

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HONEYWELL INTERNATIONAL INC.,
Petitioner,

v.

ALLURE ENERGY, INC.,
Patent Owner.

Case IPR2015-01248
Patent 8,626,344 B2

Before BART A. GERSTENBLITH, CHRISTOPHER L. CRUMBLEY, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

CHERRY, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

Honeywell International Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–8, 19–25, and 30 of U.S. Patent No. 8,626,344 B2 (Ex. 1001, “the ’344 patent”). Paper 6 (“Petition” or “Pet.”). Pursuant to 35 U.S.C. § 314(a), we determined the Petition showed a reasonable likelihood that Petitioner would prevail in establishing the

unpatentability of claims 1–8, 19, 20, 22–25, and 30, and instituted an *inter partes* review of these claims on certain asserted grounds of unpatentability. Paper 8 (“Inst. Dec.”). Patent Owner Allure Energy, Inc. (“Patent Owner”) filed a Patent Owner Response. Paper 14 (“PO Resp.”). Petitioner filed a Reply to Patent Owner’s Response. Paper 19 (“Reply”). An oral hearing was held on September 8, 2016, pursuant to a request by Petitioner. Paper 24 (“Tr.”); see Papers 20–21.

We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine Petitioner has proven by a preponderance of the evidence that claims 1, 5, 20, 22–25, and 30 of the ’344 patent are unpatentable. See 35 U.S.C. § 316(e).

I. BACKGROUND

A. RELATED PROCEEDINGS

The parties indicate that Patent Owner asserted the ’344 patent against Petitioner in the U.S. District Court for the Western District of Texas in the following lawsuit: *Allure Energy, Inc. v. Honeywell International Inc.*, No. 1:15-cv-00079-RP (W.D. Tex.). Pet. 1; Paper 5, 1. Certain other claims of the ’344 patent were also challenged in IPR2015-01251. *Id.*

B. THE ’344 PATENT

The ’344 patent relates to systems and methods for home energy management. Ex. 1001, 1:20–22. Figure 2 is reproduced below:

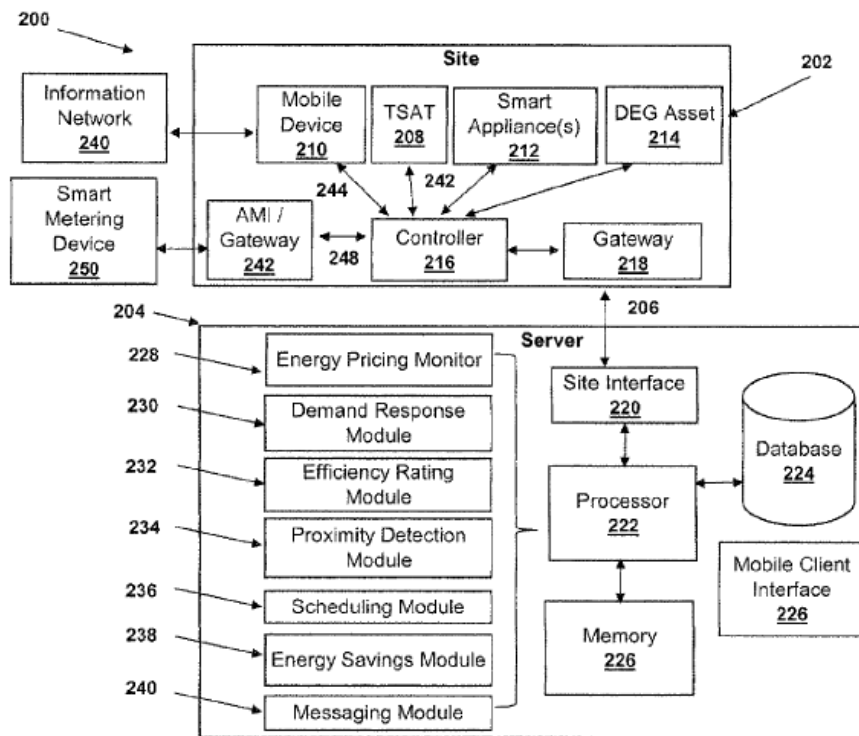


FIG. 2

Figure 2 illustrates an energy management system. *Id.* at 6:35–36. System 200 is configured for use at site 202. *Id.* at 6:35–37. Site 202 can include a residential site, an industrial site, a manufacturing site, a commercial site, or any combination thereof. *Id.* at 6:37–39. Proximity detection module 234 can detect a distance mobile device 210 may be from site 202. *Id.* at 12:25–28. In particular, proximity detection module 234 can detect whether mobile device 210 is within a first zone (e.g., less than one mile from a site, less than three miles from a site, greater than five miles from a site). *Id.* at 12:30–34. Proximity detection module 234 can further detect a current thermostat setting and can determine how much to adjust the thermostat's temperature based on how close the user is to the site. *Id.* at 12:34–48. The system can be configured for multiple user schedules that may be linked to multiple mobile devices. *Id.* at 13:13–51. For

example, the second user schedule can be used or not used based on a distance a second mobile device may be from site 202. *Id.* at 13:36–40.

C. ILLUSTRATIVE CLAIM

Claim 1, a system claim, is the only independent claim of the '344 patent challenged in this proceeding. Claims 2–8, 19–25, and 30 depend, either directly or indirectly, from claim 1. Claim 1 is illustrative of the subject matter in this proceeding, and is reproduced below.

1. A system comprising:

- a network device disposed at a site;
- a mobile application stored within each of a first mobile device and a second mobile device and each configured to individually alter the network device at the site;
- a processor configured to generate control action data in response to a comparison of a location of the first mobile device relative to the site as well as a location of the second mobile device relative to the site;
- the processor further configured to alter an operating condition of the network device in response to the control action data reflecting the comparison;
- wherein the network device includes a wireless thermostat responsive to the control action data being communicated to the network device;
- a first user profile associated with the first mobile device, wherein the first user profile includes information to alter an operating condition of the network device according to a preference of a first user; and
- a second user profile associated with the second mobile device, wherein the second user profile includes information to alter an operating condition of the network device according to a preference of a second user.

Id. at 62:33–55.

D. INSTITUTED GROUNDS OF UNPATENTABILITY

We instituted an *inter partes* review of the '344 patent on the following grounds of unpatentability asserted in the Petition. Inst. Dec. 24–25.

Claims	Basis	References
1, 5, 7, 8, 19, 20, 22–25, and 30	§ 103(a) ¹	US 6,909,891 B2 to Yamashita et al. (“Yamashita”) (Ex. 1006) and US 6,990,335 B1 to Shamoon et al. (“Shamoon”) (Ex. 1007)
2–4 and 6	§ 103(a)	Yamashita, Shamoon, and US 2010/0127854 A1 to Helvick et al. (“Helvick”) (Ex. 1005)

II. ANALYSIS

A. CLAIM CONSTRUCTION

We interpret claims in an unexpired patent using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.100(b). Under this standard, we presume a claim term carries its “ordinary and customary meaning,” which “is the meaning that the term would have to a person of ordinary skill in the art in question” at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). The presumption may be overcome by providing a definition of the term in the specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29 (2011), revised 35 U.S.C. §§ 102–103, effective March 16, 2013. Because the '344 patent has an effective filing date before March 16, 2013, we refer to the pre-AIA versions of §§ 102 and 103

from the specification into the claims. *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

1. “*comparison*”

We construed the term “comparison,” as recited in claim 1, in our Decision on Institution according to its plain and ordinary meaning. Inst. Dec. 9. As representative of that plain and ordinary meaning, we adopted one of the dictionary definitions offered by Patent Owner—“an examination of two or more items to establish similarities and dissimilarities.” *Id.* (citing Ex. 2003). Patent Owner does not offer an alternative construction, but instead construes this construction. PO Resp. 9–11. Patent Owner argues that “[w]hile the claimed comparison involves determining both similarities and dissimilarities between the relative locations of multiple mobile devices, the focus of the comparison is to identify **any dissimilarity** — i.e., which user is closer to, or farther away from, the site.” *Id.* at 10. Patent Owner contends that “absent established dissimilarities between the relative locations of the two mobile devices, the claimed system cannot determine which user is closer to the site or subsequently make a decision as to which user profile should control actions taken in response to the comparison.” *Id.* at 10–11. Petitioner replies that Patent Owner is attempting to improperly limit the claim by emphasizing the word “dissimilarity” in the construction. Reply 5.

