

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GMG PRODUCTS LLC,
Petitioner,

v.

TRAEGER PELLET GRILLS LLC,
Patent Owner.

PGR2019-00034
Patent 10,218,833 B2

Before JAMESON LEE, DEBRA K. STEPHENS, and JOSIAH C. COCKS,
Administrative Patent Judges.

COCKS, *Administrative Patent Judge.*

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 328(a)

I. INTRODUCTION

We have authority to hear this post-grant review under 35 U.S.C. § 6(c) and to issue this Final Written Decision pursuant to 35 U.S.C. § 328(a). For the reasons that follow, after reviewing all relevant evidence and arguments, we determine that GMG Products LLC (“Petitioner”) has not shown by a preponderance of the evidence that claims 1–10 of U.S. Patent No. 10,218,833 B2 (Ex. 1001, “the ’833 patent”) are unpatentable.

A. Background

Petitioner filed a Petition (Paper 3, “Pet.”) requesting a post-grant review of claims 1–10 of the ’833 patent.¹ Traeger Pellet Grills LLC (“Patent Owner”) timely filed a Preliminary Response (Paper 7) to the Petition. In response to our Order (Paper 8) authorizing filing of a Petitioner reply and a Patent Owner sur-reply, Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 9) and Patent Owner filed a Sur-Reply (Paper 11). Pursuant to 35 U.S.C. § 324(a) and 37 C.F.R. § 42.4(a), we instituted this post-grant review based on our decision that Petitioner had demonstrated a reasonable likelihood of prevailing as to at least one of the challenged claims of the ’833 patent. Paper 13 (“Inst. Dec.”).

Patent Owner filed a Patent Owner Response. Paper 17 (“PO Resp.”). Petitioner filed a Petitioner’s Reply to Patent Owner’s Response. Paper 23

¹ Petitioner also filed a Petition, concurrently with the present Petition, challenging claims 11–25 of the ’833 patent. *See* IPR2019-00035. A Final Written Decision in that proceeding is issued concurrently with this Decision.

(“Pet. Reply”). Patent Owner filed a Sur-Reply in response to Petitioner’s Reply. Paper 26 (“PO Sur-Reply”).

At the parties’ request (Papers 24, 25), an Oral Hearing was held on June 9, 2020, a transcript of which is included in the record. Paper 32 (“Tr.”).²

B. Real Parties in Interest

Petitioner identifies GMG Products LLC as its real party-in-interest. Pet. 3. Patent Owner identifies Traeger Pellet Grills, LLC as its real party-in-interest. Paper 5, 2.

C. The ’833 Patent

The ’833 Patent is titled “Mobile Application for Controlling Outdoor Grill” and issued February 26, 2019. Ex. 1001, codes (54), (45). The ’833 Patent describes computing systems for use in remote cooking in which a “software application is configured to control the electronically-controlled appliance.” *Id.* at (57). Figure 1 of the ’833 patent is reproduced below.

² Judge Lee replaced Judge Zado on the panel after the Oral Hearing was conducted. *See* Paper 33.

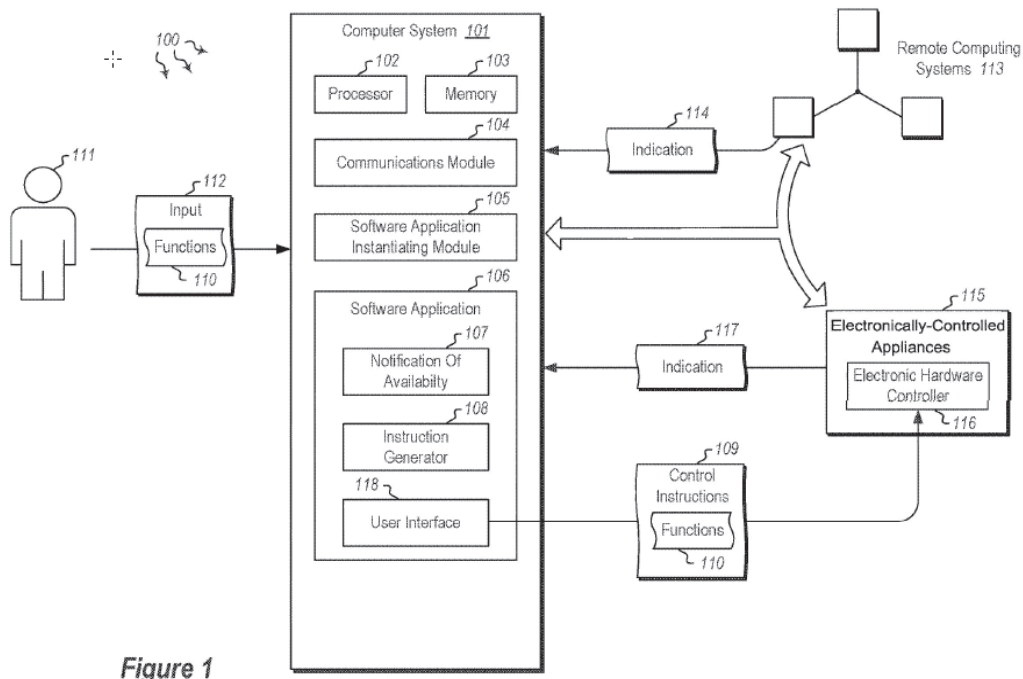


Figure 1

Figure 1 above “illustrates a computer architecture in which embodiments described herein may operate including controlling an electronically-controlled appliance using a software application and providing a user interface for controlling an electronically-controlled appliance.” Ex. 1001, 2:63–67. Environment 100 includes computer system 101. *Id.* at 5:36–41. Computer system 101 may be a “mobile computer system” that is configured to communicate with remote computing systems 113, such as cloud computer systems, and electronically-controlled appliance 115, including a grill or smoking appliance. *Id.* at 5:56–6:6. Electronic hardware controller 116 may be configured to monitor and control such aspects of appliance 115, such as temperature, cooking cycles, and fuel burn rate based on a communication from computer 101 or remote computer systems 113. *Id.* at 6:8–15.

Figure 2 of the '833 patent is reproduced below.

