

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ADEMCO INC.,
Petitioner,

v.

ECOFACOR, INC.,
Patent Owner.

IPR2023-00409
Patent 10,584,890 B2

Before MICHAEL J. FITZPATRICK, SCOTT B. HOWARD, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

FITZPATRICK, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Petitioner, Ademco, Inc., filed a Petition to institute an *inter partes* review of all claims, namely claims 1–17, of U.S. Patent No. 10,584,890 B2 (“the ’890 patent”) pursuant to 35 U.S.C. § 311(a). Paper 1 (“Pet.”). Patent Owner, EcoFactor, Inc., filed a Preliminary Response pursuant to 35 U.S.C. § 313. Paper 6 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2018); 37 C.F.R. § 42.4(a) (2022). Upon consideration of the Petition and the Preliminary Response, and for the reasons explained below, we determine that the information presented does not show a reasonable likelihood that Petitioner would prevail with respect to any claim. *See* 35 U.S.C. § 314(a). Accordingly, we deny the Petition.

A. Related Matters

The parties identify the following related matters involving the ’890 patent: *Google, LLC v. EcoFactor, Inc.*, No. IPR2022-00535 (PTAB Aug. 1, 2022) (denying institution); *EcoFactor, Inc. v. Amazon.com, Inc.*, No. 6:22-cv-00068 (W.D. Tex.); *EcoFactor, Inc. v. Resideo Technologies, Inc.*, No. 6:22-cv-00069 (W.D. Tex.); and *EcoFactor, Inc. v. ecobee, Inc.*, No. 6:21-cv-00428 (W.D. Tex.). Pet. 83; Paper 3 (Patent Owner Mandatory Notices).

B. Real Parties In Interest

Petitioner identifies itself as the sole real party in interest and additionally states that it “is a wholly owned subsidiary of Resideo Technologies, Inc.” Pet. 83. Patent Owner identifies itself as the sole real party in interest. Paper 3.

C. The '890 Patent

The '890 patent is titled “System And Method For Using A Mobile Electronic Device To Optimize An Energy Management System,” and “relates to the use of thermostatic HVAC and other energy management controls that are connected to a computer network.” Ex. 1001, code (54), 1:18–20. More specifically, the '890 patent describes using the location of geolocation-enabled mobile devices that are associated with the occupants of a home in order to enhance the control of the home's thermostat. *Id.* at 3:61–4:2.

In one embodiment, the invention comprises a thermostat attached to an HVAC system, a local network connecting the thermostat to a larger network such as the Internet, and one or more geolocation-enabled mobile devices attached to network, and a server in bi-directional communication with a plurality of such thermostats and devices. The server pairs each thermostat with one or more geolocation-enabled mobile devices which are determined to be associated with the occupants of home in which the thermostat is located.

The server logs the ambient temperature sensed by each thermostat vs. time and the signals sent by the thermostats to their HVAC systems. The server also monitors and logs the geolocation data related to the geolocation-enabled mobile devices associated with each thermostat. Based on the locations and movement evidenced by geolocation data, the server instructs the thermostat to change temperature settings between those optimized for occupied and unoccupied states at the appropriate times based on the evolving geolocation data.

Id. at 3:61–4:13.

D. The Challenged Claims

Claims 1–17 are challenged. Claim 1, the sole independent claim, is illustrative and reproduced below:

1. A thermostat system comprising:
 - a housing;
 - electrical contacts configured to connect the thermostat with wires that allow for at least two electrical connections from a building's HVAC system to the contacts;
 - a display configured to present information to a user;
 - a wireless radio compatible with a wireless radio frequency protocol and configured to communicate bi-directionally with a location-aware mobile device;
 - a temperature sensor;
 - one or more processors configured with electronic circuitry to:
 - receive HVAC data parameters, including a first data parameter from the temperature sensor comprising an interior temperature inside the building; and
 - a second data parameter from a network connected to the thermostat, wherein the second data parameter comprises an outside weather condition collected from a source external to the building;
 - determine a first temperature setpoint data parameter for the building, wherein the first setpoint data parameter includes a first temperature value and a first time value;
 - determine a second temperature setpoint data parameter for the building, wherein the second setpoint data parameter includes a second temperature value and a second time value;
 - receive radio frequency signals from the location-aware mobile device;
 - receive geo-positioning data from the location-aware mobile device and automatically adjust a temperature value

based on the geo-positioning data, including initiating at least one cooling or heating cycle for the HVAC system when the geo-positioning data is determined to indicate that the building is unoccupied by the user;

electronic circuitry configured to allow the user to adjust a desired temperature for the HVAC system;

electronic circuitry configured to analyze a plurality of data parameters specific to the user, including at least one data parameter relating to usage of the HVAC system at various times; and

electronic circuitry configured to generate and communicate usage metrics pertaining to the HVAC system over time; and

a compressor delay circuit configured to delay the start or stop of a compressor for the HVAC system and protect the compressor from rapid cycling.