We agree with Petitioner that Patent Owner is attempting to improperly limit the construction. As we explained in our Decision on Institution, we declined to limit “comparison” to a particular type of evaluation, and by our construction, we did not find that the “focus” of the “comparison” is to identify “any dissimilarity” as Patent Owner contends.

See Inst. Dec. 9. Indeed, as evidenced by the dictionary definitions cited by Patent Owner and that we relied upon, determining dissimilarities is not the “focus” of the plain and ordinary meaning of “comparison” that we adopted. *See* Inst. Dec. 9 (citing Ex. 2003 (defining “comparison” as “the act of looking at things to see how they are similar or different” and “the act of suggesting that two or more things are similar or in the same category”)); *see also* Ex. 2011 (defining “comparison” as “the representing of one thing or person as similar to or like another” and “an examination of two or more items to establish similarities and dissimilarities”).

The specification does not compel a different understanding. The only embodiment in the specification identified by Patent Owner as involving a “comparison” simply teaches that if one device is “not located” at the site, but the second device is detected as being located at the site, then the schedule associated with the second device is used. PO Resp. 9 (citing Ex. 1001, 13:38–40). Nowhere does this example discuss any type of comparison of the relative locations, nor does it discuss what the system does if it detects both mobile devices as being located at the site. The same is true for the other embodiment cited by Patent Owner. *Id.* (citing Ex. 1001, 52:60–53:3, 53:33–39). In this second embodiment, although the specification discusses there being two energy management schedules, there is no discussion of comparing the relative locations of the two mobile devices to determine which schedule to use. *See* Ex. 1001, 52:60–53:3, 53:33–39. Thus, we do not agree with Patent Owner that the specification suggests that “dissimilarities” is the “focus” of the comparison of the relative locations.

Patent Owner directs us to a portion of U.S. Provisional Application Ser. No. 61/255,678 (Ex. 2004, “the Provisional Application”) that allegedly “confirms that the claimed ‘comparison’ **requires** a determination as to which mobile device is closer to or farther away from the site.” PO Resp. 10. Patent Owner argues that the Provisional Application shows that “the claimed system compares **both** similarities and dissimilarities of multiple user locations to determine an ‘effective zone’ for control of the site.” *Id.* (citing Ex. 2008 ¶ 45); *see also id.* at 24–25 (discussing Patent Owner’s contention that “comparison” requires determination of both similarities and dissimilarities). Patent Owner asserts that “when the comparison reveals that user 1 and user 2 are located in the same zone (i.e., similar), the ‘effective zone’ is the zone they share.” *Id.* at 10 (citing Ex. 2008 ¶ 46). Patent Owner argues that “when the comparison determines that user 1 and user 2 are located in different zones (i.e., dissimilar), the ‘effective zone’ is the zone of the user closest to the site.” *Id.* (citing Ex. 2008 ¶ 46). Without resolving whether the Provisional Application is incorporated by reference,² we note that the Provisional Application does not support Patent Owner’s argument that “dissimilarities” is the “focus” of the claimed comparison. Indeed, one of the alleged comparisons identified by Patent Owner, when the users are in the same zone, involves a determination of only how the locations are similar. Thus, we see no basis in the

² The parties dispute whether the Provisional Application is incorporated by reference into the specification of the ’344 patent. *See* PO Resp. 1; Reply 2–4. We find it unnecessary to resolve this issue because, even accepting Patent Owner’s reliance on the Provisional Application, we find it does not support Patent Owner’s arguments.

Provisional Application for limiting the term “comparison” to any particular type of determination, as Patent Owner contends.

Thus, we maintain our construction of “comparison” and our previous determination, in our Decision on Institution, that a “comparison” does not require some particular type of determination.

2. “*First/Second User Profile*”

In our Decision on Institution, we did not construe or address the scope of “first/second user profile,” as recited in independent claim 1. After institution, Patent Owner raised arguments regarding the scope of the terms in the Response and Petitioner responded in its Reply. *See* PO Resp. 11–13, 27–29; Reply 8–10. Patent Owner argues that the terms should be construed as “individual user profiles which include information unique to each user for altering operation of a thermostat at a site.” PO Resp. 13. Petitioner submits that the plain and ordinary meaning of the terms should control. Reply 10.

Here, we agree with Petitioner that the plain language of the claim is sufficient and no construction is necessary for this term. The claim language already establishes that there are two user profiles, each is associated with a particular and different mobile device, and the profiles include “information to alter an operating condition of the network device according to a preference of a [first/second] user.” The claim already addresses what attributes the user profile must have. We see no support in the claim language or specification for Patent Owner’s additional requirements that the profiles be “*individual*” and “include information *unique* to each user.”

As for the specification, we note that the specification states that the “second user profile” can be “different than the first user profile,” Ex. 1001,

24:46–48, but does not go so far as to say it is a “unique” profile. The notion that the profiles are distinct is reflected already in claim 1’s use of different terms, “first user profile” and “second user profile,” which indicates that they are distinct. As for Patent Owner’s reliance on Figure 10 (PO Resp. 11–12), the specification makes clear that the schedule shown in Figure 10 is an optional feature of the user profile, so we decline to read the attributes of that feature into claim 1. *See, e.g.*, Ex. 1001, 24:38–43 (“*For example, a first user profile can include a first time schedule to operate a network device and a control setting to control the network device.*” (emphasis added)).

Patent Owner also contends that the “user profile” must include “operational information” for controlling a device. PO Resp. 13. Patent Owner argues that “the user profiles require information for altering a network device (how it is altered), not when it is to be altered based on a user’s location or other location information (a trigger).” *Id.* We do not agree that the broadest reasonable interpretation of this term requires that the “user profile” include information about how the network device is to be altered. The claim recites only that the “user profile” include information “to alter an operating condition of the network device according to a preference of a . . . user.” This language requires only that the information cause the altering of an operating condition according to the preferences of the user, not that it describe precisely how the operating condition of the network device is altered.

This understanding is further supported by the permissive language of the specification that does not mandate any particular information appear in the user profile. *See* Ex. 1001, 24:38–63. Indeed, the specification and

Provisional Application contain embodiments where the set-point information is shared between the different users. *See* Ex. 1001, 12:41–48; Ex. 2004, Table 1. Moreover, the specification includes profiles with a broad range of information, including information that can trigger an action, Ex. 1001, 11:29–56, which further can include the location of the site and related proximity data, *id.* at 29:43–49, 43:25–38. Thus, with this explanation, we determine that the claim language is sufficiently clear and that no express construction is necessary for these terms.

