

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COPELAND COMFORT CONTROL LP,
Petitioner,

v.

OLLNOVA TECHNOLOGIES LTD.,
Patent Owner.

IPR2023-00626
Patent 7,746,887 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, 3–8, 14, 15, and 18 (“the challenged claims”) of U.S. Patent No. 7,746,887 B2 (“the ’887 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 ’887 patent is unpatentable. Pursuant to 35 U.S.C. § 314, we hereby institute an *inter partes* review of all challenged claims of the ’887 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 ‘887 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, 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 ‘887 Patent

The ‘887 patent is titled “Dynamic Value Reporting for Wireless Automation Systems.” Ex. 1001, code (54). The ‘887 patent issued on June 29, 2010 from Application No. 11/402,743, which was filed on April 12, 2006. *Id.* at codes (45), (21), (22). The ‘887 patent 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.* at 2:57–61

Figure 1 of the '887 patent is reproduced below:

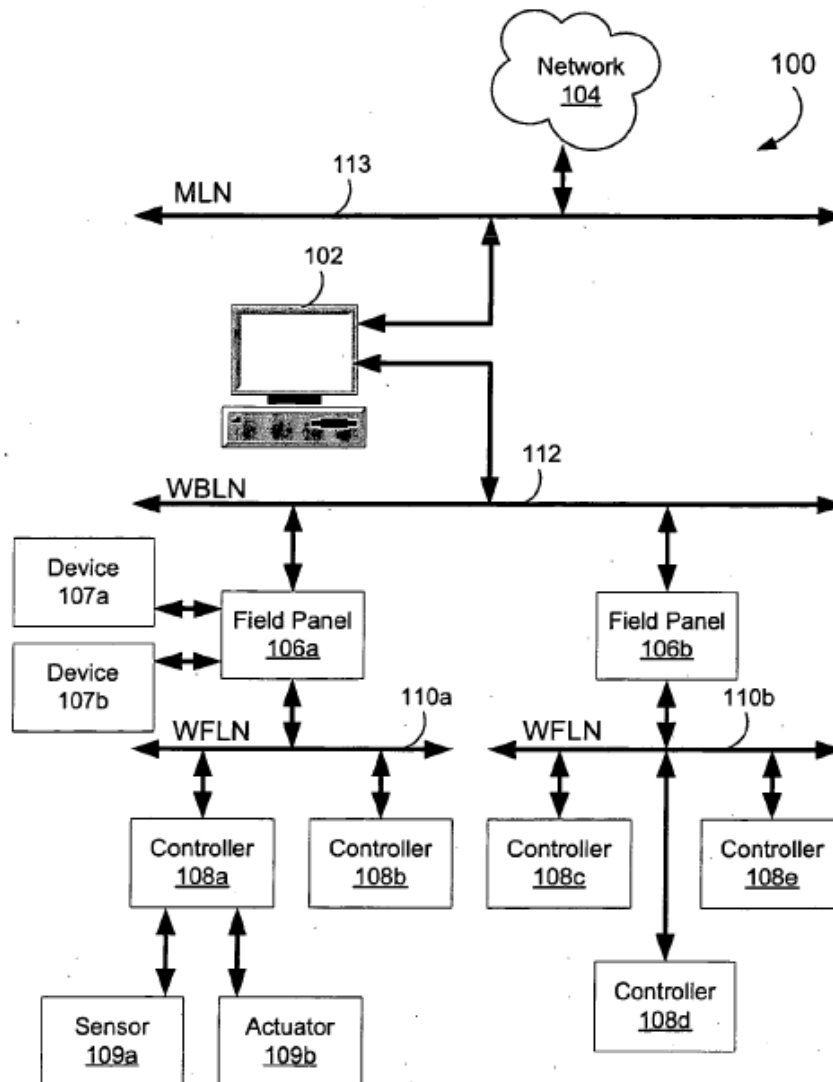


Figure 1

Figure 1 “is a block diagram for an example wireless automation system 100 configured for and/or using dynamic value reporting.” Ex. 1001, 3:45–47. 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.*

at 4:37–39. Controllers 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.* at 4: 40–43. Controllers 108a-108e may communicate with sensors 109a or actuators 109b using “two-way wireless communication protocol.” *Id.* at 4:44–45

