that include ‘appropriate sensor information’ including ‘a current value or indicator’ ‘and’ ‘prior measurements’ or other requested information responsive to the request.” *Id.* (citing Ex. 1002 ¶¶ 118–120).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

Summary of Claim 7

For the reasons discussed for claim 1 and for claim 7, we determine that Petitioner establishes a reasonable likelihood that claim 7 would have been unpatentable over McFarland.

4. Independent Claim 20

[20.pre]: A method for providing power saving wireless communication within a building automation system, the method comprising:

Petitioner refers to its contentions for claim elements [1.pre] and [7.pre]. Pet. 41. Petitioner further contends that McFarland “discloses that the device’s wireless communication is power saving by ‘using low-power wireless RF communications,’ causing devices to ‘enter a standby or sleep mode’ between transmission intervals, and ‘reducing an amount of communication . . . using dynamic value reporting.’” *Id.* (citing Ex. 1002 ¶¶ 126–128; Ex. 1027 ¶¶ 5, 22, 48). Petitioner does not address whether the preamble is limiting.

We reviewed the evidence cited by Petitioner and find it sufficiently discloses the subject matter of the preamble. Therefore, we need not address whether the preamble is limiting.

[20.a] scanning sensor data associated with each of a plurality of sensors contained within a multi-sensor package of a first automation component;

Petitioner refers to its contentions for claim elements [1.a] and [1.c] and contends that McFarland’s sensor 209 “is a multi-sensor package’ and its “processor ‘poll[s]’ (scans) sensor information from the sensor values detected using sensor 209.” Pet. 42 (citing Ex. 1002 ¶¶ 129–131; Ex. 1027 ¶¶ 38–40, 43–47, 52, Figs. 2–3).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[20.b] identifying changed sensor values within the sensed data;

Petitioner refers to its contentions for claim 3 and contends that McFarland identifies “values of sensor data that have changed by comparing them to a change-of-value threshold.” Pet. 42 (citing Ex. 1002 ¶¶ 132–134); *see also id.* at 32–33 (setting forth contentions for claim 3).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[20.c] receiving a first communication from a second automation component in communication with the first automation component and the building automation system; and

Petitioner refers to its contentions for claim element [1.e]. Pet. 43. Petitioner contends that McFarland’s “wireless automation device receives ‘instructions’ as part of a communication from the controller (i.e., the second automation component)” and “[t]he controller is also part of, and communicates with, the ‘building automation system.’” *Id.* (citing Ex. 1002 ¶¶ 135–137; Ex. 1027 ¶¶ 25, 60–62).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[20.d] communicating a portion of the identified changed sensor values associated with the first communication received from the second automation component.

Petitioner refers to its contentions for claim element 1.f. Pet. 43. Petitioner contends that McFarland stores “each indicator when there is a ‘change in the sensed condition’ as an indicator ‘V_i.’” *Id.* (citing Ex. 1027 ¶ 54). Petitioner further contends that “[t]he most recent indicators V_i are then transmitted in response to ‘other stimulus’ including ‘control signal[s]’ and ‘report’ commands” and the “reports include portions of sensor values, e.g.: current ‘or’ prior measurements.” *Id.* (citing Ex. 1002 ¶¶ 138–140; Ex. 1027 ¶¶ 23, 53–55, 62).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

Summary of Claim 20

For all the foregoing reasons, we find that Petitioner establishes a reasonable likelihood that claim 20 would have been unpatentable.

5. *Dependent Claims 2–5, 8–11, and 21*

Petitioner cites to additional disclosure in McFarland that it contends corresponds to the limitations in these dependent claims. Pet. 31–35, 40, 44. We reviewed the evidence cited by Petitioner and find it sufficient for institution.

F. *Ground 2: Alleged Obviousness of Claims 13–16 over McFarland and Kates-089*

1. *Kates-089*

Kates-089 is titled “Zone Thermostat for Zone Heating and Cooling.” Ex. 1029, code (54). Kates-089 discloses a system and method for “providing an Electronically-Controlled Register vent (ECRV)” that is “used to convert a non-zoned HVAC system into a zoned system.” *Id.* ¶ 10. The ECRV’s may comprise temperature sensors, controllers, actuators, and a user input device to set a room temperature. *Id.* ¶ 41, Fig. 4. A central system can “instruct the ECRV to perform additional measurements, to go to a standby mode, to wake up, to report battery status, to change wake-up interval, to run self-diagnostics and report results.” *Id.* ¶ 82.