3. First/Second User Schedule

Patent Owner argues that first and second “user schedule” recited in claim 5 should be construed to require a schedule for operating a network device according to the preferences of a first/second user. PO Resp. 17. Petitioner responds that the plain language of the claim does not require that the schedule is “for operating a network device according to the preferences of a first/second user,” as Patent Owner asserts. Reply 11. Instead, Petitioner argues that the explicit claim language is silent as to how a network device is to be controlled with regard to the schedule. *Id.* Petitioner argues that claim 5 provides sufficient definition for the phrase “user schedule” and no further construction is necessary. *Id.* at 12.

We agree with Petitioner that no construction is necessary for this term. Here, claim 5 already requires explicitly that the first/second user schedule “includ[e] a first[/second] identifier to identify a first[/second] user and a network device identifier to identify the network device to control.” None of the claims expressly recite the purpose of the “user schedule” in the system. Patent Owner argues that the specification teaches first and second schedules are for controlling a network device at a site, which includes

individual preferences for each user. PO Resp. 17 (citing Ex. 1001, 13:13–35, 24:38–53). Patent Owner contends that each user can customize its own schedule through a scheduling tool accessible by a graphical user interface on a mobile device. *Id.* (citing Ex. 1001, 29:41–30:18, 31:15–21, Figs. 7, 10). Patent Owner submits that the system can then implement the corresponding user schedule depending upon which mobile device is closer to or farther away from the site so network devices will operate according to the user’s pre-programmed preferences. *Id.* at 17–18 (citing Ex. 1001, 13:25–27, 13:42–44, 13:46–49). Patent Owner argues that Petitioner’s contention that this limitation is met by a “scheduled arrival time” associated with a user’s mobile device is unreasonably broad. *Id.* at 18. Patent Owner asserts that such a construction is inconsistent with the specification, which describes a user’s estimated arrival time serves as a trigger to implement the user schedule. *Id.*

We disagree that the specification limits the term “user schedule” in the manner Patent Owner suggests. Indeed, the specification suggests that a broader reading is appropriate and the most reasonable for several reasons. First, although phrased as optional, the specification states that the “first user schedule can include *a first schedule event* configured to alter an operating condition of a network device.” Ex. 1001, 13:19–23 (emphasis added). This certainly suggests that even a single event can constitute a schedule if it is “configured to alter an operating condition of a network device.” Moreover, the specification’s use of the phrase “configured to alter an operating condition” is broader than Patent Owner’s proposed construction of “operating a network device according to the preferences of the first/second user.” Indeed, there is nothing in this description that requires that this

alteration occur based on a user's preferences or that it "operate" the network device.

Second, as for Patent Owner's contention that the schedule is implemented based on the user's location (PO Resp. 17–18), the specification makes clear that this is an optional aspect of the invention and there is no requirement that the user schedule be tied to the user's location. *See* Ex. 1001, 13:13–51 (repeatedly using "can" and "for example" to describe this feature).

Third, Patent Owner's argument—that "scheduled arrival time" is what is used to trigger the schedule, so it cannot be part of the schedule itself—is not persuasive. PO Resp. 18 (citing Ex. 1001, 21:27–30, 21:9–11). Although the specification includes "estimated arrival time" among the data that can generate a control action, the specification also includes "thermostat scheduling data" and "network device scheduling data," which suggests that the distinction Patent Owner attempts to draw between triggers and schedules is not reasonable. In addition, the specification suggests that single events, which Patent Owner characterizes as "triggers," can be the basis of the schedule. *See* Ex. 1001, 19:15–35 ("Various other environmental conditions, grid conditions, user profiles, device profiles, energy pricing, or any combination of energy management information can be used to schedule or create an event."). Thus, we disagree with Patent Owner that the specification excludes an event, such as the scheduled arrival time, from constituting a "first/second user schedule," as recited in claim 5. We determine that besides these clarifications, no further construction is needed of this term.

4. *First/Second Range of Thermostat Set Points*

Patent Owner submits that the phrase “first/second range of thermostat set points” requires multiple values including at least an upper (maximum) thermostat set-point limit and a lower (or minimum) thermostat set-point limit. PO Resp. 19. Petitioner argues that the phrase should be construed as “two or more set-points.” Reply 13. Patent Owner contends that its construction is consistent with the plain and ordinary meaning of the phrase and the specification. PO Resp. 19 (citing Ex. 2013; Ex. 1001, Fig. 10). Petitioner submits that Figure 10, which is relied on by Patent Owner, describes only three distinct set points corresponding to different energy savings levels, and are not limits or endpoints of a series. Reply 12–13 (citing Ex. 1001, 15:14–18). Petitioner further argues that Mr. McAlexander, Patent Owner’s declarant, stated that a “range” is simply two or more set-points. *Id.* at 13 (citing Ex. 1011, 121:19–122:19, 123:10–13).

We agree with Patent Owner that the claims appear to use the plain and ordinary meaning of the word range, and that meaning requires a high and a low. *See* Ex. 2013. Thus, we construe “first/second range of thermostat set points” as “a series of two or more thermostat set-points including at least an upper (or maximum) thermostat set-point limit and a lower (or minimum) thermostat set-point limit.”

B. OBVIOUSNESS OF CLAIMS 1, 5, 7, 8, 19, 20, 22–25, AND 30 OVER YAMASHITA AND SHAMOON

The first instituted ground alleges that claims 1, 5, 7, 8, 19, 20, 22–25, and 30 of the ’344 patent are unpatentable as obvious over Yamashita and Shamoan. Pet. 2, 35–49; Inst. Dec. 15–22.

1. *Yamashita (Ex. 1006)*

Yamashita, titled “Mobile Terminal, and Automatic Remote Control System and Automatic Remote Control Method” (Ex. 1006, at [54]), describes a system for automatically controlling an appliance based on a positional relation between a mobile terminal and the appliance and other factors (*id.* at 1:9–13). In Yamashita, the mobile terminal holds a message transmission rule for transmitting a message to the control terminal indicating that a control requirement has been met. *Id.* at 9:42–46. One example given provides that the message transmission rule has a control requirement that a distance from the current position to home is within 300 m is stored in correspondence with a message “approaching.” *Id.* at 9:47–50. The control terminal receiving the message has a rule indicating that when the “approaching” message is received a particular control command is transmitted to an appliance for controlling that appliance. *Id.* at 9:50–54. One example is that receipt of the “approaching” message by the control terminal results in the control terminal sending a control command to turn the air conditioner on, which is executed automatically without any action by the user. *Id.* at 9:54–57, 10:8–15.

Yamashita describes that the mobile terminal of a traveling user checks whether a control requirement has been satisfied based on the position, speed, and direction of the mobile terminal and can, based on these data, determine whether the control condition (e.g., “within 300 m of home”) is met. *Id.* at 9:57–64. Yamashita also discloses that the mobile terminal and controlled target appliance can communicate directly with each other through the network. *Id.* at 10:50–53. Yamashita also describes that a plurality of mobile terminals each can control different appliances at a site.