Ex. 1001, 33:28–34:10.

C. The Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Claims Challenged	35 U.S.C. § ¹	Basis
1–8	103(a)	Leen, ² Trundle, ³ Ehlers ⁴

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, which was enacted September 16, 2011, made amendments to 35 U.S.C. §§ 102 and 103. AIA § 3(b)–(c). Those amendments became effective eighteen months later on March 16, 2013. *Id.* at § 3(n). Because the application from which the ’890 patent issued claims priority to an application filed before March 16, 2013, any citations herein to 35 U.S.C. §§ 102 and 103 are to their pre-AIA versions. *Id.* at § 3(n)(1).

² US 2009/0140056A1, published June 4, 2009 (Ex. 1008, “Leen”).

³ US 2010/0289643 A1, published Nov. 18, 2010 (Ex. 1009, “Trundle”).

⁴ US 6,216,956 B1, issued Apr. 17, 2001 (Ex. 1010, “Ehlers”).

Claims Challenged	35 U.S.C. § ¹	Basis
9–17	103(a)	Leen, Trundle, Ehlers, Wedekind ⁵
1–8	103(a)	Imes, ⁶ Young, ⁷ Ehlers
9–17	103(a)	Imes, Young, Wedekind, Ehlers

Pet. 2.

II. ANALYSIS

A. Claim Construction

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

Neither party proffers an express construction of any claim term.

Pet. 3; Prelim. Resp. 8.

The parties state that the preamble of claim 1 (“A thermostat system”) is limiting, as the U.S. District Court for the Western District determined

⁵ US 5,197,666, issued Mar. 30, 1993 (Ex. 1011, “Wedekind”).

⁶ US 8,457,797 B2, issued June 4, 2013 (Ex. 1014, “Imes”).

⁷ US 6,196,468 B1, issued Mar. 6, 2001 (Ex. 1016, “Young”).

(Ex. 1021 at 2) in a related civil action, but neither party offers an express construction of the preamble. Pet. 3; Prelim. Resp. 8. In fact, both parties state that Petitioner’s grounds of unpatentability do not turn on whether the preamble is limiting. Pet. 3; Prelim. Resp. 8.

We do not explicitly construe any limitations, as it unnecessary to decide the Petition. However, we agree with the court and the parties that the preamble of claim 1 is limiting.

“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.” *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003). This is the case here as the body of claim 1 twice refers to “the thermostat” for which the only antecedent basis could be “A thermostat system.” Ex. 1001, at claim 1.

B. Obviousness Generally

A claim is unpatentable “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103(a). “Obviousness is a question of law based on underlying facts.” *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1167 (Fed. Cir. 2015). The underlying facts include (i) the scope and content of the prior art, (ii) the differences between the prior art and the claimed invention, (iii) the level of ordinary skill in the field of the invention, and (iv) any relevant objective considerations of nonobviousness. *Id.* (citing *Graham v. John Deere of Kan. City*, 383 U.S. 1, 17–18 (1966)).

An additional underlying fact is whether there was a reason to combine prior art teachings when so asserted. *Id.*

C. Level Of Ordinary Skill In The Art

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

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 (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.* at 696–97.

Petitioner argues a person having ordinary skill in the art “would have had at least (1) an undergraduate degree in electrical engineering, computer engineering, computer science, or a comparable field of study and (2) at

least two years of experience with (i) process control, (ii) automation systems, (iii) or a comparable field of work.” Pet. 8 (citing Ex. 1002 ¶12). Patent Owner does not dispute Petitioner’s definition. Prelim. Resp. 7–8.

Because Petitioner’s formulation of the level of ordinary skill in the art appears consistent with the ’890 patent and the asserted prior art and is not challenged by Patent Owner, we apply it in our analysis below.

*D. The Prior Art*⁸

1. Leen

Leen discloses “HVAC controllers that are configured to be more intuitive and user friendly to program and operate.” Ex. 1008 ¶4. Leen discloses a thermostat that allows a user to create a schedule, which schedule may consider when the user’s home is unoccupied. *Id.* ¶¶92–93, 107.