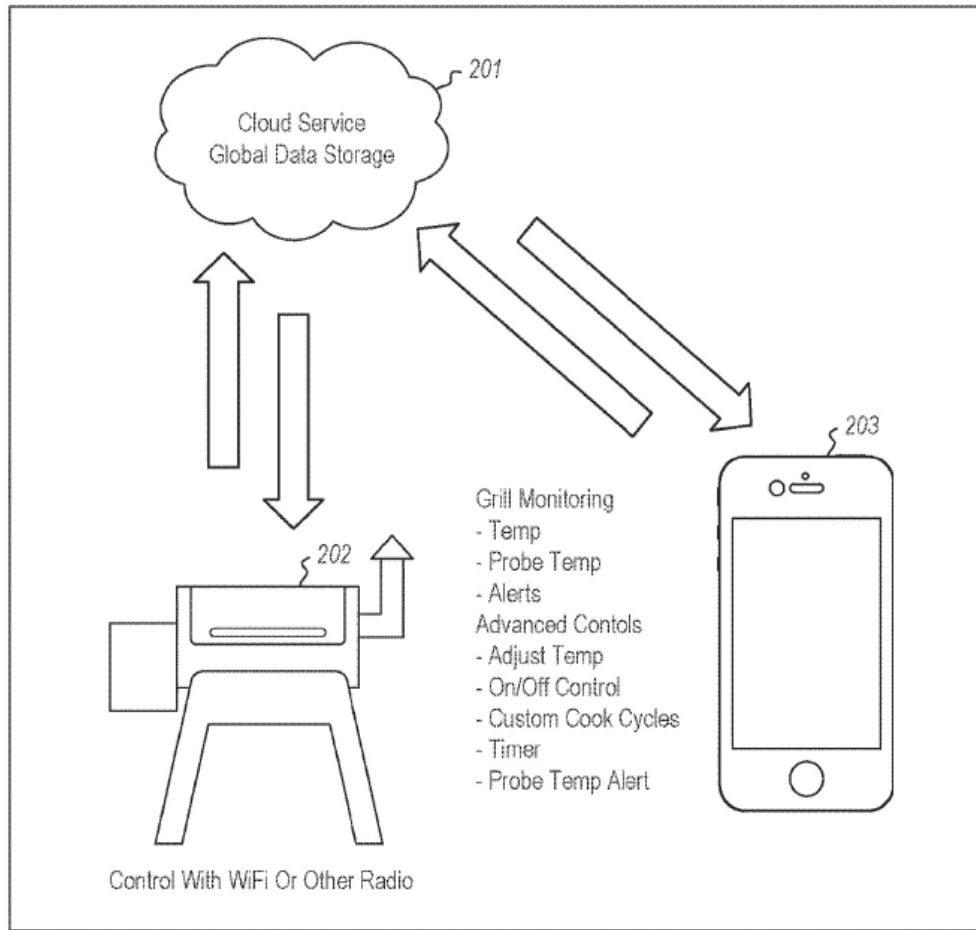


Figure 2

Figure 2 above “illustrates an embodiment in which an electrically-controlled appliance is in communication with a cloud service and a mobile electronic device.” *Id.* at 3:1–3. In Figure 2, smoker 202 is controlled via smart phone 203 that is in communication with cloud service 201. *Id.* at 7:20–24.

D. The Claims

Of the challenged claims, claim 1 is independent. Claims 2–10 ultimately depend from claim 1. Claim 1 is reproduced below:

1. A method for controlling an electronically-controlled wood-pellet grill using a software application on a mobile device, the electronically-controlled wood-pellet grill having at least one hardware controller, the method comprising:

receiving an indication from one or more remote computing systems indicating that the electronically-controlled wood-pellet grill is communicably connected to the one or more remote computing systems, wherein the one or more remote computing systems comprise a cloud service;

providing a notification in the software application indicating that the electronically-controlled wood-pellet grill is available to receive instructions;

receiving a user input at the software application indicating that a particular temperature is to be maintained by the electronically-controlled wood-pellet grill;

generating one or more instructions configured to cause a hopper to feed wood pellets into the electronically-controlled wood-pellet grill at a particular rate in order to maintain the particular temperature; and

sending the generated instructions to the electronically-controlled wood-pellet grill to activate the hopper, the generated instructions being interpreted and carried out on the electronically-controlled wood-pellet grill via the hardware controller.

Ex. 1001, 13: 34–59.

E. Evidence

Petitioner relies upon the following references in asserting that the challenged claims are unpatentable:

Reference	Publication Number	Exhibit
Lee et al. (“Lee”)	US 2015-0134727 A1	1003
Tucker (“Tucker”)	US 9,759,429 B2	1004
Henderson et al. (“Henderson”)	US 2015-0025687 A1	1005
Amer et al. (“Amer”)	US 2016/0072638 A1	1006
Jablokov et al. (“Jablokov”)	US 9,928,672 B2	1007

Petitioner supports its challenge with a Declaration by Dr. Henry H. Houh, dated February 26, 2019 (Ex. 1002) and a Supplemental Declaration of Dr. Houh, dated March 13, 2020 (Ex. 1046). Patent Owner supports its Response with a Declaration by Mr. Daniel Minoli (Ex. 2006) and a Declaration by Mr. James M. Tomaszewski (Ex. 2007).

F. The Proposed Grounds of Unpatentability

Petitioner challenges claims 1–10 of the ’833 patent on the following grounds:

Ground	Claim(s)	Basis	References
1	1–2, 6–10	§ 103	Lee, Tucker, Henderson
2	3, 5	§ 103	Lee, Tucker, Henderson, Amer
3	4	§ 103	Lee, Tucker, Henderson, Jablovkov

II. ANALYSIS

A. Claim Construction

We construe the claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent” *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,340, 51,358 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b) (2019)); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005).

Neither party offers any proposed constructions for any claim terms. *See* Pet. 37–38; PO. Resp. 19. Specifically, Petitioner indicates “that no claim terms require construction” and that “[e]ach claim term should be given its plain and customary meaning as understood by one of ordinary skill in the art.” Pet. 37 (citing Ex 1002 ¶115). Patent Owner also indicates, “[f]or purposes of this Patent Owner Response, . . . no claim construction is necessary[.]” PO Resp. 19. On this record and for purposes of this decision, we determine no claim term requires express construction. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

B. Legal Standards

Petitioner challenges the patentability of claims 1–10 on the grounds that the claims would have been obvious in light of various references including: Lee, Tucker, Henderson, Amer, and Jablokov. To prevail in its challenges to the patentability of the claims, Petitioner “has the burden of proving a proposition of unpatentability by a preponderance of the evidence.” 35 U.S.C. § 326(e) (2018); *see* 37 C.F.R. § 42.1(d) (2019).

The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), reaffirmed the framework for determining obviousness as set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The *KSR* Court summarized the four factual inquiries set forth in *Graham* that we apply in determining whether a claim is unpatentable as obvious under 35 U.S.C. § 103(a) as follows: (1) determining the scope and content of the prior art, (2) ascertaining the differences between the prior art and the claims at issue, (3) resolving the level of ordinary skill in the pertinent art, and

(4) considering objective evidence indicating obviousness or non-obviousness. *KSR*, 550 U.S. at 406 (citing *Graham*, 383 U.S. at 17–18). “To satisfy its burden of proving obviousness, a petitioner cannot employ merely conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380–81 (Fed. Cir. 2016) (citing *KSR*, 550 U.S. at 418). We consider the asserted grounds based on obviousness with the principles identified above in mind.

C. Level of Ordinary Skill in the Art

The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)). Petitioner asserts that a person of ordinary skill in the art at the time of the invention “would have a [Bachelor of Science] degree in Computer Science or an equivalent field, as well as at least two years of academic or industry experience related to Internet connectivity, Internet content delivery, and network applications, and user application programming or web interface design, and familiarity with smart home appliances.” Pet. 38 (citing Ex. 1002 ¶¶ 39–42).

Patent Owner argues that Petitioner’s “definition of a [person of ordinary skill in the art] is incorrect because it does not account for the context of the invention.” PO Resp. 20 (citing Ex. 2007 ¶¶ 34–37, 69–72). According to the Patent Owner,

Properly considering the relevant factors in the field of outdoor appliances like grills and smokers, the actual level of

ordinary skill in the art at the time of the invention was a person with a bachelor's of science degree in mechanical engineering (or technical degree with equivalent experience) and awareness of appropriate methods for remotely controlling an outdoor appliance.