Id. at 10:17–34, 46–53. The mobile terminal sends a message to the control terminal and the control terminal selects a control command based on the message received and transmits the control command to the controlled appliance. *Id.* at 11:13–26. This is illustrated in Figure 2, which is reproduced below:

FIG. 2

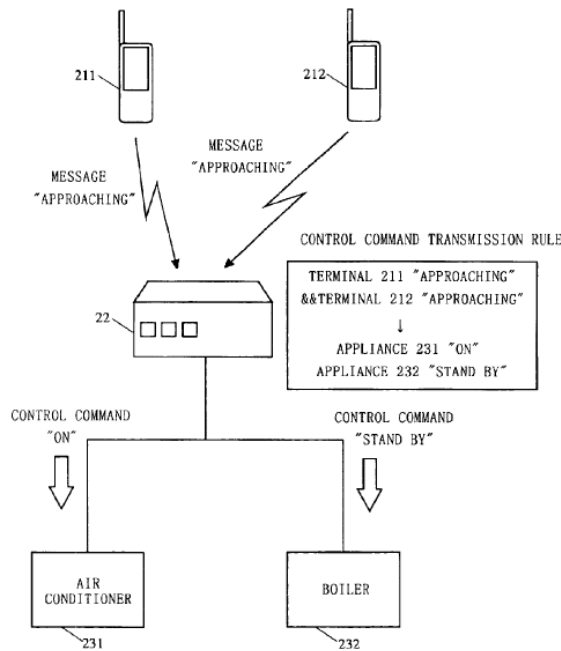


Figure 2 is an illustration showing an embodiment of Yamashita with a plurality of mobile terminals and a plurality of target control appliances. *Id.* at 10:16–20. Yamashita also discloses that different command transmission rules can be set allowing a command message to turn on the air conditioner to be sent if either mobile terminal A or mobile terminal B sends an “approaching” message, or requiring that both mobile terminal A and mobile terminal B transmit the “going away” message to transmit the command to turn off the air conditioner. *Id.* at 17:58–18:28.

2. *Shamoon (Ex. 1007)*

Shamoon, titled “Ubiquitous Connectivity and Control System for Remote Locations” (Ex. 1007, at [54]), describes a thermostat control system for monitoring and controlling environmental characteristics of a building that includes a base station unit and a remote access (or control) unit (*id.* at [57]). The base control unit is configured to interact with and respond to multiple remote control units. *Id.* at 8:4–5. The remote control units are “Java/J2ME enable[d] cellular telephones 30 having . . . an LCD display 38 for displaying textual information 40 and graphical icons 42 responsive to commands received from the base control unit 16 or from other control units configured through base control unit 16 to work with system 10.” *Id.* at 3:65–4:6.

Shamoon describes that its system may include multiple remote control units and indicates that the remote control units can be “segregated into classes such that the base control unit responds to commands and communicates selected information to a class containing one or more remote control units.” *Id.* at 8:4–20. Shamoon explains that the class assignments and configurations are easily customized to provide the notifications desired by the authoritative system operators. *Id.* at 8:20–27. The base control unit may adjust the water temperature and thermostats when one of the remote control units comes within a specific distance from the house. *Id.* at 8:36–38. The geographic information is acquired by the GPS subsystem in the remote control unit and can be compared to a setting stored in either the remote control unit itself or the base control unit. *Id.* at 8:38–45. The remote control unit includes application software with a user interface. *Id.* at 8:59–9:5.

3. Analysis

a. Claims 1, 20, 22–25, and 30

i. Overview

With respect to independent claim 1, we find that Petitioner has shown by a preponderance of the evidence that Yamashita discloses “[a] system comprising: a network device disposed at a site.” Pet. 35 (citing Ex. 1006, 2:19–23 (automatically controlled air conditioner), 10:17–34 (“plurality of mobile terminals and a plurality of control target appliances”), 10:50–53 (mobile terminal and controlled appliance communicate directly over network); Ex. 1002 ¶¶ 209–210). We find that Petitioner also has shown sufficiently that the combination of Yamashita and Shamoon accounts for a mobile application stored on the mobile devices and configured to alter the network device at the site, as recited in claim 1. *Id.* at 35–38 (citing Ex. 1006, 1:28–34 (remote operation of appliance over internet through mobile phone), 19:41–49 (flowchart for program on mobile phone); Ex. 1007, 8:59–9:5 (application software on phone); Ex. 1002 ¶¶ 205–207, 212, 213). As discussed below, we find that the record also supports that Yamashita teaches “a processor configured to generate control action data in response to a comparison of a location of the first mobile device relative to the site as well as a location of the second mobile device relative to the site,” as recited in claim 1. *Id.* at 38 (citing Ex. 1006, 10:17–34, 11:1–26, 17:58–18:13; Ex. 1002 ¶¶ 214, 216). As further discussed in greater detail below, Petitioner also has shown sufficiently that Yamashita discloses “the processor further configured to alter an operating condition of the network device in response to the control action data reflecting the comparison.” *Id.* at 38–39 (citing Ex. 1006, 11:13–30, 17:58–18:13;

Ex. 1002 ¶¶ 217–218). We are also persuaded that Yamashita suggests “wherein the network device includes a wireless thermostat responsive to the control action data being communicated to the network device,” as recited by claim 1. Pet. 39 (citing Ex. 1006, 10:50–65 (discussing control target appliances), 11:36–38 (target appliances connected to network), 14:13–23 (target appliance is connected to network), 17:58–18:13 (target appliance is air conditioner and command is setting temperature); Ex. 1002 ¶¶ 220–222). Lastly, as discussed in greater detail below, Petitioner has shown sufficiently that the combination of Yamashita and Shamoon suggests first and second user profiles associated with the respective mobile devices that include information to alter an operating condition of the network device according to a preference of the particular user, as recited in claim 1. *Id.* at 39–41 (citing Ex. 1006, 12:10–20, 17:58–18:13, 19:41–49; Ex. 1007, 8:4–27, 8:36–45, 13:36–41; Ex. 1002 ¶¶ 223–228).

Petitioner also accounts sufficiently for the limitations of dependent claims 20, 22–25, and 30. Pet. 45–49.

ii. “Comparison” Limitations

As mentioned above, Petitioner submits that Yamashita teaches “a processor configured to generate control action data in response to a comparison of a location of the first mobile device relative to the site as well as a location of the second mobile device relative to the site,” as recited in claim 1. *Id.* at 38 (citing Ex. 1006, 10:17–34, 11:1–26, 17:58–18:13; Ex. 1002 ¶¶ 214, 216). Also, as mentioned above, Petitioner argues that Yamashita discloses “the processor further configured to alter an operating condition of the network device in response to the control action data reflecting the comparison.” *Id.* at 38–39 (citing Ex. 1006, 11:13–30, 17:58–

18:13; Ex. 1002 ¶¶ 217–218). We address these limitations together because both limitations involve a similar dispute about whether Yamashita teaches or suggests the claimed comparison.

Petitioner points to several teachings of Yamashita to account for these limitations. First, Yamashita teaches that its control terminal includes a processor, which can run “control function-programmed software” for the processor that can generate control action data. *Id.* (citing Ex. 1006, 10:17–34, 11:13–26; Ex. 1002 ¶ 214). Second, Yamashita teaches that the mobile terminal (mobile device) can judge a control requirement based on its current position, and based on that judgment transmits a message to the control terminal. *Id.* (citing Ex. 1006, 11:1–12). For example, Yamashita explains that a control requirement could be established to transmit the message “approaching” to the control terminal when the linear distance between the current position of the mobile terminal and home is within 300 m. Ex. 1006, 9:58–67. The control terminal then determines the control command corresponding to the received message, e.g., “approaching” message from the mobile terminal, and transmits the determined control command to a control target appliance, e.g., an air conditioner. *Id.* at 10:2–16. Finally, Yamashita further discloses that when multiple mobile terminals are associated with the control terminal, the control terminal can have message requirements such as “when receiving the message ‘approaching’ from the mobile terminal 211 and the message ‘approaching’ from mobile terminal 212,” and then transmit a command to the target appliance, if the condition is met. *Id.* at 10:17–34.