2. Trundle

Trundle discloses “controlling one or more energy consuming devices,” such as an HVAC system, in part, by “monitoring sensor data captured by one or more sensors that sense attributes relevant to user presence at one or more monitored properties and monitoring status of one or more energy consuming devices associated with the one or more monitored properties.” Ex. 1009 ¶5.

In some implementations, a native mobile device application enables use of a mobile device to monitor and control

⁸ Young and Wedekind are not discussed here, as they are asserted only against dependent claims 9 through 17, and, as discussed below, the Petition fails to present a reasonable likelihood of prevailing with respect to sole independent claim 1 (or any other claim).

thermostat, lighting, and other energy-consuming appliances in a home, business, vacation or other property from anywhere. The native mobile device application provides alerts related to energy consumption and events that may impact user decision on energy consumption. *The native mobile device application also tracks the mobile device's physical location and uses location tracking to automatically set thermostat, lights, and appliances accordingly.*

Id. ¶37 (emphasis added).

3. Ehlers

Ehlers states that prior art “[t]emperature control systems [such as] thermostats and thermostatic control devices [that] are designed primarily to sense the temperature inside a premise and, based on an occupant-designated temperature setting, activate a heating and/or cooling system or systems to maintain the temperature at that setting.” Ex. 1010, 1:19–25. Ehlers proceeds to describe its invention as “directed to an environmental condition sensing and control system aimed at optimizing comfort and minimizing energy consumption and cost, based on user-defined comfort and cost level parameters.” *Id.* at 2:42–45.

“Options selected by the user that affect [the system’s] operation are ramping and preconditioning. These comfort-based options reduce any drastic swings in temperature due to large changes in cost. Ramping allows for gradual change in temperature over time.” *Id.* at 28:65–29:2.

4. Imes

Imes discloses an “energy management system” that uses a “proximity detection module.” Ex. 1014, 1:29–31, code (57). Imes states:

According to an aspect of the disclosure, a system and method includes a network device disposed at a first site, wherein the network device is capable of being altered, and a network device disposed at a second site, wherein the network device is also capable of being altered. A proximity detection module is configured to initiate altering an operating condition of each of the network devices in response to a proximity detection of a location reporting device associated with each of the sites.

Id. at code (57).

E. Analysis of Ground I (Petition Ground “1A”)

A Petition must “identify” how a challenged claim is unpatentable under the statutory ground advanced. 37 C.F.R. § 42.104(b)(4). Thus, the Petition must identify how “the claimed invention [of each challenged claim] as a whole would have been obvious . . . to a person having ordinary skill in the art” in view of Leen, Trundle, and Ehlers. 35 U.S.C. § 103. The Petition does not do this.

In particular, and as Patent Owner argues and as we explain below, the Petition fails to show what it maps to the recited “thermostat system”/“thermostat” includes, or would have been modified to include, a processor configured to “receive geo-positioning data from the location-aware mobile device and automatically adjust a temperature value based on the geo-positioning data,” as recited in claim 1. Prelim. Resp. 11–19.

The Petition maps the claimed “thermostat system” to Leen’s HVAC controller 10. *See* Pet. 14 (“Leen discloses an HVAC controller 10 (thermostat system), such as a thermostat, that may control ‘one or more components of an HVAC system.’ EX. 1008, [0025], Fig. 1; EX. 1002, ¶108.”). The Petition asserts, with supporting evidence, that Leen’s HVAC

controller 10 includes a processor. Pet. 21 (citing Ex. 1008 ¶25; Ex. 1002 ¶127).

Turning to Trundle, the Petition asserts, with supporting evidence, that it “discloses techniques for remotely monitoring and controlling devices such as thermostats to increase user convenience and improve energy efficiency, such as by using a mobile device application’s specific geolocation or ‘location tracking to automatically set [a] thermostat.’” Pet. 9 (citing Ex. 1009 ¶¶36–37, 131; Ex. 1002 ¶85).

The Petition presents reasons why a person of ordinary skill in the art “would have been motivated to implement the mobile device-based occupancy detection of Trundle to improve both user-friendliness and energy efficiency of programmable thermostats, such as Leen.” Pet. 10. However, according to the Patent Owner, the Petition does not assert, let alone explain why, a so-motivated person of ordinary skill in the art would configure the processor of Leen’s HVAC controller to “receive geo-positioning data from the location-aware mobile device and automatically adjust a temperature value based on the geo-positioning data,” as recited in claim 1. Prelim. Resp. 13.