Figure 2 of the '887 patent is reproduced below:

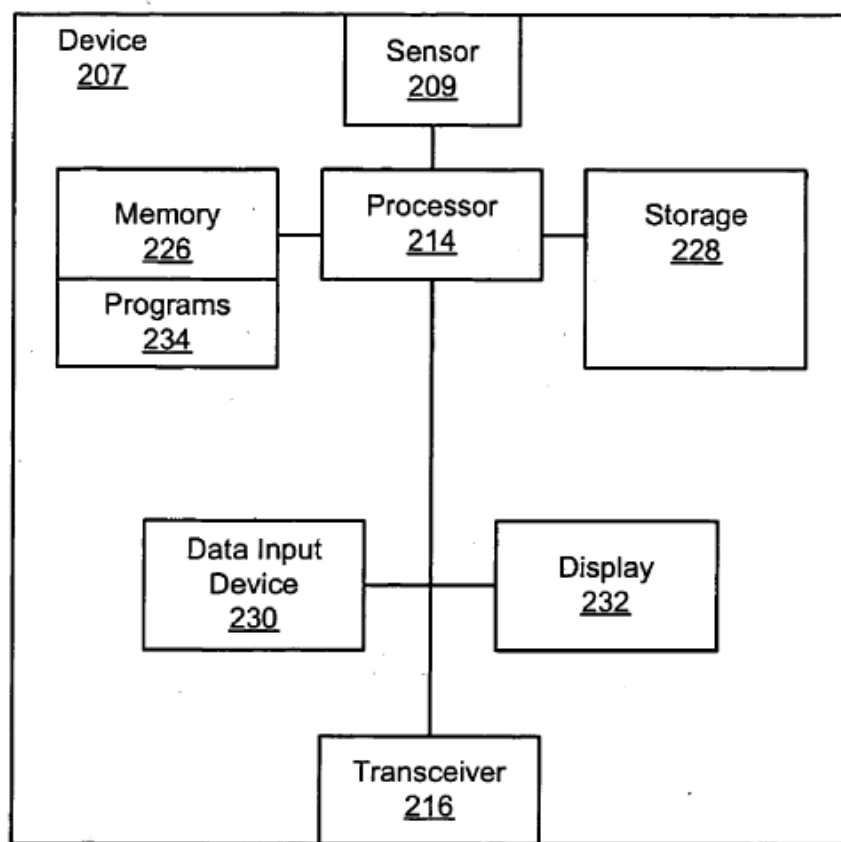


Figure 2

Figure 2 is “a block diagram of an automation device 207 for a wireless automation system using dynamic value reporting.” Ex. 1001 6:59–61. Device 207 “includes a processor 214, a transceiver 216, and a sensor 209.” *Id.* at 7:27–28. Processor 214 “implements a control process for 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.* at 7:48–52. Transceiver 216 “wirelessly communicates information using one or a combination of one-way and/or two-way wireless communications.” *Id.* at 8:24–26. 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.* at 8:58–62.

D. Illustrative Claim

Claim 1, the only independent claim, is reproduced below with Petitioner’s annotations:

1. [1.pre] A wireless automation device, comprising:
 - [1.a] a transceiver operable to wirelessly communicate packets of information over a wireless network;
 - [1.b] a sensor operable to generate a indicator for a sensed condition;
 - [1.c] a controller configured to poll the sensor at a polling interval to read the indicator during a current period of the polling interval and to selectively operate the transceiver to communicate information associated with the reading of the indicator; and
 - [1.d] a memory, the controller storing a reading of the indicator during the current period in the memory, where the memory stores at least one prior reading of the indicator, the prior reading of the indicator made during a prior period of the polling interval,
 - [1.e] wherein the transceiver is configured to transmit a most recent reading of the indicator stored in the memory during a period of a transmission interval in response to detecting a change in the sensed condition outside a predetermined range and wherein transmission of the most recent reading of the

indicator stored in the memory during the period of the transmission interval is suspended in response to detecting a change in the sensed condition within the predetermined range.