Patent Owner argues that Yamashita does not teach a “comparison” of the relative locations of multiple devices. PO Resp. 23–27. In support of

this contention, Patent Owner makes several intertwined arguments regarding different aspects of Yamashita.

First, Patent Owner argues the message transmitted in Yamashita does not include any “location information.” *Id.* at 23. Although Patent Owner is correct that Yamashita discloses the use of messages that do not contain latitude and longitude information, we do not agree with Patent Owner that these messages cannot represent relative locations. Mr. McAlexander conceded that the term location is broad, and is not limited to a particular form. *See* Ex. 1011, 52:21–60:19 (discussing a number of possibilities for expressing “location”). As Yamashita explains, the messages are generated by comparing various types of location data (e.g., position, speed, direction) to a command requirement (e.g., distance from current position to home is within 300 m). Ex. 1006, 9:58–10:16, 11:1–12. Thus, we are persuaded that Yamashita does teach messages that constitute location information.

Patent Owner asserts that the messages are not “location information” because there are a variety of factors that can result in the transmission of the messages in Yamashita and this confirms that the messages cannot represent any mobile terminal location. PO Resp. 23 (citing Ex. 2008 ¶¶ 96, 104). We disagree. The breadth of Yamashita’s disclosure does not diminish the fact that Yamashita discloses scenarios (e.g., the greater or less than 300 m from home rules) where the messages do represent the relative location of the mobile terminal. Patent Owner repeats this argument elsewhere when it argues that, although the examples in Yamashita have the same transmission rules (e.g., both mobile terminals transmit a message at the same distance threshold), mobile terminals could have different transmission rules. PO Resp. 26–27. But again, this potential

implementation Patent Owner posits still does not negate Yamashita's express disclosure of control requirements and messages that represent relative locations. *See Unwired Planet, LLC v. Google Inc.*, Nos. 2015-1810, 2015-1811, 2016 WL 6694955, at *5 (Fed. Cir. Nov. 15, 2016) ("It does not matter that the use of alphabetical order for locations would not always result in farther-over-nearer ordering. It is enough that the combination would sometimes perform all the method steps, including farther-over-nearer ordering.") (citing *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1326 (Fed. Cir. 2003)).

We also agree with Petitioner that Patent Owner errs by ignoring Yamashita's flexibility in message transmission rules when arguing that Yamashita messages are too imprecise to be "locations." PO Resp. 25–26. As an example of the more general disclosures of Yamashita, Yamashita discloses that it is not just limited to the "Going Away" and "Approaching" messages disclosed, different messages can sent. *See* Ex. 1006, 20:33–21:31, Fig. 15 (block S22 ("Set Message")). In addition, Yamashita makes clear that different location-based rules can be implemented in each mobile device for each type of message. *See* Ex. 1006, 12:45–13:14 (describing possible message transmission rules). Also, Yamashita teaches that these different messages can be compared in different ways to create a more complex set of rules than Patent Owner acknowledges. *See* Ex. 1006, 20:33–21:31, Fig. 15 (block S24 ("Set 'and' OR 'or'")). We find that Yamashita has much more flexibility and possible precision in ascertaining the physical location of a user than Patent Owner acknowledges. *See* Ex. 2009, 92:11–93:15, 116:22–118:15 (discussing flexibility of Yamashita's rules). Thus, we find that Yamashita teaches that the messages represent the

relative location of the mobile device to the site. Ex. 1006, 9:58–10:16, 11:1–12. This teaching is supported by testimony of Petitioner’s declarant, Dr. Selker, which we find has sufficient explanation. Ex. 1002 ¶¶ 214–216.

Second, Patent Owner argues that “[t]he matching of messages to a set of rules in a look-up table does not satisfy the claimed ‘comparison’” because “message matching cannot identify **both** similarities and dissimilarities as required by the [construction] of this term.” PO Resp. 24. As we explained *supra*, our construction does not *require* that the comparison include *both* similarities and dissimilarities in every instance. In particular, as we said above, there is no requirement for any particular type of determination, e.g., which device is closer, required by the claims.

Patent Owner is correct that Yamashita discusses how the control terminal receives messages and compares them to a set of rules to determine whether to send control messages to the controlled appliances. *Id.* at 21 (citing Ex. 1006, 9:50–57, 21:37–41, 9:50–53). The ’344 patent expressly states that the proximity detection module can use “rules based logic” to determine if the operating condition should be altered. *See* Ex. 1001, 8:61–9:3 (discussing use of rules-based logic in the proximity detection module). Thus, we do not agree that the use of rules-based logic is outside the scope of the claim.

Patent Owner also contends that it is possible that one of the two mobile terminals in Yamashita could arrive home and manually alter the thermostat by the time the second mobile terminal sends its message to the control terminal. PO Resp. 26. Patent Owner argues that this scenario demonstrates that the control terminal of Yamashita “simply carries out its programmed rules by way of associating the newly received . . . message to

the control command stored in the look-up table.” *Id.* Patent Owner asserts that “[t]hus, Yamashita is simply not configured to compare messages to implement an appropriate control command based on which user is closer to the site.” *Id.* Yet, as we discussed above, there is nothing in the claim that prevents the use of rules-based logic, and there is also nothing in the claim that says that the system must compare locations in “real time” or before a user is able to manually alter the thermostat. Patent Owner seeks to impose temporal and precision requirements that are not recited in the claim. When the term “location,” as used in the ’344 patent, is broad enough to encompass an entire city, as Mr. McAlexander acknowledges, *see* Ex. 1011, 52:21–60:19, we decline to require the operational tolerances that Patent Owner suggests. In other words, these contentions are not commensurate with the scope of the claim.

Here, Petitioner has shown sufficiently that Yamashita discusses that the rules include situations when the messages are compared to determine what actions to take. For example, in Figure 2, the controller issues certain commands only if the same message, “Approaching,” is received from both wireless terminals. Ex. 1006, 10:21–34. Dr. Selker testifies that this would indicate to a person of ordinary skill that Yamashita suggests that messages (which provide relative location of the wireless terminals to the control terminal, such as less than 300 m) are compared. Ex. 1002 ¶ 216. In Figure 12, Yamashita shows transmission rule (B), where the message requirement is that both terminals send a “Going Away” message. Ex. 1006, 18:14–28. We find that transmission rule (B) requires that the control terminal receive both messages and perform an evaluation to determine whether they are the same. This is similar to the “comparison” in the

Provisional Application, where the system applies a rule that the zone closest to the site occupied by a user is the “effective zone” for operating the automatic mode of the thermostat. Ex. 2004, 8.