The Patent Owner is correct. The Petition provides the following assertions about what a person of ordinary skill in the art would have done in view of Leen and Trundle.

A POSITA would have been motivated to locate those details in other related literature and sought to incorporate location-based services given the ubiquitous nature of location-aware mobile devices at the time and the increased desire to optimize energy consumption. [Pet. 10.]

A POSITA would have been motivated to implement the mobile device-based occupancy detection of Trundle to improve both

user-friendliness and energy efficiency of programmable thermostats, such as Leen, at least because Trundle teaches techniques that “provid[e] an enhanced level of convenience to users” that would reduce or eliminate well-known difficulties with respect to schedules. EX. 1009, [0036]; EX. 1002, ¶92. [Pet. 9–10.]

A POSITA would have been motivated to rely on automated, location-based systems to also ensure that a home will be heated or cooled to a comfort level prior to a user’s arrival. [Pet. 11.]

[A] POSITA would have understood the benefits of leveraging user interfaces on existing “smart” devices for the remote control of thermostats, such as those disclosed in Trundle, instead of having a complex user interface on every controlled device. EX. 1002, ¶97. A POSITA would have also been motivated to rely on wireless networks configured to facilitate communications between a monitoring system control unit and one or more mobile devices, as taught by Trundle, to further provide enhanced convenience to users in the form of remote device control. EX. 1009, [0036], [0043], [0114]; EX. 1002, ¶98. [Pet. 11–12.]

[T]he combination of Leen and Trundle discloses receiving radio frequency signals from the location-aware mobile device. [Pet. 28.]

Nowhere does the Petition assert that a person of ordinary skill in the art would have modified Leen in view of Trundle *by configuring Leen’s HVAC controller* to “receive geo-positioning data from the location-aware mobile device and automatically adjust a temperature value based on the geo-positioning data,” as recited in claim 1.

Nor would such a modification flow naturally from the combination. Patent Owner persuasively explains that Trundle does not teach an HVAC controller (or thermostat) that receives geo-positioning data. *See* Prelim. Resp. 14 (“[T]he Petition identifies only Trundle’s monitor control unit or

the mobile device itself (i.e., a system outside of Trundle's thermostat 230) as allegedly receiving geo-positioning data."), 16–17 ("Notably, the Petition does not allege that Trundle teaches that its thermostat (e.g., 136, 156, 230) ever receives geo-positioning data. To the contrary, the only aspects of Trundle that allegedly make use of geo-positioning data are Trundle's 'native monitoring application[s]' 242/252 and Trundle's 'monitoring system' 120 (which includes 'monitoring system control unit' 210)."
(footnote omitted)).

Patent Owner is correct that, in Trundle, the geo-positioning data is processed outside the thermostat. For example, the Petition argues that, in Trundle, "as illustrated in Figure 11 below, the control system may receive geographic location by using 'GPS data' and 'cell tower triangulation.'" Pet. 28 (citing Ex. 1009 ¶¶131, 133, 136, 138; Ex. 1002 ¶145). Figure 11 of Trundle is reproduced below.