Id. at 21 (citing Ex. 2007 ¶¶ 5–7, 40–68). Patent Owner, thus, is of the view that a skilled artisan is particularly focused on control of outdoor appliances. Patent Owner also contends that one of ordinary skill would view safety concerns pertaining to outdoor cooking appliances as paramount. *See, e.g.*, PO Sur-Reply 3–4.

Factors that may be considered in determining 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[.]

Daiichi Sankyo Co., Ltd. v. Apotex, Inc., 501 F.3d 1254, 1256 (Fed. Cir. 2007) (citations omitted). “These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.” *Id.*

The '833 patent, in its Background, discusses that “Bluetooth radios allow communication with nearby electronic devices including cell phones or tablets of the appliance's owner.” Ex. 1001, 1:40–42. The '833 patent further describes that “[r]ange limitations to the Bluetooth radio, however, necessitate that the user of the appliance still be within a certain proximity of the appliance.” *Id.* at 1:42–44. Thus, it is apparent from the '833 patent that Bluetooth, a communications technology, was the prior art solution to allowing communication with various electronic devices, including appliances and cell phones. Additionally, the claims of the '833 patent are directed to communication between various elements including a cloud, a

mobile device, transmitters, and receivers and the accompanying software applications rather than matters pertaining to safety concerns of the grill.

We further observe that the '833 patent describes the following:

[t]hose skilled in the art will appreciate that the principles described herein may be practiced in network computing environments with many types of computing system configurations, including, personal computers, desktop computers, laptop computers, message processors, hand-held devices, multi-processor systems, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, mobile telephones, PDAs, tablets, pagers, routers, switches, and the like.

Ex. 1001, 4:54–62. The '833 patent also explains that those principles are “practiced in a cloud computing environment.” *Id.* at 5:6–8. Therefore, based on the record before us, we determine that the sophistication of the technology of the '833 patent is of a level requiring knowledge of computer systems and, particularly, cloud computing environments communicating with multiple devices.

Lastly, we note that Patent Owner relies on Mr. Minoli (Ex. 2006) as its expert declarant in challenging the grounds of unpatentability. Mr. Minoli indicates he is “a telecommunications practitioner with 44 years of data communications, telecommunications, cloud computing, Internet, wireless, and Internet of Things (IoT) experience.” *Id.* ¶ 9, Appendix A. Mr. Minoli also sets forth that he has a Master of Science in Computer Science and both a Bachelor and Master of Science in Mathematics. *Id.* at Appendix A. Thus, in arguing the patentability of the disputed claims, Patent Owner itself relies on a declarant having both a degree in Computer Science and at least two years industry experience related to Internet connectivity, Internet content delivery, and network applications.

We have considered the record before us and determine that, it is Petitioner's description of an ordinarily skilled artisan that is better supported by the record.³ However, we delete the qualifier "at least" with regard to the number of years of academic or industry experience, because its inclusion extends the level to that of an expert beyond the level of ordinary skill. We note also that the applied prior art reflects the appropriate level of skill at the time of the claimed invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

D. References Relied Upon

1. Overview of Lee

Lee is titled "Cloud-Based Data Server Providing Home Appliance Management Service and Method Thereof," and discloses a "cloud-based data server providing a user of a terminal apparatus with a management service for one or more home appliances" so that "the user of the terminal apparatus may remotely monitor states of the home appliances or control actions or operations of the home appliances in a home network system." Ex. 1003, codes (54), (57). Figure 1 of Lee, reproduced below, illustrates "a system in which states of one or more home appliances 150 may be

³ Patent Owner does not contend that the parties' disagreement as to level of ordinary skill in the art would affect any determination in this Decision. *See id.* at 21.

monitored and functions or operations of the home appliances 150 may be controlled, using a terminal apparatus 160 of a user.” *Id.* ¶ 55.

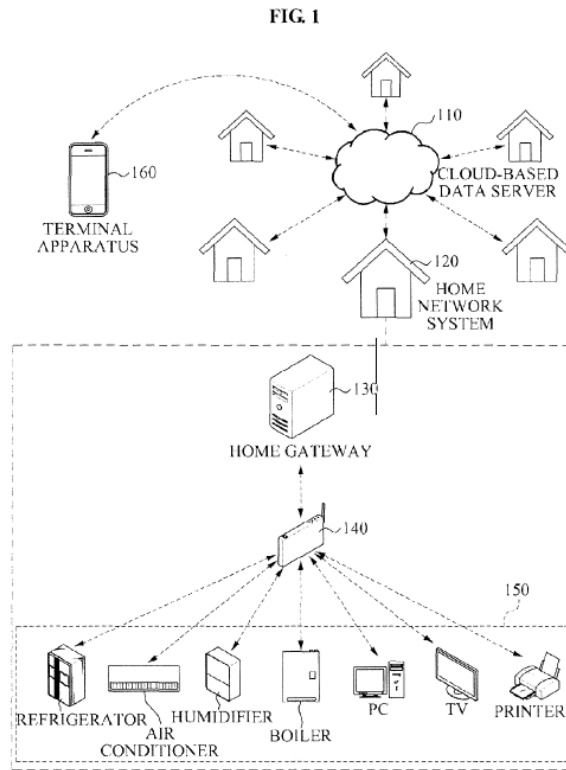


Figure 1 illustrates a system for monitoring and controlling home appliances. *Id.* As shown, Lee’s “system for managing the home appliances 150” includes “cloud-based data server 110,” “terminal apparatus 160” connected to “cloud-based data server 110,” and “home network system 120 connected to the [cloud-based] data server 110.” *Id.* ¶¶ 55–58. Further, home network system 120 includes “home gateway 130” connected to home appliances 150. *Id.* ¶¶ 58–59, 62. Terminal apparatus 160 monitors home appliances 150 through metadata generated by the home appliances. *Id.*

¶¶ 65–69. Figure 5, reproduced below, is a signal flow chart illustrating the signals generated and transmitted to monitor home appliances.

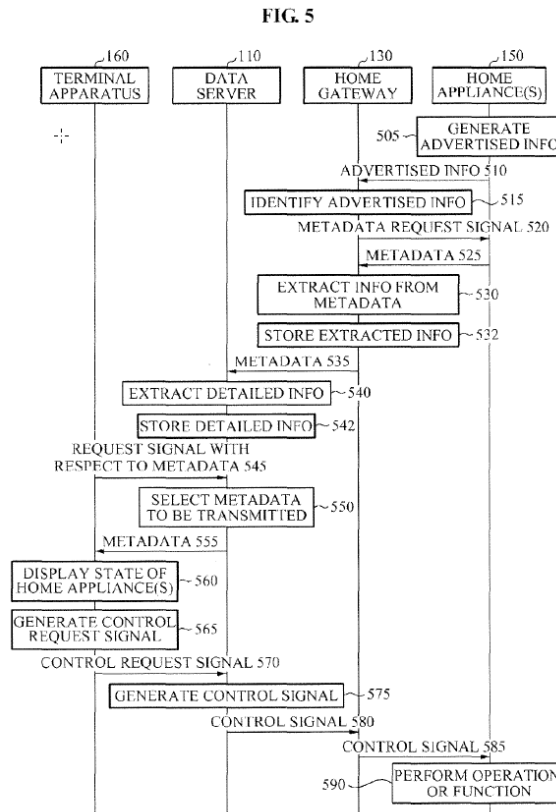


Figure 5 illustrates signals transmitted between networked devices. *Id.* ¶ 47. Initially, “each of the home appliances 150 may generate information . . . related to a current state of each home appliance.” *Id.* ¶ 175; *see id.* ¶ 68. The “information generated by each home appliance may correspond to metadata associated with each home appliance.” *Id.* ¶ 175. In particular, “metadata includ[es] at least one piece of state information on a state of each of the home appliances 150.” *Id.* ¶ 190; *see id.* ¶¶ 168, 204. In operation 525, that metadata is transmitted from the home appliance to the home gateway’s device subscription function module (DSFM). *Id.* ¶ 187.

