Docket No.: 2215790-00120
Filed on behalf of GMG Products LLC
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GMG PRODUCTS LLC,

Petitioner,

v.

TRAEGER PELLET GRILLS LLC,

Patent Owner.

Case PGR2019-00035
U.S. Patent No. 10,218,833

PETITIONER'S NOTICE OF APPEAL

Director of the United States Patent and Trademark Office
c/o Office of the General Counsel
P.O. Box 1450
Alexandria, VA 22314-5793

Pursuant to 35 U.S.C. §§ 141-44 and 319, and 37 C.F.R. § 90.2-90.3, notice is hereby given that Petitioner GMG Products LLC appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision entered August 31, 2020 (Paper 34) in PGR2019-00035, attached as Exhibit A, and all prior and interlocutory rulings related thereto or subsumed therein.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), Petitioner indicates that the issues for appeal include the holding that claims 11-25 are not unpatentable. Additionally, Petitioner identifies claim construction as an issue for appeal, including any implicit construction of "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" / "a notification field configured to indicate whether the electronically-controlled wood-pellet grill is communicably connected to the one or more remote computing systems" and "providing a notification in the software application indicating that the electronically-controlled wood-pellet grill is available to receive instructions" / "to further provide notifications indicating that the electronically-controlled wood-pellet grill is available to receive instructions."

Pursuant to 37 C.F.R. § 90.3, this Notice of Appeal is timely.

A copy of this Notice of Appeal is being filed simultaneously with the Patent Trial and Appeal Board, the Clerk's Office for the United States Court of Appeals for the Federal Circuit, and the Director of the Patent and Trademark Office.

Respectfully submitted,

Dated: August 31, 2020

By: /David Cavanaugh/

David Cavanaugh, Reg. No. 36,476

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 90.2(a)(1) and 104.2(a), I hereby certify that, in addition to being filed electronically through the Patent Trial and Appeal Board's End to End (PTAB E2E), a true and correct original version of the foregoing PETITIONER'S NOTICE OF APPEAL is being filed by Express Mail on this 31st day of August, 2020, with the Director of the United States Patent and Trademark Office, at the following address:

Office of the General Counsel
United States Patent and Trademark Office
Madison Building East, Room 10B20
600 Dulany Street
Alexandria, VA 22314

Pursuant to 37 C.F.R. § 90.2(a)(2) and Federal Circuit Rule 15(a)(1), and Rule 52(a),(e), I hereby certify that a true and correct copy of the foregoing PETITIONER'S NOTICE OF APPEAL is being filed in the United States Court of Appeals for the Federal Circuit using the Court's CM/ECF filing system on this 31st day of August, 2020, and the filing fee is being paid electronically using pay.gov.

I hereby certify that on August 31, 2020 I caused a true and correct copy of the PETITIONER'S NOTICE OF APPEAL to be served via e-mail on the following attorneys of record:

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EXHIBIT A

Trials@uspto.gov
571-272-7822

Paper No. 34
Entered: August 31, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GMG PRODUCTS LLC,
Petitioner,

v.

TRAEGER PELLET GRILLS LLC,
Patent Owner.

PGR2019-00035
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 11–25 of U.S. Patent No. 10,218,833 B2 (Ex. 1101, "the '833 patent") are unpatentable.

A. Background

Petitioner filed a Petition (Paper 3, "Pet.") requesting a post-grant review of claims 11–25 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 1–10 of the '833 patent. *See* IPR2019-00034. 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. 1101, 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 code (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.