2. *Claim 13*

For the claim elements that Petitioner identifies as [13.pre]–[13.d], Petitioner relies on its contentions for claim elements [1.pre]–[1.d] and [7.pre]–[7.d]. Pet. 40 (citing Ex. 1002 ¶ 152).

[13.e] wherein the computer readable instructions are programmed to: receive a wake-up command from a second automation component;

Petitioner contends that McFarland teaches “that ‘[i]n response to a report instruction, the device 507 may wake up from a sleep mode’ (a low power state).” Pet. 49 (citing Ex. 1027 ¶¶ 48, 62). According to Petitioner, “[b]ecause the report instruction is a command that causes device 507 to wake up, it is a wake-up command.” *Id.* (citing Ex. 1002 ¶¶ 153–154).

Petitioner alternately contends that Kates-089 “discloses using a ‘wake up’ command to cause a controller to read a sensor.” Pet. 49–50 (citing Ex. 1029 ¶ 86). Petitioner further contends that a person of ordinary skill in the art “would have been motivated to modify **McFarland** by implementing **Kates-089’s** ‘wake up command’ to, e.g., advantageously facilitate the reporting of sensor data outside of periodic reporting intervals with a specific instruction.” *Id.* at 50 (citing Ex. 1002 ¶¶ 155–157; Ex. 1029 ¶¶ 82, 86); *see also id.* at 45–49 (explaining in detail why a person of ordinary skill in the art would have been motivated to combine McFarland and Kates-089 and would have had a reasonable expectation of success in doing so).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[13.f]: communicate stored sensor data related to the sensor data in control at a second automation component; and

Relying on its contentions for claim elements [1.f] and [7.g], Petitioner contends that McFarland discloses claim element 13.f. Pet. 50 (citing Ex. 1002 ¶¶ 158–159).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

[13.g]: receive a power down command from the second automation component.

Petitioner contends that McFarland’s “processor and sensor ‘enter a standby or sleep mode (low power states) between periodic intervals, but leaves it to a [person of ordinary skill in the art] as to how the device reenters the sleep mode after being woken up.” Pet. 51 (citing Ex. 1027 ¶¶ 8, 18, 46, 48, 62). Petitioner further contends that Kates-089 “discloses issuing a ‘standby mode’ command to return the device to a low power state outside the periodic polling cycle.” *Id.* (citing Ex. 1029 ¶¶ 82, 86). Petitioner further contends an ordinarily skilled artisan would have been motivated to modify McFarland with Kates-089 to “advantageously improve power savings within the system by powering down the device before the next periodic cycle.” *Id.* (citing Ex. 1002 ¶¶ 162–164).

We reviewed the evidence cited by Petitioner and find it sufficiently discloses this limitation.

Summary of Claim 13

For all the foregoing reasons, we determine that Petitioner establishes a reasonable likelihood that claim 13 would have been unpatentable over McFarland and Kates-089.

Claims 14–16

For these dependent claims, Patent Owner relies on its contentions for claims 2–4 and 8–10. Pet. 51.

We reviewed the evidence cited by Petitioner and find it sufficient for institution.

Ground 3–9

Petitioner submits these alternate grounds for each of the challenged claims adding additional references, Stoner and Ahmed-629, to McFarland and/or Kates-089 as articulated for Grounds 1 and 2 and adds a third

challenge for claims 20–21. Pet. 6. We do not reach these alternate challenges at this time in light of our determination that Petitioner has established a reasonable likelihood that each challenged claim would have been unpatentable under the challenges set forth in Ground 1 and 2 without Stoner or Ahmed-629. However, we institute trial based on all grounds in the Petition including Grounds 3–9.

III. CONCLUSION

Based on the present record, we determine that Petitioner demonstrates a reasonable likelihood that it would prevail in establishing that at least one challenged claim of the ‘282 patent is unpatentable. We, thus, institute an *inter partes* review of all challenged claims of the ‘282 patent based on all grounds in the Petition. At this stage of the proceeding, we have not made a final determination under 35 U.S.C. § 318(a) with respect to the unpatentability of any challenged claim.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of the ‘282 patent is instituted with respect to all challenged claims on all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4(b), *inter partes* review of the ‘282 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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Patent 8,224,282 B2

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