Then, in operation 535, home gateway 130 “may transfer the metadata from the home appliances 150 to . . . the data server 110.” *Id.* ¶ 194, Fig. 5;

see id. ¶ 67. Next, in operation 545, data server 110’s monitoring service module (MSM) “may receive, from the terminal apparatus 160, a request signal with respect to the metadata.” *Id.* ¶ 201, Fig. 5. Subsequently, in operation 555, “[the] data server 110’s M[S]M 245 may transfer the received metadata to the terminal apparatus 160.” *Id.* ¶ 203, Fig. 5; *see id.* ¶ 66. As discussed above, “[t]he metadata transferred to the terminal apparatus 160 may include information on states of the home appliances 150” (*id.* ¶ 203), thus providing “a service for monitoring the home appliances 150 to the user of the terminal apparatus 160” (*id.* ¶ 66).

2. Overview of Tucker

Tucker, a U.S. Patent titled “Pellet Grill,” discloses “an automated self-contained pellet grill” that uses “compressed hardwood sawdust” as cooking fuel. Ex. 1004, (54), (57), 1:19–20. Tucker further teaches that its pellet grill includes “a communication device to exchange data wirelessly with a remote control device.” *Id.* at 4:33–45.

3. Overview of Henderson

Henderson is titled “Remote-Controlled Food-Related Appliance,” and discloses a “smoking appliance and [a] remote computing device . . . in communication via [a] communication network” such that “a user of the remote computing device controls the smoking appliance remotely.” Ex. 1005, codes (54), (57). Figure 1 of Henderson, reproduced below, illustrates an example system in which “the smoking appliance 102 and remote

computing device 104 are in communication via the communication network 106.” *Id.* ¶ 13.

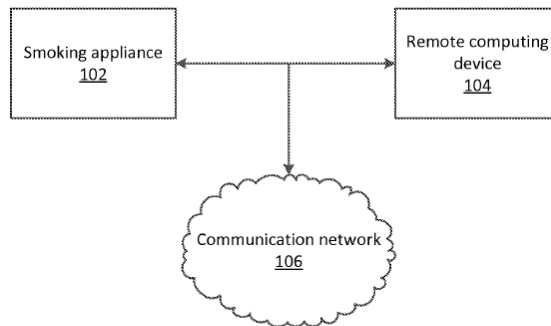


Figure 1

Figure 1 illustrates a cooking system operating over a network. *Id.* ¶ 5. Henderson describes that, in one example, “the smoking appliance 102 is connected to the communication network 106. The communication network 106 is, in turn, connected to the remote computing device 104.” *Id.* ¶ 16. Further, Henderson describes that its “smoking appliance 102 functions to, in any combination, cook, smoke, grill, bake, broil, blanch, braise, roast or steam, food.” *Id.* ¶¶ 14–15.

4. Overview of Amer

Amer is titled “System and Method for Remotely Controlling IR-Enabled Appliances via Networked Device,” and discloses a system that “enables one or multiple users to control, monitor, and manage their appliances (e.g., air conditioners, television sets, multimedia systems,

window curtains, etc.) both locally and remotely.” Ex. 1006, codes (54), (57). Figure 2 of Amer is reproduced below.

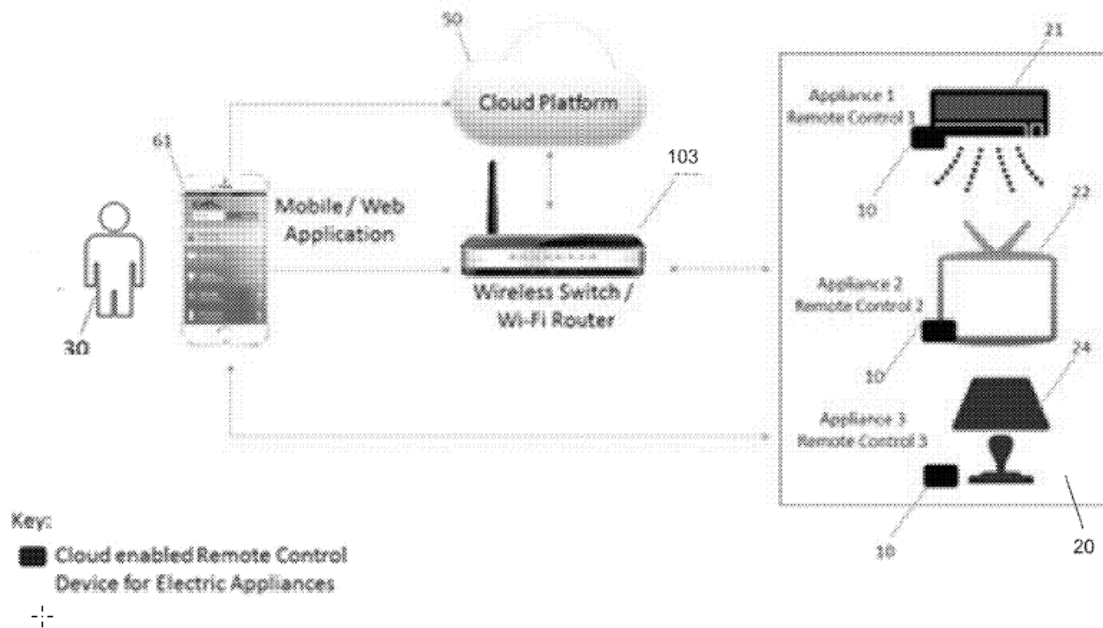


FIG. 2

Figure 2 shows components and relationships between those components for the remote control and monitoring of appliances. *Id.* ¶¶ 5, 49. In Figure 2, “electric appliances 20 denoted by reference numerals 21, 22, and 24” are associated with respective “cloud-enabled remote control devices 10” (*id.* ¶¶ 49, 53) which control those electric appliances 20 via, e.g., IR control signals (*id.* ¶ 41). Further, “[t]he cloud platform 50 acts as a bridge between . . . [cloud-enabled remote control] devices 10, mobile devices 60, and web applications 61.” *Id.* ¶ 50. “The user 30 can control, monitor, and manage their . . . electric appliances 20” through cloud platform 50’s network connection to the cloud-enabled remote control devices 10. *Id.* ¶ 53.

5. Overview of *Jablokov*

Jablokov is titled “System and Method of Monitoring and Controlling Appliances and Powered Devices Using Radio-Enabled Proximity Sensing.” Ex. 1007, code (54). *Jablokov* describes its invention as “providing optional watchdog safety shutoff capabilities including an inline or remote monitor and control system, radio awareness of compatible components such as Bluetooth smartphones and dongles, and optional Internet connectivity for remote monitoring, control, and usage data accumulation.” *Id.* at (57). *Jablokov* contemplates various types of appliances that may be remotely monitored and controlled including “outdoor grills.” *Id.* at 11:26–42. *Jablokov*’s Figure 4C is reproduced below.