Ex. 1001, 14:48–15:4, pp. 14, 15 (Certificates of Correction).

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1, 3–8, 14, 15, and 18 would have been unpatentable on the following grounds (Pet. 7):

Claim(s) Challenged	35 U.S.C. §²	References/Basis
1, 3–8, 18	103(a)	Kates-711 ³
1, 3–8, 18	103(a)	Kates-711, Hitt ⁴
1, 3–8, 14, 15, 18	103(a)	Kates-711, Litrell ⁵
1, 3–8, 14, 15, 18	103(a)	Kates-711, Hitt, Litrell
1, 3–8, 18	103(a)	Kates-505 ⁶
1, 3–8, 18	103(a)	Kates-505, Hitt
1, 3–8, 14, 15, 18	103(a)	Kates-505, Litrell
1, 3–8, 14, 15, 18	103(a)	Kates-505, Hitt, Litrell
1, 3–8, 18	103(a)	Kates-505, Mueller ⁷
1, 3–8, 18	103(a)	Kates-505, Mueller, Hitt
1, 3–8, 14, 15, 18	103(a)	Kates-505, Mueller, Litrell
1, 3–8, 14, 15, 18	103(a)	Kates-505, Mueller, Hitt, Litrell

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 No. 7,528,711 B2 (May 5, 2009) (“Kates-711”).

⁴ U.S. Patent Publication No. 2004/0100394 A1 (May 27, 2004) (“Hitt”).

⁵ U.S. Patent Publication No. 2005/0246593 A1 (Nov. 3, 2005) (“Litrell”).

⁶ U.S. Patent No. 7,102,505 B2 (Sep. 5, 2006) (“Kates-505”).

⁷ U.S. Patent No. 6,513,723 B1 (Feb. 4, 2003) (“Mueller”).

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)] 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 in the Eastern District of Texas 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.* This case is the Ecobee litigation referred to above. *Id.* at 3.

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).

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. We analyze the Ecobee litigation and the Parties’ district court litigation separately.

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 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 and Patent Owner has sued Petitioner in a separate proceeding, we find that this factor is neutral.

Fintiv Factor 4

In the Ecobee litigation, Patent Owner asserts claims 1, 11, 12, 20, and 21. *Id.* at 8. Patent Owner further contends that “ecobee’s invalidity expert report in the district court case addresses the same Kates prior art reference as that asserted in the Petition.” *Id.* at 8 (citing Ex. 2005, 1–2). Patent Owner contends that “ecobee asserts Kates (U.S. Patent App. Pub. No. 2005/0275530), which is the published patent application for Kates-505 (U.S. Patent No. 7,102,505) asserted in the Petition.” *Id.* (citing Ex. 2005, 34, 323–337). Patent Owner further contends that “the Petition asserts

Kates-711 (U.S. Patent No. 7,528,711), which names the same inventor and is substantially similar to Kates-505.” *Id.* (citing Pet. 7 n.2, 64–68).

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.*; Prelim. Sur-reply 2.

Petitioner, in turn, contends that “there are few overlaps with the *ecobee Case*.” Prelim. Reply 2. Petitioner notes that the only challenged claim at issue in the Ecobee litigation is claim 1 and “claims 3–8, 14, 15, and 18 are unasserted in that case.” *Id.* Petitioner further contends that “Kates-711 is not at issue in the *ecobee Case*” and “Kates-505 is at issue in the *ecobee Case*, but there it is not being considered in combination with, e.g., Hitt, Littrell, and/or Mueller for even claim 1—as it will be in this IPR.” *Id.* Petitioner contends that “Kates-505 does not include some of Kates-711’s teachings of, e.g., suspending transmission if a change is ‘within the predetermined range’; the Petition combines Kates-505 with Mueller, which is not in the *ecobee Case*, for these teachings.” *Id.* at 2–3.