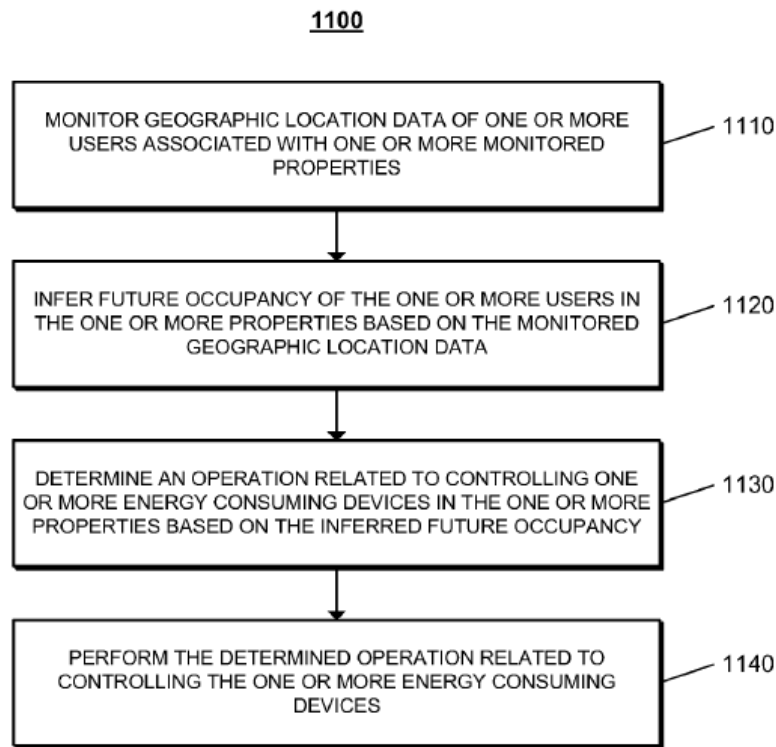


FIG. 11

Figure 11 of Trundle illustrates a flow chart of an exemplary process.

Ex. 1009 ¶27. The illustrated process does not include the receipt of location data *by a thermostat*. Nor does Trundle disclose such a feature. Rather, Trundle discloses “an electronic system 200 configured to provide *remote* thermostat control.” Ex. 1009 ¶43 (emphasis added); *see also id.* ¶49 (“The monitoring system control unit 210 communicates with modules 220, 222, and 230 to perform thermostat control and energy monitoring.”).

The Petition also argues that, in Trundle, “[t]he native monitoring application also may switch between the operating modes (e.g., home or away) based on ‘location of the mobile device.’” Pet. 29 (citing Ex. 1009 ¶¶73, 141; Ex. 1002 ¶¶146–147). However, the native monitoring application is also not part of any thermostat in Trundle. It is located in a

mobile phone. *See* Ex. 1009, ¶54 (“The one or more mobile devices 240, 250 are devices that host and display user interfaces and that host one or more native applications (e.g., the native monitoring application 242, 252).”), Fig. 2. Trundle teaches a mobile device with a native monitoring application can use the device’s location in determining whether or how to control a thermostat, but Trundle does not teach that the mobile device provides its location data to a thermostat. For example, paragraph 65 of Trundle states the following:

In some examples, the native monitoring application 242, 252 tracks the mobile device’s physical location using GPS or other location protocols built into device and uses location tracking to control thermostat, lighting, and other energy-consuming appliances. For example, the native monitoring application 242, 252 may check location of the mobile device periodically and automatically detect when user is going toward or away from a home and sets thermostat, lights, appliances accordingly. For instance, when the user is detected as moving away from the home and lights remain on in the property, the native monitoring application 242, 252 may turn off the lights. When the user is detected is moving toward the home, the native monitoring application 242, 252 may turn on lights in the home, adjust the thermostat to a comfortable setting, and turn on useful appliances when the user is less than a threshold distance from the home.

Ex. 1009 ¶65.

In sum, as Patent Owner argues, “a POSITA seeking to combine Trundle and Leen would have no motivation to implement that functionality within Leen’s thermostat (HVAC controller 10), but would instead implement that functionality outside of the thermostat (as Trundle did).” Prelim. Resp. 14. Thus, as Patent Owner further argues, the Petition fails to show that what it maps to the recited “thermostat system”/“thermostat” (i.e.,

Leen's HVAC controller 10) includes, or would have been modified to include, a processor configured to "receive geo-positioning data from the location-aware mobile device and automatically adjust a temperature value based on the geo-positioning data," as recited in claim 1 and incorporated by reference into claims 2 through 8.

Accordingly, there is not a reasonable likelihood that Petitioner would prevail in proving that any of claims 1 through 8 would have been obvious over Leen, Trundle, and Ehlers.

F. Analysis of Ground II (Petition Ground "1B")

Each of the challenged claims, namely claims 9 through 17, ultimately depends from claim 1. In Ground II, the Petition relies on a fourth reference, Wedekind, for teaching additional subject matter recited by, or incorporated by reference into, each of claims 9 through 17. Pet. 46–57. The Petition does not rely on Wedekind in a manner that could cure the deficiency in Ground I. To the contrary, the Petition explicitly relies on its Ground I ("1A") analysis as its foundation for Ground II ("1B"). See Pet. 43 ("As was described in Ground 1A, the POSITA would have been motivated to combine Leen, Trundle, and Ehlers.").

Accordingly, there is not a reasonable likelihood that Petitioner would prevail in proving that any of claims 9 through 17 would have been obvious over Leen, Trundle, Ehlers, and Wedekind.

G. Analysis of Ground III (Petition Ground "2A")

In Ground III, the Petition fails to demonstrate a likelihood of prevailing on any of claims 1 through 8 for reasons similar to those

discussed above in Ground I regarding the proposed combination of Leen and Trundles.