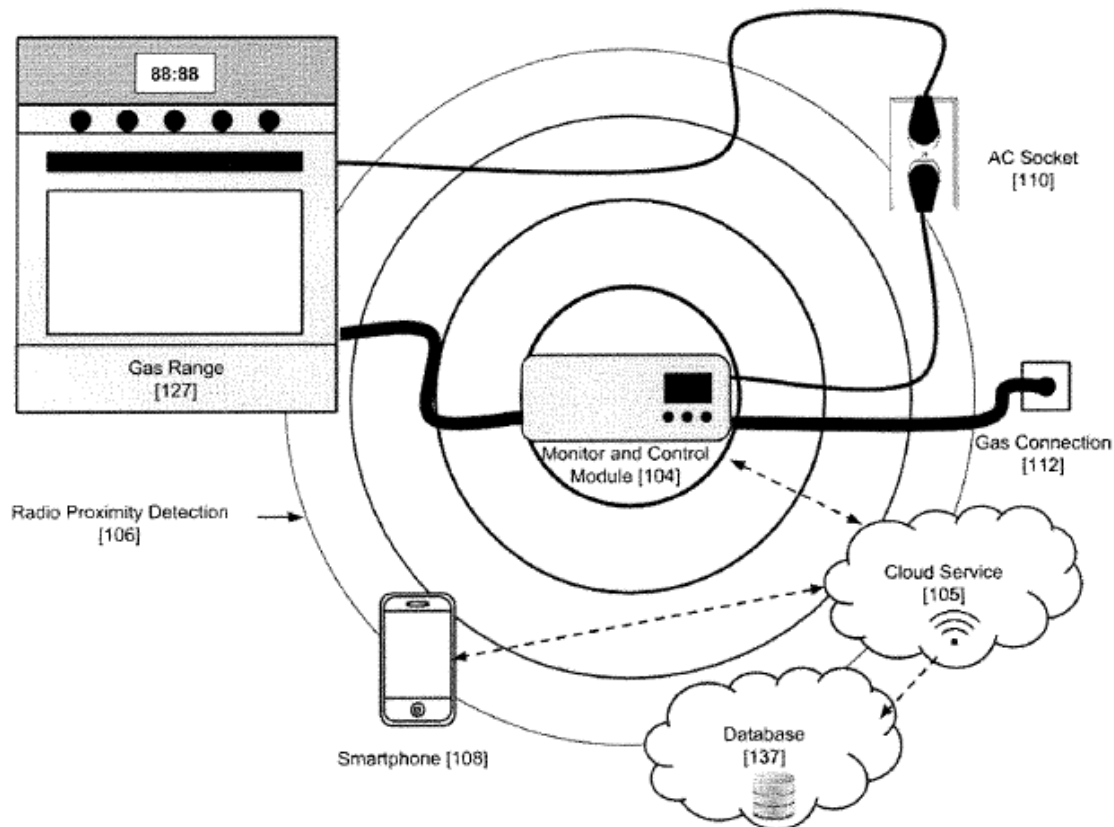


FIG. 4C

Figure 4C above shows “an illustrative embodiment of a safety monitoring and control implementation for monitoring and controlling the operation state of a gas range.” *Id.* at 3:65–67. In connection with Figure 4C, Jablovkov describes the following:

[G]as range 127 . . . is coupled to the monitor and control module 104, which is electrically coupled to an AC power socket 110 or gas source connection 112. As previously described, the radio proximity detection device 106 of the monitor and control module 104 scans, e.g., using Bluetooth technology and the like, in search for any authorized radio-enabled devices, such as smartphones 108, within the pre-determined range.

Id. at 11:44–51.

E. Obviousness Under 35 U.S.C. § 103

1. Alleged Obviousness of claims 1, 2, and 6–10 Over Lee, Tucker, and Henderson

Petitioner contends claims 1, 2, and 6–10 of the ’833 patent would have been obvious over Lee, Tucker, and Henderson. Pet. 39–75. Petitioner argues that all the features of those claims are present in the prior art. *Id.* at 39–42, 48–75. Petitioner also argues that a skilled artisan would have had adequate reason to combine the teachings of Lee, Tucker, and Henderson. *Id.* at 43–48 (citing Ex. 1002 ¶¶ 134, 135, 138, 139, 141–143, and 145–147).

Patent Owner has a different view than Petitioner. Patent Owner contends that Petitioner has not accounted adequately for all features that are required by claim 1, and that Petitioner has not set forth sufficient reason to combine the teachings of the prior art. We focus below on certain of the features that Patent Owner contends are absent from the record.

- a) *“receiving an indication from one or more remote computing systems indicating that the electronically-controlled wood-pellet grill is communicably connected to one or more remote computing systems, wherein the one or more remote computing systems is a cloud service”*

Among other limitations, claim 1 recites “receiving an indication from one or more remote computing systems indicating that the electronically-controlled wood-pellet grill is communicably connected to one or more remote computing systems, wherein the one or more remote computing systems is a cloud service.” Ex. 1001, 13:25–32. Patent Owner initially focuses its challenge to Petitioner’s ground of unpatentability on the requirement that an “indication” is received and conveys that the grill is “communicably connected to” the remote computing systems, i.e. the cloud service. PO Resp. 22–28.

Petitioner contends that “Lee and Tucker collectively disclose this limitation.” Pet. 48.⁴ Lee’s Figure 5, as annotated by Petitioner, is reproduced below.

⁴ Petitioner relies on Tucker in connection with the noted limitation for only the particular recitation in the claim of a “wood-pellet grill.” Pet. 51.