In its Preliminary Sur-reply, Patent Owner reiterates its contentions but does not address Petitioner’s arguments that the Ecobee litigation will not address Kates-505 in combination with Hitt, Litrell, and/or Mueller as set forth in Petitioner’s Grounds 5–12 (Pet. 7).

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, although claim 1 is challenged here and in the Ecobee litigation, the dependent claims challenged here are not at issue in the Ecobee litigation. Second, Kates-711 is not asserted in the Ecobee litigation. Ex. 2005, 34,

323–337. We acknowledge that Petitioner admits that Kates-711 and Kates-505 share much of the same disclosure. Pet. 64–68. Importantly, however, although Kates-505 is asserted in the district court, none of the secondary references asserted here in combination with Kates-505 or Kates-711, e.g., Hitt, Littrell, and Mueller, are asserted in the Ecobee litigation. Ex. 2005, 34, 323–337.

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 as well as the differences in the prior art references asserted by Petitioner as discussed above. 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 in the record that Petitioner is related to the defendants in the Ecobee litigation. 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 Patent Owner “does not meaningfully dispute the Petition’s compelling merits.” 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).⁸ *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. 13–14 (citing Ex. 1002 ¶ 43–47). 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.*

⁸ No evidence of secondary considerations has been presented at this stage of the proceeding.

For the purposes of this Decision, we apply Petitioner’s proposed level of skill in the art because it appears consistent with the problems addressed in the ‘887 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 *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. 14 (citing Ex. 1002 ¶48).

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 Obviousness of Claims 1, 3–8, and 18 over Kates-711

Petitioner contends claims 1, 3–8, and 18 would have been obvious over Kates-711. Pet 16–41. Petitioner supports its contentions with the

Declaration of Dr. Neikirk. Ex. 1002 ¶¶ 58–111. Patent Owner does not address Petitioner’s contentions. *See* Prelim. Resp. 1–10.

We begin with a brief summary of Kates-711 and then address the Petitioner’s contentions.

1. Kates-711 (Ex. 1004)

Kates-711 is titled “Portable Monitoring Unit.” Ex. 1004, code (54). Kates-711 discloses “a sensor system that provides sensor information to a portable monitoring unit . . . for alerting building or complex management, or other responsible parties, to a potential problem detected by the sensor system.” *Id.* at 1:65–2:2.

Figure 2 of Kates-711 is reproduced below:

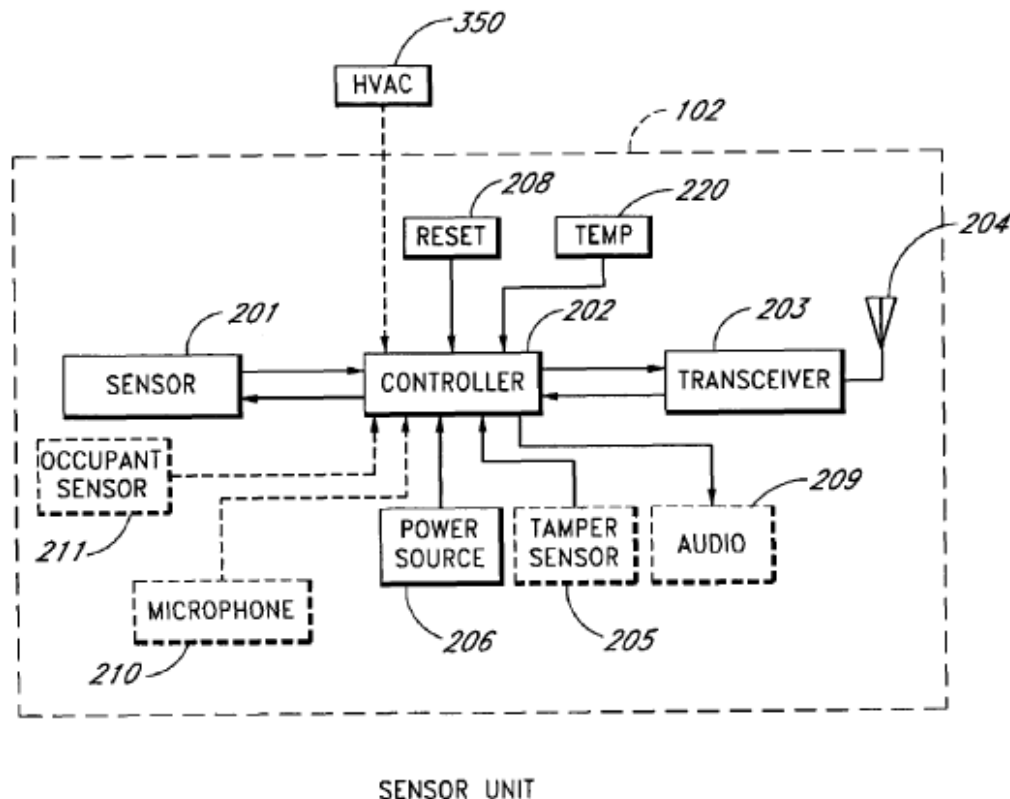


Figure 2 “is a block diagram of the sensor unit 102” shown in Figure 1 of Kates-711. Ex. 1004, 12:47. In sensor unit 102, “one or more sensors 201

and transceiver 203 are provided to a controller 202.” *Id.* at 12:48–49. Controller 202 “is a conventional programmable microcontroller.” *Id.* at 12:63–64. In various embodiments, sensor 201 can be “a thermistor,” “a humidity sensor,” “a water level sensor, a water temperature sensor, a carbon monoxide sensor, a moisture sensor, a water flow sensor, natural gas sensor, propane sensor, etc.” *Id.* at 13:2–7.

2. Claim 1

Petitioner provides a limitation-by-limitation analysis of independent claim 1, mapping each claim limitation to Kates-711. 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.⁹

[1.pre] A wireless automation device, comprising:

Petitioner contends that Kates-711 “discloses a wireless ‘sensor unit’ that detects and communicates data about anomalous conditions.” Pet. 19 (citing Ex. 1004, 5:30–33, 7:45–48, 12:47–51). Petitioner further contends that Kates-711’s sensor unit “is an automation device because, e.g., it automatically detects and communicates an ‘anomalous’ condition as part of a larger system for process control based on sensing and reacting to potentially dangerous building conditions.” *Id.* (citing Ex. 1004, 1:6–11, 4:35–48, 7:45–48, 16:36–17:44); *see also id.* at 20–22 (citing Ex. 1002 ¶¶ 66–68; Ex. 1004, 4:35–42, 5:30–33, 6:6–19, 7:45–48, 12:47–51, 16:56–17:2, Fig. 2).

⁹ For ease of reference, we utilize Petitioner’s claim annotations.

We reviewed the evidence cited by Petitioner and find it discloses the subject matter of the preamble sufficiently for the purposes of institution.

Therefore, we need not address whether the preamble is limiting.

[1.a] a transceiver operable to wirelessly communicate packets of information over a wireless network;

Petitioner contends that Kates-711 “discloses that the sensor unit includes a ‘transceiver’ that wirelessly communicates ‘network communication packets’ over a wireless network.” Pet. 22 (citing Ex. 1002 ¶¶ 70–72); *see also id.* at 23–24 (citing Ex. 1004, 5:21–25, 6:29–30, 11:30–34, 12:26–30, 12:47–51, Figs. 2, 5).