In sum, Petitioner has shown sufficiently that the control terminal in Yamashita receives messages from the wireless terminals that represent the relative location of the mobile terminal (e.g., within 300 m of the site or moving away from the site) and that the control terminal includes a number of rules to compare the messages to determine what control information to send to the controlled appliances, and, as a result of the comparison, to send control information to alter the condition of the controlled appliances. See Ex. 1002 ¶¶ 214–216. Thus, we are persuaded that Yamashita accounts for the “a processor configured to generate control action data in response to a comparison of a location of the first mobile device relative to the site as well as a location of the second mobile device relative to the site” and “the processor further configured to alter an operating condition of the network device in response to the control action data reflecting the comparison” limitations of claim 1.

iii. User profiles

As discussed above, Petitioner submits that the combination of Yamashita and Shamoon suggests first and second user profiles associated with the respective mobile devices that include information to alter an operating condition of the network device according to a preference of the particular user, as recited in claim 1. Pet. 39–41 (citing Ex. 1006, 12:10–20, 17:58–18:13, 19:41–49; Ex. 1007, 8:4–27, 8:36–45, 13:36–41; Ex. 1002 ¶¶ 223–228). Patent Owner argues that the combination of Yamashita and Shamoon fails to teach or suggest “user profiles.” PO Resp. 27–33. Patent

Owner asserts that Yamashita teaches a single, shared command structure that takes the same action regardless of which mobile device message matches the requirement in the look-up table. PO Resp. 28–29. Patent Owner further argues that because its construction requires the user profile include “specific information for how a thermostat at a site is to be altered” the message transmission rules of Yamashita, which govern only when a message will be transmitted, do not meet this term. *Id.* at 29. As for Shamoon, Patent Owner contends that the customizable classes relied on by Petitioner do not relate to automatic control of a device at a site and do not include instructions related to adjustment of thermostats. *Id.* at 30–33.

We agree with Petitioner that the combination of Yamashita and Shamoon suggests first and second user profiles associated with the respective mobile devices that include information to alter an operating condition of the network device according to a preference of the particular user. As we held above, there is no requirement that the “user profiles” include “operational information,” such as set point information for the thermostat. Here, Yamashita discloses that the message transmission rules on the mobile device can cause messages to be transmitted to the control terminal that cause the control terminal to alter the operation of the network device. Ex. 1006, 17:58–18:13; Ex. 1002 ¶¶ 224, 227. As Petitioner explained and Dr. Selker testified, the control terminal also includes profile details associated with each mobile device in its control command transmission storage. Pet. 40 (citing Ex. 1002 ¶ 224). As Petitioner notes, Yamashita discloses that different actions can be taken for each of the mobile terminals based on the messages received. Reply 18 (citing Ex. 1006, Figs. 13, 15).

In addition, Yamashita discloses that users can set up customized rules for each mobile terminal. Ex. 1006, 19:16–49, Fig. 14. Moreover, Yamashita also discloses that, when there are multiple mobile terminals, the messages transmitted include identification information indicating terminal A or terminal B. *Id.* at 17:65–18:3. Thus, we agree with Petitioner that, even under Patent Owner’s construction, Yamashita suggests user specific profiles containing information “to alter an operating condition of the network device according to a preference of a first user.” Reply 17–19.

Yamashita’s suggestion is further supported by the teachings of Shamoon about personalized settings associated with different devices or groups of devices. Reply 19 (citing Ex. 1002 ¶¶ 225, 228); Ex. 1007, 8:4–27 (discussing segregating remote control units (mobile devices) into classes and “class assignments and configurations are easily customizable”). Patent Owner’s arguments—that Shamoon’s teachings related to customizable classes of remote control units are not related to proximity settings—are belied by Shamoon’s discussion of various automated systems in the home being controlled differently based on the class to which the remote control unit belongs. *See* Ex. 1007, 9:19–30.

To the extent that Patent Owner argues that Shamoon fails to teach or suggest the claimed user profiles because of distinctions between Shamoon’s system and the claimed system (PO Resp. 30–33), we note that Petitioner relies on the combination of the references to account for the limitation. Shamoon is relied upon primarily for its teachings related to personalization of location-based control generally, while Yamashita is relied upon for the

other limitations.³ See Reply 19. Thus, we find that Petitioner has shown by a preponderance of the evidence that the combination of Yamashita and Shamoon accounts for the claimed user profiles.

iv. Sufficiency of the Motivation to Combine

As for the motivation to combine, Petitioner articulates sufficient reasons with rational underpinning that explain why one of ordinary skill in the art would have combined Yamashita's system for location-based management of controlled appliances using mobile devices with the mobile application taught by Shamoon for operating an automated control system for networkable devices. Pet. 36–38; Ex. 1002 ¶¶ 205–206, 207, 213. Namely, Petitioner states that Yamashita and Shamoon are similar systems in the same field of endeavor, and as Shamoon illustrates techniques related to a mobile application that have been used to improve one device, a person of ordinary skill in the art would understand that Shamoon's techniques would likewise improve the similar Yamashita system. Pet. 36–37 (citing Ex. 1002 ¶¶ 206, 207, 213). We agree with Petitioner's analysis of the evidence.

Patent Owner argues that there is no motivation to combine because Yamashita and Shamoon approach the problems of remote control systems in different ways. PO Resp. 33. Patent Owner asserts that Yamashita is an automatic control system that seeks to replace manual remote control. *Id.* at 34. Patent Owner contends that Shamoon, on the other hand, relies on a

³ As to Patent Owner's arguments regarding differences in the references and the whether Petitioner's assertions go against Shamoon's primary purpose (PO Resp. 32–33), we understand Patent Owner's arguments to be directed to the motivation to combine rather than whether the combination would disclose the claimed user profiles.

manual remote control to effectuate changes at the site. *Id.* Patent Owner argues that Yamashita disparages manual systems, and, as we understand the argument, teaches away from the combination. *Id.* at 34 (citing Ex. 1006, 1:35–40). Patent Owner argues combining Yamashita with Shamoon would change the principle of operation of Yamashita. PO Resp. 35 (citing *In re Ratti*, 270 F.2d 810, 813 (CCPA 1959)). Patent Owner also contends that because “Yamashita abandons direct two-way communication (as disclosed in Shamoon) to control devices in favor of one-way messages, one of ordinary skill would not modify Yamashita to include such a feature.” *Id.* at 35–36. Patent Owner argues that “the direct two-way communication and interaction with select devices of Shamoon would frustrate the purpose of Yamashita which sought to minimize and ideally not ‘requir[e] any operation by the user.’” *Id.* at 36. Patent Owner asserts that this combination would require substantial reconstruction and redesign and change the principle of operation of Yamashita. *Id.*

We do not find Patent Owner’s arguments persuasive. Teaching away requires that “a person of ordinary skill upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994).⁴ Patent Owner cites nothing in Yamashita that says that adding the features from Shamoon in addition to the automatic functionality of Yamashita would be unlikely to work; Yamashita alleges only that manual control alone has certain disadvantages.

⁴ We understand Patent Owner to be arguing both that the references teach away from the combination generally and teach away because, in particular, the combination would change the principle of operation of the system. PO Resp. 33–36.

See In re Mouttet, 686 F.3d 1322, 1334 (Fed. Cir. 2012); *see also Baxter Int'l, Inc. v. McGaw, Inc.*, 149 F.3d 1321, 1328 (Fed. Cir. 1998) (finding no teaching away where nothing in the prior art device suggested that the claimed invention was unlikely to work). The lack of teaching away is confirmed by Yamashita's disclosure of an embodiment requiring manual interaction. *See* Reply 20 (citing Ex. 1006, 22:31–51). Indeed, although Patent Owner contends that automatic functionality is “not the focus or main purpose of Shamoon,” PO Resp. 35, Shamoon's system demonstrates that automatic functionality can be combined with manual functionality to result in a working system. *See* Ex. 1007, 8:36–45.