FIG. 5

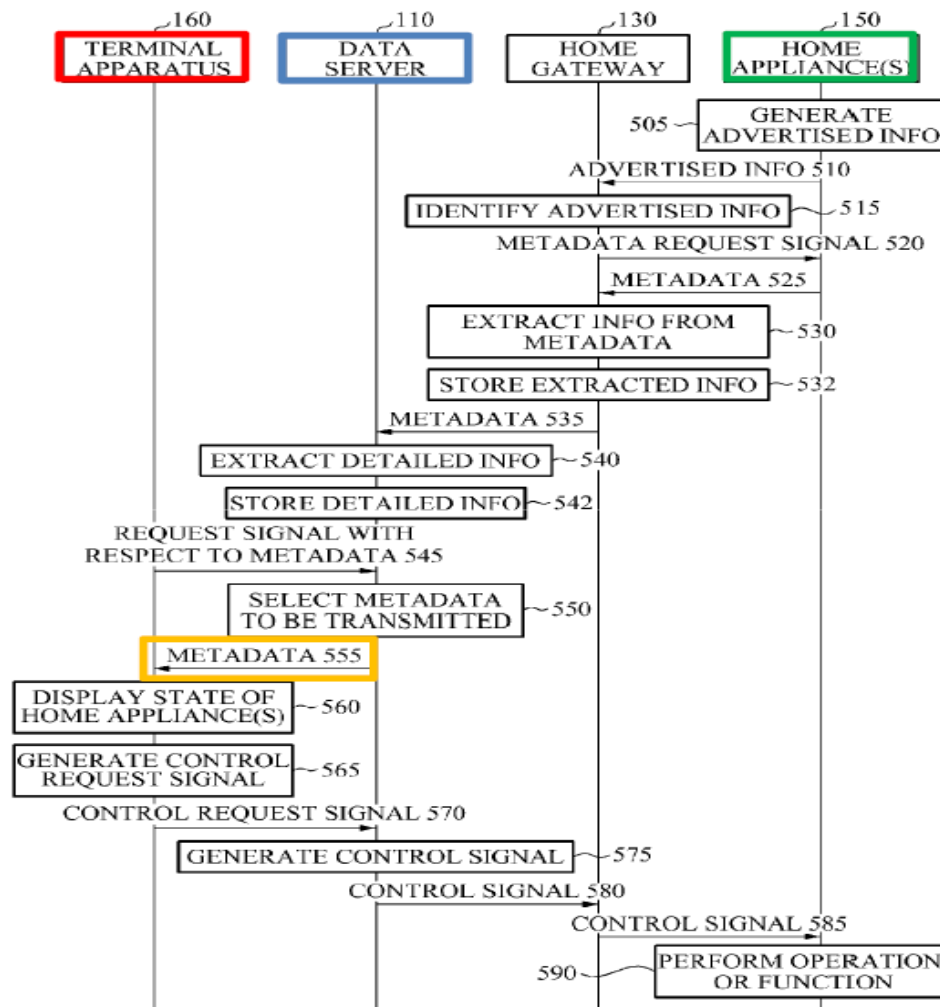


Figure 5 above “is a signal flowchart illustrating a method of providing a home appliance management service according to an embodiment of the present invention.” Ex. 1003 ¶ 47. Petitioner urges that “[s]tep 555 shows a transmission of data from the cloud-based data server 110 to the terminal apparatus 160—i.e., the user’s mobile device.” Pet. 49 (citing Ex. 1003 ¶ 203).

Petitioner asserts two different arguments: first, “the metadata includes connectivity information, and, second, the signal itself indicates

there's a connection" (Tr. 11:18–12:6). We address each of those arguments.

With respect to the first argument, according to Petitioner, Lee explains that step 555 describes transmitted data as “metadata” that can “include at least one piece of state information on a state of each of the home appliances 150, service information related to a function of each home appliance and information on a command code requested to control each home appliance.” Pet. 50 (quoting Ex. 1003 ¶ 68; Ex. 1002 ¶ 152). Petitioner also contends that one of ordinary skill in the art would have understood from Lee’s disclosure that the state information of the appliance transmitted “includes data indicating that the appliance is in network communication with the cloud-based data server” and which “indicates that the home appliance is communicably connected to the cloud.” *Id.* at 50–51 (citing Ex. 1002 ¶¶ 153–155).

For the purpose of instituting trial, and on the record that was then before us, we accepted Petitioner’s position that Lee’s metadata, including “state information” of an appliance, would have been understood by a skilled artisan to include data indicating that an appliance is communicably connected with the cloud. Inst. Dec. 26–27. In initially accepting that position, we credited the testimony of Petitioner’s declarant, Dr. Houh, who testified of such understanding by one of ordinary skill in the art. *Id.* (crediting Ex. 1002 ¶ 153). We, however, noted that Patent Owner, at the time, had not yet offered any countervailing testimony from its own expert or cross-examined Dr. Houh on the matter. *Id.* at 27. Patent Owner has now availed itself of the opportunity to do both.

With support from the testimony of its declarant, Mr. Minoli (Ex. 2006), Patent Owner now argues that Lee provides no disclosure of “how the network connectivity of an appliance is indicated, monitored, or otherwise reported.” PO Resp. 24 (citing Ex. 2006 ¶ 92). To that end, Patent Owner submits that Lee simply assumes that a valid network connection exists and that “there is nothing in Lee that would need to *indicate* network communication—by ‘metadata’ or otherwise.” *Id.* (citing Ex. 2006 ¶ 92 (*e.g.*, “[g]iven that Lee simply assumes *a priori* network connectivity, Lee does not disclose any metadata that would indicate that the appliance is communicably connected with the cloud”); Ex. 1003 ¶¶ 63, 70–73). In reviewing Lee’s disclosure, we discern that Lee conveys that appliances 150 generally are connected to a home network via a connection that is established based on “universal plug and play (UPnP),” but Lee is less than specific in conveying that it recognized the presence of an active indication of communication between the network and the appliances. *See, e.g.*, Ex. 1003 ¶ 63 (“The home appliances 150 may be connected to the home gateway 130 through a home network in wired, and wireless fashion. The home network may be established based on universal plug and play (UPnP).”)

Petitioner and Dr. Houh infer from Lee’s disclosure of supplying “state information” for an appliance that there is an intrinsic indication that the information conveyed includes that the appliance is connected to a network and presently is available to communicate. *See, e.g.*, Pet. 50–51 (citing Ex. 1002 ¶¶ 152–155; Ex. 1003 ¶¶ 68, 194, 203). Careful review of Dr. Houh’s testimony and Petitioner’s assessment of the cited portions of Lee, however, reveals that they are predicated on a proposed expansive

meaning of “state information” that is not well supported in the record at hand. We do not discern from the evidence before us that “state information” has a particular definition in Lee or an otherwise widely-accepted meaning. Petitioner and Dr. Houh characterize Lee’s disclosure as presenting a meaning of “metadata” that is “broad and non-limiting in scope” and thus necessarily includes an indication of an appliance’s communication capability. Pet. Reply 10; Ex. 1046 ¶ 16. To that end, Petitioner’s approach evidently is premised on a view that, based on Lee’s disclosure, a skilled artisan would understand “state information” of an appliance to include all possible information pertaining to the appliance, including current network connectivity information.

As Patent Owner observes, however, Lee does provide several explicit examples of “state information” that seemingly dictate that the type of information that is “state information” is not so expansive as Petitioner advances. *See* PO Resp. 25 (citing Ex. 2006 ¶ 94). We also find credible Mr. Minoli’s testimony that, given the lack of any explicit or widely understood definition of “state information,” “one of skill in the art would look to the examples in Lee to gain an understanding of what Lee means by ‘state information’.” Ex. 2006 ¶ 93. We agree that Lee’s examples reasonably would inform a skilled artisan as to the meaning of “state information.”

For instance, in connection with a refrigerator appliance, the collected metadata is described as data derived from sensors measuring temperature or which may generate information or the expiration date of food contained therein. *See* Ex. 1003 ¶¶ 221–225. With respect to an appliance that is a humidifier, Lee describes that the state information relayed may be that

pertaining to the water level of a water tank. *See id.* ¶ 226. Patent Owner and Mr. Minoli characterize the type of information contemplated in Lee as “state information” as being related to “appliance-specific features” and “not generic network connectivity.” PO Resp. 25–26; Ex. 2006 ¶ 95. We discern that none of Lee’s expressed examples pertains or relates to an appliance’s network connectivity status. Thus, we conclude that the record is nebulous in conveying that a skilled artisan would associate information pertaining to the status of an appliance’s network connectivity with Lee’s disclosed “state information” of an appliance.