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

[1.b] a sensor operable to generate a indicator for a sensed condition;

Petitioner contends that Kates-711 “discloses the sensor unit including ‘sensor 201,’ which generates sensor data including a sensor ‘reading.’” Pet. 24 (citing Ex. 1002 ¶¶ 74–76); *see also id.* at 25–27 (citing Ex. 1004, 7:13–23, 12:47–51, 12:66–13:9, 13:7–23, 15:50–16:7, 21:1–5, Fig. 2).

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

[1.c] a controller configured to poll the sensor at a polling interval to read the indicator during a current period of the polling interval and to selectively operate the transceiver to communicate information associated with the reading of the indicator;

Petitioner first refers to its contentions for the preamble and limitation 1.b. Pet. 27. Petitioner contends that the sensor unit of Kates-711 “includes a ‘controller’ that provides control information to the sensor.” *Id.* (citing Ex. 1004, 12:47–51). Petitioner further contends that “the controller powers up the sensor to take a sensor reading” and “evaluates the sensor data, and if the

sensor data is ‘deemed to be anomalous,’ the controller powers up and operates the transceiver to communicate the sensor data and related information, such as the sensor unit’s ID code.” *Id.* (citing Ex. 1004, 5:18–23, 7:60–8:12, 13:7–23, 15:50–16:7). According to Petitioner, “[b]ecause both the reading and the associated ID code information are transmitted, this element is met regardless of how it is interpreted.” *Id.* at 27–28 (citing Ex. 1002 ¶¶ 77–79); *see also id.* at 28–30 (citing Ex. 1004, 5:18–23, 12:47–51, 13:7–23, 13:57–14:5, 15:50–16:7, Figs. 2, 7).

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

[1.d] a memory, the controller storing a reading of the indicator during the current period in the memory, where the memory stores at least one prior reading of the indicator made during a prior period of the polling interval;

Petitioner contends that Kates-711’s “controller is a conventional programmable microcontroller, and that the controller calculates values such as ‘a time weighted average’ based on ‘recent sensor readings’ and ‘less recent sensor readings.’” Pet. 30 (citing Ex. 1004, 12:62–64, 19:64–20:9, 21:1–16). Petitioner further contends that the “[s]ensor readings are taken once per period of the periodic monitoring, so the ‘less recent’ sensor readings are from periods of periodic monitoring prior to the ‘recent’ sensor readings.” *Id.* (citing Ex. 1004, 15:50–16:7). Petitioner further contends that “Kates-711 . . . discloses that the sensor unit includes a processor such as a Xilinx FPGA, which as understood or found obvious by a [person of ordinary skill in the art] would have used memory.” *Id.* (citing Ex. 1002 ¶¶ 81–83, Ex. 1004, 12:62–66). According to Petitioner, Kates-711 calculates an average of readings

from a current period and from prior periods, and assigning different weights to those readings, using a processor . . . not only renders obvious but affirmatively discloses, this limitation because a [person of ordinary skill in the art] would have understood that a memory is used by the sensor unit for storage and retrieval of sensor data for use by the processor in those calculations during later periodic monitoring cycles.

Id. at 30–31 (citing Ex. 1002 ¶ 84); *see also id.* at 31 (citing Ex. 1004, 12:62–66, 15:50–16:7, 19:64–20:9).

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

[1.e] wherein the transceiver is configured to transmit a most recent reading of the indicator stored in the memory during a period of a transmission interval in response to detecting a change in the sensed condition outside a predetermined range and wherein transmission of the most recent reading of the indicator stored in the memory during the period of the transmission interval is suspended in response to detecting a change in the sensed condition within the predetermined range.