As for Patent Owner's contentions that Yamashita “abandoned bi-directional communication” (PO Resp. 35), we find no support in the cited portions of Yamashita for these contentions. Although Yamashita does tout the benefits of its automatic control system, the cited portions of Yamashita are silent about the advantages or disadvantages of “bi-directional communication.” As for Patent Owner's arguments about substantial reconstruction and redesign (PO Resp. 36 (citing Ex. 2008 ¶ 91)), we do not find the testimony or argument persuasive. Yamashita's control terminal and mobile terminals already has built in communication abilities (Ex. 1006, 11:31–38), and we find Dr. Selker's testimony persuasive that a person of ordinary skill would have been motivated to add the ability to communicate the thermostat reading to verify that Yamashita's automatic control worked. Ex. 1002 ¶¶ 205–207.

As for Patent Owner's allegation that the combination with Shamoon would change Yamashita's principle of operation, we disagree. Yamashita would continue to work as before; the messages, rules, and control

information would continue operate in the same manner. Shamoon would only add additional functionality to allow for an improved user interface and two-way communication. Where the device would operate on the same principles as before, the combination does not change the principle of operation. *See Mouttet*, 686 F.3d at 1332 (noting *Ratti* inapplicable where the modified apparatus will operate “on the same principles as before”). As Petitioner explains, Shamoon demonstrates that its known techniques have been used to improve similar devices in similar ways. We find that Petitioner has articulated sufficient reasoning with rational underpinnings to support the combination. *See* Ex. 1002 ¶¶ 205–207, 213. Thus, we conclude that a person of ordinary skill would have had reason to combine the teachings of Yamashita and Shamoon.

v. Summary as to Claims 1, 20, 22–25, and 30

Patent Owner raises no evidence of secondary considerations of nonobviousness in this case. Thus, weighing the evidence of obviousness that is before us, we find that Petitioner has shown by a preponderance of the evidence that claims 1, 20, 22–25, and 30 would have been obvious over the combination of Yamashita and Shamoon.

b. Claim 5

Claim 5 depends from claim 1 and further recites “a [first/second] user schedule including a [first/second] identifier to identify a [first/second] user and a network device identifier to identify the network device to control.” Ex. 1001, 63:20–26. Petitioner submits that Yamashita teaches assigning identifiers to each user. Pet. 41. Petitioner argues that this is evidenced by the system’s ability to distinguish between each mobile device and the messages received from them. *Id.* (citing Ex. 1006, 10:17–34).

Petitioner further relies on Yamashita’s teaching that a schedule can be assigned to each particular user or mobile device, such as a scheduled arrival time, to account for this element. *Id.* at 41–42 (citing Ex. 1006, 16:20–37; Ex. 1002 ¶¶ 230–232).

Patent Owner argues that Yamashita fails to teach a “user schedule” under its construction of the term. PO Resp. 36–38. Patent Owner argues that Yamashita teaches that “scheduled arrival time” is an example of a message transmission rule, and merely serves to trigger a message for matching to the look up table. *Id.* at 38. Patent Owner further contends that the scheduled arrival time feature is not a user schedule because it is only a rule that governs when to transmit a control message and does not provide an indication of what device to alter and when it is to be altered. *Id.*

We agree with Petitioner that the scheduled arrival time feature of Yamashita suggests the claimed user schedule. As Dr. Selker explains, Yamashita teaches that the scheduled arrival time influences the control of particular network devices and is tied to a user, as shown in Figure 13. *See* Ex. 1002 ¶¶ 230–232; Ex. 1006, 16:20–37. The fact that scheduled arrival time is part of a rule is not persuasive of Patent Owner’s position because nothing in the claims or specification excludes use of rule-based logic or requires any particular form for the schedule. Thus, we conclude that Petitioner has shown by a preponderance of the evidence that claim 5 would have been obvious over Yamashita and Shamoon.

c. Claims 7 and 8

Claim 7 depends from claim 1 and recites “a [first/second] range of thermostat set points associated with the [first/second] mobile device” and “wherein the wireless thermostat is responsive to an operating condition of

the first mobile device and the second mobile device.” Ex. 1001, 63:36–43. Claim 8 depends from claim 7 and recites “a thermostat set point generated using the first range of thermostat set points, wherein the first range of thermostat set points is used in response to the first mobile device being disposed closer to the site than the second mobile device.” *Id.* at 63:44–48. Petitioner submits that Yamashita and Shamoon both suggest this “range” of set points limitation. Pet. 42–44. Patent Owner argues that neither reference suggests a range of set points associated with each mobile device. PO Resp. 38–42. We agree with Patent Owner that Petitioner has failed to show sufficiently that Yamashita or Shamoon teaches or suggests a range of set points associated with each device.

With respect to Yamashita, Petitioner argues that Yamashita describes a thermostat set point of 28 degrees Celsius, but

this disclosure indicates that a temperature set point could be set for different users according to their rules, could include a heat and cool setting (such as when the thermostat is in “auto” mode), or could instead include an indication to change a current set point by a particular number or by a percent.

Pet. 42 (citing Ex. 1006, 19:16–40; Ex. 1002 ¶¶ 238, 240, 241). Yet, our review of the cited portions of Yamashita do not persuade us that Yamashita discloses anything more than setting a thermostat set point to a single temperature, although that temperature could vary by user. The testimony of Dr. Selker does not persuade us otherwise because he simply relies on the same citations from the Petition, which do not contain any suggestion about a “range” of thermostat set points, and he cites no other evidence to support his opinion that a person of ordinary skill would understand that Yamashita

could do so. Thus, we decline to give his testimony on this point substantial weight.

As for Shamoon, Petitioner relies on a disclosure in Shamoon that the thermostat could be raised or lowered, to support its contention that Shamoon discloses a “range” of set point settings associated with each mobile device. Pet. 42–43; Ex. 1007, 9:25–30. Yet, we do not agree that Shamoon discloses a range of set points associated with each device. Shamoon discloses only that the thermostat could be raised or lowered; it contains no further details about what set points are associated with each mobile device. Dr. Selker provides no explanation why the disclosure of the possibility of raising or lowering the set point at the thermostat would disclose a range of set points associated with each mobile device, as claimed. Thus, we find Petitioner has failed to show by a preponderance of the evidence that the combination of Yamashita and Shamoon discloses a “range of thermostat set points” as recited in claims 7 and 8.

d. Claim 19

Claim 19 depends from claim 1 and requires that the processor, which performs the comparison and alters the operating condition of the network device, is disposed on each of the first mobile device and the second mobile device. Petitioner argues Yamashita accounts for this element because “Yamashita is configured to control an appliance based on a position speed and/or direction of a mobile terminal without requiring any operation by a user.” Pet. 44 (citing Ex. 1006, 1:44–47; Ex. 1002 ¶ 249). Petitioner submits that because Yamashita’s mobile device can communicate directly with network appliances and has navigation functionality, that the mobile device may perform the comparison functionality without relying on the

control terminal and leaving all of the processing on the mobile device. *Id.* at 44–45 (citing Ex. 1006, 10:60–11:12; Ex. 1002 ¶¶ 249–250). Patent Owner responds that this single terminal embodiment does not teach or suggest placing the comparison functionality on each of the mobile devices. PO Resp. 44. In particular, Patent Owner notes that there is no disclosure in Yamashita that the mobile devices can communicate control messages with each other and perform the comparison of the messages. *Id.*

We agree with Patent Owner that Petitioner has failed to show by a preponderance of the evidence that claim 19 would have been obvious over Yamashita and Shamoon. Although Yamashita teaches that a single mobile device can control network appliances directly, by communicating control messages to the network appliances (Ex. 1006, 10:60–11:12), Petitioner identifies no disclosure or suggestion in Yamashita that the mobile devices communicate control messages to each other and that the comparison of the messages from different mobile devices can be performed on a mobile device to control a network appliance. Instead, Petitioner merely argues that Yamashita could be operated in this way. Pet. 45. Yet, Petitioner provides no evidence, besides the unsupported testimony of Dr. Selker, to support its assertion that Yamashita could operate this way. We find that this conclusory testimony is insufficient to fill all of the gaps Patent Owner identified between what Yamashita discloses and what would be necessary to establish that Yamashita could operate in the manner claimed. *See* Ex. 2008 ¶ 118. Thus, we find that Petitioner has failed to show that claim 19 would have been obvious over Yamashita and Shamoon.