Even assuming that network connectivity information reasonably can be regarded as state information, it does not follow from Lee’s broad disclosure of transmitting other kinds of state information that network connectivity information would be included in the transmission. Petitioner does not point to any disclosure in Lee that all information about the state of the appliance would be transmitted, without exception. Further, Petitioner points to no disclosure that any sensor exists in Lee’s appliance to monitor its own network connectivity to create such state information.

We also are mindful of Petitioner’s second view that the very action of transmitting signal 555, with metadata, to terminal apparatus 160 constitutes an “indication” that the appliance is communicably connected to the cloud. *See, e.g.*, Pet. Reply 9 (“As explained in the Petition (Pet. 48–51), the claimed ‘indication’ is Lee’s signal 555”). In particular, Petitioner contends the following:

Since the metadata is generated by the home appliance and received by the data server, one skilled in the art would have understood that the metadata input signal to the cloud-based data server (step 535) indicates that the home appliance is communicably connected to the cloud. That very same metadata

— or portion thereof — is what is transmitted to the user’s smartphone in step 555. Thus, a skilled artisan regarding Lee’s Figure 5 would have understood that the metadata transmitted to the smartphone in step 555 pertains to whether the appliance is communicably connected to the cloud.

Pet. 51 (citations omitted). “Lee’s Step 555 still must indicate that the appliance is communicably connected because the only way that metadata gets to the user’s terminal apparatus is by passing through the data server, which would indicate that the appliance is communicably connected to that data server.” Tr. 12:2–6. Dr. Houh also testifies to that effect. *See* Ex. 1046 ¶ 14 (“[Petitioner’s] Petition makes clear that Lee’s signal 555 is the claimed ‘indication’ (Pet. 48–51).”

Claim 1 requires an “indication” that the wood-pellet grill “*is* communicably connected.” The nature of “*is*” in that context is that the indication must be about the present communicable connection status of the grill. Petitioner notes that the claims do not expressly require “current” cloud connectivity. Pet. Reply 12. Petitioner, however, does not explain why the absence of the term “current” changes the plain meaning of the term “*is* communicably connected” to not require the grill’s present or current communicable connection condition.

Petitioner takes the position that Lee’s disclosure that metadata may be “immediately” sent “upon request” means that the metadata necessarily reflects current information of the appliance. *Id.* (citing Ex. 1003 ¶¶ 133, 146, 151, 184–185). Lee provides no indication, however, that the metadata sent in step 555 indicates the cloud-based server and home appliance are still connected. Because Lee discloses that the metadata may be stored (Ex. 1003 ¶¶ 133, 146, 151, 184–185), there is no preclusion that, at the time of

the request for the metadata, the home appliance is no longer connected for communication with the cloud. Although the metadata may be sent immediately “upon request,” that does not mean that at the time of the “request” for the metadata, the metadata reflects any current information of the home appliance. Indeed, Lee clearly contemplates that the stored metadata may be used “in the future.” Ex. 1003 ¶ 133. In other words, while the cloud-based server may immediately send the information, that information might well have been obtained earlier and then kept in storage at the server. It is speculative to assume that the cloud-based server queries the appliance only after a request is received from the user. Petitioner points to no such disclosure in Lee.

Furthermore, although Petitioner and Dr. Houh generally urge that transmission of “stale” metadata would “not make sense,” that depends on the meaning of “stale,” which Petitioner does not clarify. Metadata is not necessarily “stale” simply because it is not up to the minute current. At least Petitioner has not explained why it would be so. For instance, the temperature within a refrigerator a minute ago may not be stale. Thus, receipt of non-stale metadata does not equate to present communication connectivity.

We also have considered paragraph 224 of Lee’s disclosure, which states: “When the terminal apparatus 160 received the information from the data server 110, the user of the terminal apparatus 160 may monitor a current state of the refrigerator and control temperature of the refrigerator using the terminal apparatus 160.” Ex. 1003 ¶ 224. In the absence of any disclosure that the server queries the appliance only upon request from the user, and in light of Lee’s disclosure that the uploaded state information is

for future use, the reference to monitoring a current state of the refrigerator is not sufficient to support Petitioner's assertion that receiving state information is itself an indication of present network connectivity of the appliance. Just as we explained above why certain information from a short moment ago may not be stale, certain information from a short moment ago still may be deemed current. Something more is needed for Petitioner to prove affirmative notification of present network connectivity of the appliance.

Patent Owner's declarant, Mr. Minoli, also acknowledged the possibility that Lee's metadata is not representative of the current state information of a home appliance. *See* Ex. 2006 ¶¶ 98–104; Ex. 1048 (Minoli Deposition), 94:2–95:5. For example, Mr. Minoli testifies the following: “the existence of metadata on the cloud is decoupled from whether the appliance is communicably connected. At most, the existence of metadata on the cloud-based data server 110 means that the appliance *has been* communicably connected [to] the *home gateway*.” Ex. 2006 ¶ 101.

As is clear from the record, Dr. Houh and Mr. Minoli take opposing views as to the nature of what a person of ordinary skill in the art would have understood from the metadata supplied to Lee's terminal apparatus 160. There is no challenge from either party as to the qualifications of either declarant to give credible testimony in this proceeding. Nevertheless, for the reasons discussed above, we are not satisfied that Dr. Houh's testimony on the issue of Lee's metadata as constituting an indication of a grill's communicably connected status is supported by sufficient evidence of record. We are also cognizant of Mr. Minoli's testimony, discussed above,

that Lee’s disclosure does not convey that any appliance is communicably connected to the cloud.

It is Petitioner’s burden to prove is proposition of unpatentability by a preponderance of the evidence. 35 U.S.C. § 326(e) (2018); *see* 37 C.F.R. § 42.1(d) (2019). Satisfaction of that burden must be based on evidence of record. *See In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d at 1380–81. We have considered the parties’ respective positions. Given (1) Lee’s ambiguous disclosure as to the full purpose, content, and nature of its metadata, (2) the conflicting testimony of the parties’ expert declarants, and (3) the absence of other persuasive evidence supporting Petitioner’s contention, we conclude that Petitioner has not met its burden on the record that is before us.

b) “providing a notification in the software application indicating that the electronically-controlled wood-pellet grill is available to receive instructions”

Claim 1 also requires that a “notification” is provided to a software application indicating that wood-pellet grill “is available to receive instructions.” Petitioner attempts to account for this requirement in a manner similar to that discussed above with respect to the “is communicably connected” aspect of claim 1.⁵

In particular, Petitioner points to Lee’s Figure 5 and its step 560 showing “the terminal apparatus 160 ‘display[ing] the states of the home

⁵ Petitioner asserts that “Lee, Tucker, and Henderson collectively disclose this limitation.” Pet. 52. Tucker and Henderson, however, are only cited to account for additional disclosure of a “software application” and a “wood-pellet grill.” *Id.* at 53–54. Thus, it is apparent that Petitioner relies on Lee’s disclosure to meet the claim requirement pertaining to a notification that the grill is “available to receive instructions.”

appliances 150 based on the . . . metadata’ received in step 555.” Pet. 52 (quoting Ex. 1003 ¶ 204). Petitioner further contends that “Lee explains that ‘the states of the home appliances 150 may be output through a display of the terminal apparatus 160.’” *Id.* Because, in Petitioner’s view, Lee provides “broad description of state information,” such information includes that Lee’s appliance is available to receive instructions. *Id.* at 53 (citing Ex. 1002 ¶160). Petitioner urges that its view “is supported by the fact that the displayed state information is a portion of the metadata received from the cloud-based data server in step 555—i.e., the indication that the appliance is communicably connected to the cloud.” *Id.* And, that “a skilled artisan would have understood that, once an appliance indicates that it is connected to the cloud, the appliance is then ready to receive instructions from the user via the cloud.” *Id.* (citing Ex. 1002 ¶161).