Petitioner refers to its contentions for limitations 1.pre–1.d. Pet. 32. Petitioner contends that Kates-711 “discloses that during each period of ‘periodic monitoring,’ the sensor unit takes a sensor reading and enters a ‘report block 707’ for reporting the sensor reading to a monitoring computer.” *Id.* (citing Ex. 1004, 15:50–16:4). Petitioner further contends that “the sensor unit conserves power by not transmitting data that falls within a normal range: when the controller receives sensor data from the sensor . . . the controller evaluates the sensor data to determine if the sensor data should be transmitted.” *Id.* (citing Ex. 1002 ¶¶ 85–87; Ex. 1004, 13:8–23). Petitioner further contends that if the received sensor data is outside “predetermined” thresholds (*id.* at 33 (citing Ex. 1004, 13:16–23, 20:9–49), “the data is deemed . . . ‘sufficiently anomalous’ and ‘necessary’ to transmit, and transmission occurs.” *Id.* at 32 (citing Ex. 1004, 4:39–42, 5:12–16,

13:8–23). Petitioner further contends that if the sensor data is within the predetermined thresholds, “then transmission of the sensor data is suspended ‘by not transmitting data that falls within a normal range.’” *Id.* (citing Ex. 1004, 13:8–23); *see also id.* at 34–36 (citing Ex. 1004, 4:6–9, 4:39–42, 5:12–17, 13:8–23, 15:50–16:4, 20:9–49).

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

Summary of Claim 1

For all the foregoing reasons, we determine that Petitioner has shown a reasonable likelihood that claim 1 would have been unpatentable over Kates-711.

3. Claims 3–8 and 18

Claims 3–8 and 18 depend from claim 1. Ex. 1001, 15:10–32, 16:23–24. Petitioner sets forth evidence and argument as to why Kates-711 allegedly renders these claims unpatentable. Pet. 35–41.

Patent Owner does not address these claims in the Preliminary Response. *See* Prelim. Resp.

We reviewed Petitioner’s evidence and arguments and determine that Petitioner has sufficiently shown a reasonable likelihood that these dependent claims would have been unpatentable over Kates-711.

F. Ground 2: Alleged Obviousness of Claims 1, 3–8, and 18 over Kates-711 and Hitt

1. Hitt (Exhibit 1005)

Hitt is titled “Distributed Environmental Control in a Wireless Sensor System.” Ex. 1005, code (54). Hitt discloses a method of providing environmental monitoring and control that “includes providing a network of wireless nodes, the wireless nodes includes an array of sensor nodes and an

array of actuator nodes, each wireless node including a wireless transceiver, a processor and one of a sensor device or an actuator device.” *Id.* at ¶ 27. Hitt discloses that “the processor receives the data related to the sensor or actuator” or the data may be stored in a memory and retrieved from the memory by the processor. *Id.* at ¶ 67.

2. *Analysis*

In this alternative challenge, Petitioner contends that “[w]hile **Kates-711**’s teachings not only render obvious but also disclose the ‘memory’ elements ([1.d]-[1.e], [5]), **Hitt** provides explicit teachings of a memory storing information as claimed.” Pet. 42. Petitioner further contends that Hitt’s memory 155 “store instructions for execution by processor 156 and also stores instructions for execution by processor 156 and also stores periodically sampled sensor data for retrieval by the processor for processing and/or transmission.” *Id.* at 43 (citing Ex. 1002 ¶ 112; Ex. 1005 ¶¶ 65, 67–68). Petitioner also provides reasons why an ordinarily skilled artisan would have combined Kates-711 and Hitt, i.e., a person of ordinary skill in the art “would have been motivated to modify **Kates-711**’s sensor units with **Hitt**’s teachings of ‘memory’ to achieve the beneficial and predictable result of utilizing memory to securely store sensor readings.” *Id.* (citing Ex. 1002 ¶ 114).

Patent Owner does not address this challenge. *See* Prelim. Resp.

We reviewed Petitioner’s evidence and arguments and determine that Petitioner has sufficiently shown a reasonable likelihood that claims 1, 3–8, and 18 would have been unpatentable over Kates-711 and Hitt.