C. OBVIOUSNESS OF CLAIMS 2–4 AND 6 OVER
YAMASHITA, SHAMOON, AND HELVICK

1. *Helvick (Ex. 1005)*

Helvick, titled “Method and System for Controlling Home Appliances Based on Estimated Time of Arrival” (Ex. 1005, [54]), describes a method and system for controlling home appliances based on location information of a mobile electronic device (*id.* ¶¶ 57, 58). Helvick teaches that a device called “ETA determination service”

is a network capable service that determines an [estimated time of arrival or “ETA”] of the resident at home using device location information supplied by [the mobile device or MED] that identifies the present location of MED and home location information supplied by [home automation system or “HAS”] that identifies the location of the home.

Id. ¶ 35. Helvick further teaches that the ETA determination service can be a standalone element or it can be disposed on the mobile device or home automation system. *Id.* Helvick further teaches that HAS receives ETA information from ETA determination service and determines whether the ETA information meets an ETA condition. *Id.* ¶ 57. If the ETA information meets the ETA condition, then HAS can take an appliance control action. *Id.* For example, there could be a control rule in the memory of HAS 120 that specifies an ETA condition “less than 45 minutes” and an appliance control action of “raise the temperature of heating system to 72 degrees.” *Id.* If the ETA condition is met, then HAS can control the appliance and adjust the temperature to 72 degrees. *Id.* ¶ 58.

2. Analysis

a. Claims 2–4

Claims 2–4 depend, directly or indirectly, from claim 1, and recite “a remote server” that can “receive a location-based input from the first mobile device,” “detect the first user profile . . . and the second user profile,” and “determine whether to alter the network device in response to the location based input and the first user profile . . . and the second user profile.”

Ex. 1001, 62:56–64. Petitioner submits that Yamashita teaches such a remote server, and if not, then the combination of Yamashita and Helvick teaches or suggests such a server. In particular, Petitioner argues that Yamashita teaches that its control terminal can be networked via a local-area network (LAN) with the network appliances at the site, which Petitioner contends would suggest to a person of ordinary skill that the same functionality in the control terminal can be relocated to a site outside the home. Pet. 49. Petitioner also points to Helvick, which teaches that part of its ETA determination service can be located on a remote server. Pet. 50.

We agree with Patent Owner that Petitioner has failed to show that the combination of Yamashita and Helvick would teach or suggest the remote server, recited in claim 2. With respect to Yamashita, we agree with Patent Owner that there is no suggestion in Yamashita that the control terminal is remotely located. PO Resp. 46. As Patent Owner points out, Yamashita suggests that the control terminal is located at the site because it describes the appliances as connected by a local area network (LAN) and that the control terminal communicates with a remote server to download software, not to control the appliances. *See id.* at 46–47; Ex. 2008 ¶ 119. Indeed, as Mr. McAlexander persuasively testifies, given the cable and wireless signal

strength limitations of a LAN, a person of ordinary skill conclude that the control terminal is located at the same site as the network appliances.

Ex. 2008 ¶ 119. Thus, we agree with Patent Owner that Yamashita does not suggest a remote server with functionality to control network appliances at a site.

Petitioner's reliance on Helvick does not remedy this missing teaching. As discussed above, Helvick discusses only locating the ETA determination service functionality in the network on a server. See PO Resp. 48–49; Ex. 2008 ¶¶ 84, 124. Helvick never discusses locating the home automation services on the server. Petitioner contends that Helvick suggests that the HAS could be located in the network, because Helvick discloses that the ETA determination services can be located in the network and also that the ETA determination services can be part of the HAS or mobile. See Pet. 50. Yet, we are not persuaded that this is a reasonable reading of Helvick.

Helvick teaches the ETA determination service as either a standalone service or as part of one of the other components (i.e., the mobile device or HAS). Ex. 1005 ¶ 35. But Helvick is clear that it is only when the ETA determination service is a standalone service that it can be located in the network. *Id.* Nowhere in the cited portions does Helvick suggest that when the ETA determination service is part of the HAS that it could be located in the network. In addition, Helvick does not teach that the HAS can be located in the network. We further agree with Patent Owner that, in light of this disclosure, it is unreasonable to read Helvick as suggesting that the HAS can be located in the network. See Ex. 2008 ¶¶ 84, 124. Thus, neither of the

references cited by Petitioner teaches moving the home control functions, such as found in Yamashita's control terminal, to a remote server.

As for Dr. Selker's testimony that moving the control terminal of Yamashita to a remote server would have been obvious, we find this testimony unpersuasive. Ex. 1002 ¶¶ 270–276. A finding of obviousness requires some articulated reasoning with rational underpinning. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), *cited with approval in KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Here, Dr. Selker relies on an unreasonable reading of Yamashita and Helvick to support his conclusion that moving this functionality would have been obvious. Without adequate underpinning, we cannot rely on this testimony to support a finding of obviousness. Thus, we find that it is entitled to little weight.

Because neither the references cited, nor Dr. Selker's testimony, provides sufficient support for Petitioner's contentions, we find that Petitioner has failed to prove by a preponderance of the evidence that claims 2–4 would have been obvious over Yamashita, Shamoan, and Helvick.

b. Claim 6

Claim 6 recites a remote server that can control the network devices at a site, similar to that recited in claim 2. Petitioner relies on similar reasoning as was discussed above with respect to claim 2. *See* Pet. 57 (referring to reasoning provided for claim 2 for why the combination discloses a remote server). Thus, for the same reasons discussed above with respect to claim 2, we find that Petitioner has failed to prove by a preponderance of the evidence that claim 6 would have been obvious over the combination of Yamashita, Shamoan, and Helvick.

III. CONCLUSION

For the reasons given, based on the arguments and evidence of record, Petitioner has met its burden to prove by a preponderance of the evidence that claims 1, 5, 20, 22–25, and 30 of the '344 patent are unpatentable under 35 U.S.C. § 103(a) over Yamashita and Shamoon. *See* 35 U.S.C. § 316(e). Petitioner has not met its burden to prove by a preponderance of the evidence that claims 2–4, 6–8, and 19 are unpatentable. *See id.*

IV. ORDER

Accordingly, it is:

ORDERED that claims 1, 5, 20, 22–25, and 30 of the '344 patent are *unpatentable*;

FURTHER ORDERED that claims 2–4, 6–8, and 19 have *not been proven unpatentable*; and

FURTHER ORDERED that, because this is a Final Written Decision, any party to the proceeding seeking judicial review of this Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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Patent 8,626,344 B2

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