Here, the Petition relies on Ehlers for disclosing a thermostat. Pet. 60–61 (citing Ex. 1010 at 1:17–24; Ex. 1002 ¶252). Turning to Imes, the Petition asserts that it “discloses receiving radio frequency signals from [a] location-aware mobile device.” Pet. 66. However, the Petition does not assert, let alone show, that Imes’s thermostat (TSAT or TSTAT) or its processor receives geo-positioning (or location) data from the mobile device and automatically adjusts a temperature value based on said data. Instead, the Petition erroneously conflates the “reporting” of said data by a mobile phone with the receiving of said data by a thermostat’s processor. *See* Pet. 66 (“As illustrated in Figure 5A (annotated) below, ‘[m]obile device 500 can also include a **location reporting device 515, such as GPS technology**, cell tower location technology, triangulation technology or any combination thereof’ (*receive geo-positioning data from the location-aware mobile device*).” (quoting Ex. 1014, 29:31–38; citing Ex. 1015, 7–8 (§1.3), 9 (§ 1.4), 15 (§ 2.1.8), 30; Ex. 1002 ¶277)).

Indeed, none of the citations is probative of Imes’s thermostat receiving geo-positioning data. The citation to Imes proper does not even mention a thermostat. Ex. 1014, 29:31–38.

The citation to the Imes provisional application actually tends to disprove that Imes’s thermostat receives geo-positioning data. For example, the Imes provisional application describes a thermostat that is controlled based on geo-positioning data, but which does not receive any actual geo-positioning data, as follows:

2.1.8 Blackberry periodically updates its current location

At a time interval determined by the Server, the Blackberry Client periodically acquires its current location from its GPS. This location is sent to the Server which will calculate the user's distance from home. If in automatic mode, the Server will then calculate whether a thermostat setpoint change is needed, and if so, will change the thermostat's setpoint, via the Home Controller.

Ex. 1015 at 15 (§2.1.8).

In sum, Imes does not operate by sending geo-positioning data to a thermostat.

In any event, the Petition does not even assert that a person of ordinary skill in the art would configure *the processor of Ehlers's thermostat* to "receive geo-positioning data from the location-aware mobile device and automatically adjust a temperature value based on the geo-positioning data," as recited in claim 1. *See* Pet. 57–60. To be clear, the Petition provides reasons why a person of ordinary skill in the art would combine teachings from Ehlers and Imes. *Id.* However, the Petition does not articulate that such combination would include modifying *Ehler's thermostat* such that its processor would be configured to receive geo-positioning data and automatically adjust a temperature values based on such received data.

Accordingly, there is not a reasonable likelihood that Petitioner would prevail in proving that any of claims 1 through 8 would have been obvious over Ehlers, Imes, and Young.

H. Analysis of Ground IV (Petition Ground "2B")

Each of the challenged claims, namely claims 9 through 17, ultimately depends from claim 1. In Ground IV, the Petition relies on a fourth

reference, Wedekind, for teaching additional subject matter recited by, or incorporated by reference into, each of claims 9 through 17. Pet. 76–77. The Petition does not rely on Wedekind in a manner that could cure the deficiency in Ground III. To the contrary, the Petition explicitly relies on its Ground III (“2A”) analysis as its foundation for Ground IV (“2B”). *See* Pet. 73 (“As was described in Ground 2A, the POSITA would have been motivated to combine Ehlers, Imes, and Young.”).

Accordingly, there is not a reasonable likelihood that Petitioner would prevail in proving that any of claims 9 through 17 would have been obvious over Imes, Young, Wedekind, and Ehlers.

III. CONCLUSION

The Petition fails to show there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition. *See* 35 U.S.C. § 314(a); 37 C.F.R. § 42.108.

IV. ORDER

In consideration of the foregoing, it is hereby:

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

IPR2023-00409
Patent 10,584,890 B2

PETITIONER:

S. Benjamin Pleune
Christopher T.L. Douglas
Stephen R. Lareau
ALSTON & BIRD LLP
ben.pleune@alston.com
christopher.douglas@alston.com
stephen.lareau@alston.com

PATENT OWNER:

Philip X. Wang
Jonathan Link
Reza Mirzaie
Kristopher Davis
RUSS AUGUST & KABAT
pwang@raklaw.com
jlink@raklaw.com
rmirzaie@raklaw.com
kdavis@raklaw.com