G. Grounds 3 and 4: Alleged Obviousness of Claims 1, 3–8, 14, 15, and 18 over Kates-711 and Litrell and Kates-711, Hitt, and Litrell

1. Litrell (Exhibit 1006)

Littrell is titled “Methods and Apparatus for Providing Alarm Notification.” Ex. 1006, code (54). Littrell is directed to “[a] method for indicating an alarm condition in an industrial process includes measuring a parameter of the industrial process that varies over time.” *Id.* at code (57). Litrell discloses a data acquisition system 16 that receives data from one or more sensors 14. *Id.* at ¶ 16. Litrell further discloses monitoring time varying parameters. *Id.*

2. Analysis

Petitioner argues these two alternative challenges to claims 1, 3–8, and 18 together. Pet. 47–61. Petitioner contends that Kates-711 “teaches various processes that imply the use of timing data associated with sensed conditions” but “leaves to a [person of ordinary skill in the art] the details of how such timing data is acquired.” *Id.* at 52 (citing Ex. 1002 ¶ 133).

Petitioner contends that “**Litrell** teaches time-stamping sensor data and making this time-stamp information available to computers networked to the sensors and their data acquisition systems” and “teaches that parameters and their associated upper and lower limits are tracked and analyzed based on times.” *Id.* at 53 (citing Ex. 1006 ¶¶ 14, 15, 29, 31, 32, 34–38, Fig. 2).

Petitioner further contends that a person of ordinary skill in the art “would have been motivated to modify **Kates-711’s** time history teachings with **Littrell’s** teachings of communicating timing data to facilitate computing ‘time’ averages, establishing ‘time’ histories, and making determinations related to ‘when’ conditions occur” and “to transmit the timing data with the sensor readings to a computer for analysis . . . to provide accurate

representations of the sensor data for use in **Kates-711**'s processes.” *Id.* at 53–54 (citing Ex. 1002 ¶ 134).

Petitioner also provides a claim chart for claims 14 and 15 detailing the disclosure in Kates-711, Litrell, and Hitt allegedly corresponding to the limitations of these dependent claims. Pet. 58–61.

Patent Owner does not address this challenge. *See* Prelim. Resp.

We reviewed Petitioner's evidence and arguments and determine that Petitioner has sufficiently shown a reasonable likelihood that claims 1, 3–8, 14, 15, and 18 would have been unpatentable over Kates-711 and Litrell with or without Hitt.

H. Grounds 5–8: Alleged Obviousness of Claims 1, 3–8, 14, 15, and 18 over Kates-505, Kates-505 and Hitt, and Kates-505, Hitt, and Litrell

Petitioner submits these alternative challenges in the event that Patent Owner contends that the '887 patent is entitled to a priority date earlier than its filing date of April 14, 2006.” Pet. 61. Petitioner asserts that “**Kates-505** is § 102(e) prior art with a priority date of 5/27/2004 and shares the same core critical disclosures with **Kates-711**.” *Id.* (citing Ex. 1002 ¶ 154).

Because Patent Owner does not contend in the Preliminary Response that the '887 patent is entitled to a priority date earlier than April 14, 2006 or address Petitioner's contentions for these grounds, we do not analyze these alternative challenges in detail at this time. We reviewed the comparison between Kates-505 and Kates-711 provided by Petitioner. Pet. 64–68.

Based on our review of the preliminary record, it appears that Petitioner's showing is sufficient for institution.

I. Grounds 9–12: Alleged Obviousness of Claims 1, 3–8, and 18 over Kates-505 and Mueller with or without Hitt and Claims 1, 3-8, 14, 15, and 18 over Kates-505, Mueller, and Littrell with or without Hitt

Because of our determination that Petitioner has made a sufficient showing for institution for Grounds 5–8 without Mueller, we do not reach this alternate challenge at this time. However, we institute trial based on all grounds in the Petition including Grounds 9–12.

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 ‘887 patent is unpatentable. We, thus, institute an *inter partes* review of all challenged claims of the ‘887 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 ‘887 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 ‘887 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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