The testimony of Dr. Houh (Ex. 1002 ¶¶ 160–161) on which Petitioner relies, however, provides little by the way of evidentiary citation to the record to support the premise that Lee, itself, contemplates that its metadata transmitted to terminal appliance 160 prompts display of a notification that a home appliance is available to receive instructions. Patent Owner challenges Petitioner’s and Dr. Houh’s positions on the basis that their position that the displayed metadata “*can* include an indication that Lee’s appliance is available to receive instructions” does not find sufficient support in the record. PO Resp. 31–32 (quoting Pet. 53; Ex. 1002 ¶160). Patent Owner also maintains that one of ordinary skill in the art “reading Lee would not understand Lee’s ‘state information’ to include information about whether the appliance is available to receive instructions.” PO Resp. 32 (citing Ex. 2006 ¶ 106).

Having carefully reviewed the record at hand, we conclude that Petitioner's accounting for the requirement of "providing a notification in the software application indicating that the electronically-controlled wood-pellet grill is available to receive instructions" suffers from the same or similar deficiencies as those discussed above with respect to the indication that the grill is communicably connected. In that respect, we simply are not persuaded that Petitioner has met its burden to show that a person of ordinary skill in the art would have found that element taught in the prior art of record.

c) Conclusion – Obviousness over Lee, Tucker, Henderson

Based on the record that developed during trial, we conclude that Petitioner has not established by a preponderance of evidence that claim 1 would have been obvious over the teachings of Lee, Tucker, and Henderson. Claims 2 and 6–10 depend from claim 1 and require all of the features of that claim. We also conclude that Petitioner has not shown that claims 2 and 6–10 would have been obvious.

2. Alleged Obviousness of Claims 3 and 5

Petitioner contends claims 3 and 5 of the '833 patent would have been obvious over Lee, Tucker, Henderson, and Amer. Claims 3 and 5 ultimately depend from claim 1. Petitioner does not rely on Amer's teachings to account for the missing features discussed above with respect to claim 1. We conclude that Petitioner has not established by a preponderance of evidence that claims 3 and 5 would have been obvious over the teachings of Lee, Tucker, Henderson, and Amer.

3. *Alleged Obviousness of Claim 4*

Petitioner contends claim 4 of the '833 patent would have been obvious over Lee, Tucker, Henderson, and Jablovkov. Claim 4 depends from claim 1. Petitioner does not rely on Jablovkov's teachings to account for the missing features discussed above with respect to claim 1. Thus, for that reason, we also conclude that Petitioner has not established by a preponderance of evidence that claim 4 would have been obvious over the teachings of Lee, Tucker, Henderson, and Jablovkov.

Nevertheless, we also take note of an additional reason why Petitioner's proposed ground of unpatentability for claim 4 is deficient. Claim 4 adds to claim 1 the following features:

determining that the user input is received from a computing device located outside a specified distance from the electronically-controlled wood-pellet grill; and
in response to the determination, disabling the one or more instructions.

Ex. 1001, 14:7–12.

Thus, claim 4 requires a step of determining that a user input from a device is received from “*outside* a specified distance” and a subsequent step of disabling the one or more instructions. With respect to that step, Petitioner contends the following:

Jablovkov discloses this limitation, Jablovkov discloses a “method of monitoring and controlling an appliance” (which can include an “outdoor grill”) by “sensing an identity and a proximity of a user equipped with a radio-enabled component to the appliance” (such as a mobile device, including a smartphone), and “altering the operating state of the appliance depending on the proximity of the authorized user (Ex. 1007, Jablovkov 1:51–60.) In particular, a “radio proximity detection device” installed on the appliance “scans, e.g., using Bluetooth

technology and the like, for any authorized radio-enabled devices, such as smartphones 108, within the predetermined range.” (*Id.* 11:47–51).

Pet. 89–90.

Jablokov also discloses that if the continued presence of a radio-enabled device is detected within the predetermined range, the appliance may be maintained in an operating state, and if not detected, the appliance may be turned off. Ex. 1007, 11:64–12:7. Thus, Jablokov describes sensing a signal, or input, “*within* [a] predetermined range” as the condition for performing an operation with respect to an appliance.

Patent Owner contends that because Jablokov takes action when determining whether a signal is detected that is “*within*” a proximity of an appliance, it does not disclose taking an action when a user input is received from “*outside* a specified distance” of an appliance as required by claim 4. *See* PO Resp. 40–43; PO Sur-reply 16–17. We agree with Patent Owner. We are not persuaded by Petitioner that the pertinent teachings of Jablokov and the requirements of claim 4 are “functionally equivalent” and “two ways of expressing the same thing.” Pet. Reply 24. The plain language of claim 4 requires that the catalyst for disabling instructions in connection with a wood-pellet grill is the active determination of a user input that is received from “*outside*” a particular range from the grill. Petitioner has not adequately explained why such language conveys a determination and condition that are materially the same with respect to what is recited in claim 4.

In support of its position, Petitioner points to disclosure in the ’833 patent describing that “[i]n some cases, the user may even be able to ignite the smoker/grill 202 remotely, while in other cases such functionality may

be disabled unless the user is *within a specified distance of the grill*, as determined by a GPS or Blue tooth geofence.” Pet. Reply 25 (quoting Ex. 1001, 7:50–54). Petitioner urges that such disclosure using the “within” language is the same as that of Jablov. Even if that is so, the “within” language is not what is used in the claim. Rather, claim 4 recites “outside a specified distance” which we have discussed above. “To coin a phrase, the name of the game is the claim.” Giles Sutherland Rich, *Extent of Protection and Interpretation of Claims—American Perspectives*, 21 Int’l Rev. Indus. Prop. & Copyright L. 497, 499 (1990).

The claim requires disabling instructions after determining that user input is received from a computing device that is located *outside* a specified distance from the appliance. It requires actual receipt of such an input, i.e., an input that is outside of a specified distance. Jablov’s not receiving a signal that is within a specified range does not indicate receipt of an input that is outside a specified distance.

Thus, we conclude that for the additional reason discussed above, Petitioner has not established by a preponderance of evidence that claim 4 would have been obvious over the teachings of Lee, Tucker, Henderson, and Jablov.

III. CONCLUSION

For the foregoing reasons, in view of the record that developed during trial, we conclude that Petitioner has not shown by a preponderance of the evidence that claims 1–10 of the ’833 patent are unpatentable.

In summary,

Claims	35 U.S.C. §	Basis/Reference(s)	Claims Shown Unpatentable	Claims Not shown Unpatentable
1, 2, 6–10	103	Lee, Tucker, Henderson,		1, 2, 6–10
3, 5	103	Lee, Tucker, Henderson, Amer		3, 5
4	103	Lee, Tucker, Henderson, Jablokov		4
Overall Outcome				1–10

IV. ORDER

It is

ORDERED that Petitioner has *not* shown by a preponderance of the evidence that claims 1–10 of the '833 patent are unpatentable; and

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

PGR2019-00034
Patent 10,218,833 B2

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