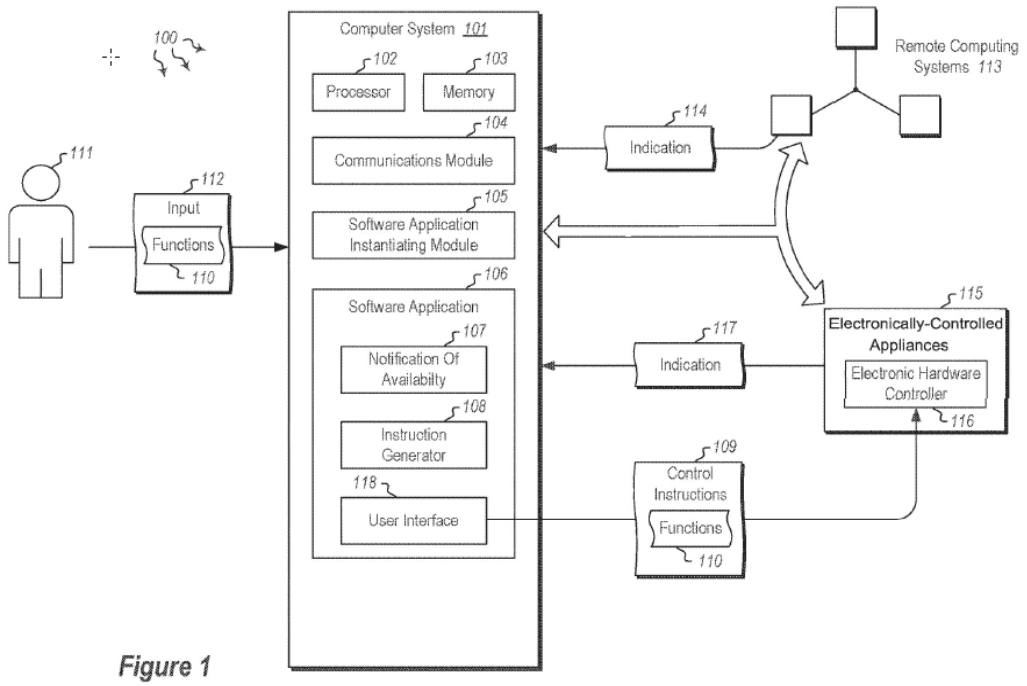


Figure 1

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. 1101, 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.

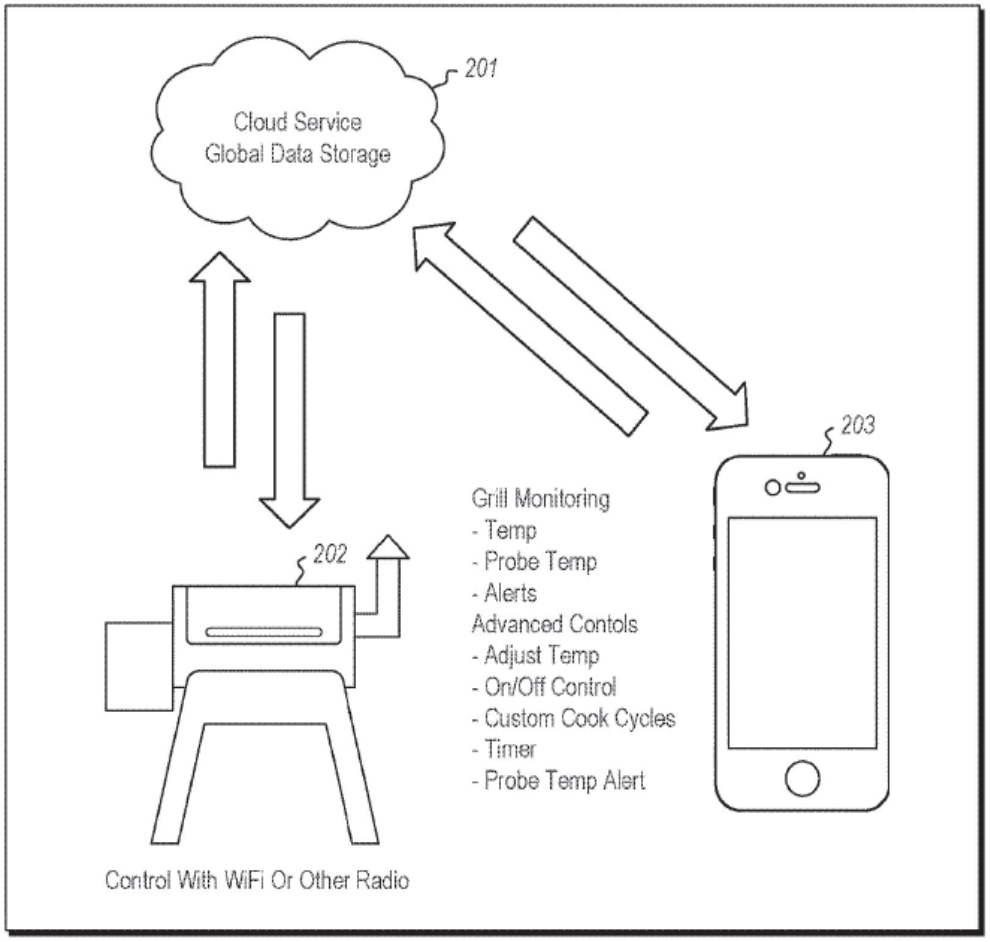


Figure 2

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, claims 11 and 18 are independent. Claims 12–17 ultimately depend from claim 11 and claims 19–25 ultimately depend from claim 18. Claim 11 is representative and is reproduced below:

> 11. One or more non-transitory computer-readable media that store computer-executable instructions that, when executed, implement a method for controlling an electronically-controlled wood-pellet grill using a software application on a mobile device, the method comprising:
>
> receiving an indication at the software application indicating that the electronically-controlled wood-pellet grill is attempting to communicate with one or more remote computing systems, wherein the one or more remote computing systems comprise a cloud service;
>
> receiving a first user input at the software application indicating that the electronically-controlled wood-pellet grill is permitted to communicate with the one or more remote computing systems; receiving an indication from at least one of the 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;
>
> providing a notification in the software application indicating that the electronically-controlled wood-pellet grill is available to receive instructions;
>
> receiving a second 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 one or more instructions to the electronically-controlled wood-pellet grill to activate the hopper, the one or more instructions being interpreted and carried out by a hardware controller on the electronically-controlled wood-pellet grill.

Ex. 1101, 14:45–15:13.

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	1103
Tucker ("Tucker")	US 9,759,429 B2	1104
Henderson et al. ("Henderson")	US 2015/0025687 A1	1105
Amer et al. ("Amer")	US 2016/0072638 A1	1106

Petitioner supports its challenge with a Declaration by Dr. Henry H. Houh, dated February 26, 2019, (Ex. 1102) and a Supplemental Declaration of Dr. Houh, dated March 13, 2020 (Ex. 1146). Patent Owner supports its Response with a Declaration by Mr. Daniel Minoli (Ex. 2106) and a Declaration by Mr. James M. Tomaszewski (Ex. 2107).

F. The Proposed Ground of Unpatentability

Petitioner challenges claims 11–25 of the '833 patent as unpatentable over Lee, Tucker, Henderson, and Amer. Pet. 7.

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. 33; PO Resp. 18. 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. 33 (citing Ex 1102 ¶112). Patent Owner also indicates, "[f]or purposes of this Patent Owner Response, . . . no claim construction is necessary[.]" PO. Resp. 18. 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 11–25 on the grounds that the claims would have been obvious in light of various references including: Lee, Tucker, Henderson, and Amer. 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 (2107), 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, network applications and user application programming or web interface design, and familiarity with smart home appliances." Pet. 33–34 (citing Ex. 1102 ¶¶ 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. 19 (citing Ex. 2107 ¶¶ 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 20 (citing Ex. 2107 ¶¶ 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. 2107) (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. 1101, 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. 1101, 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. 2106) 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. 1103, codes (54), (57). Figure 1 of Lee, reproduced below, illustrates "a system in which states of one or more home appliances 150 may be monitored and functions or operations of the home appliances 150 may be controlled, using a terminal apparatus 160 of a user." *Id.* ¶ 55.

[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.

FIG. 1

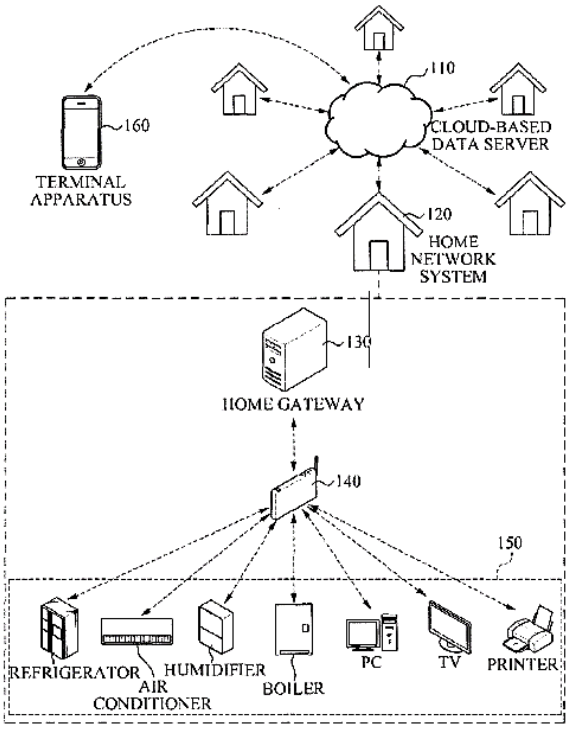


Figure 1 illustrates a system for monitoring and controlling home appliances. *Id.* As shown, Lee's "system for managing the home appliances 150" includes "cloud-based data server 110," "terminal apparatus 160" connected to "cloud-based data server 110," and "home network system 120 connected to the [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.

FIG. 5

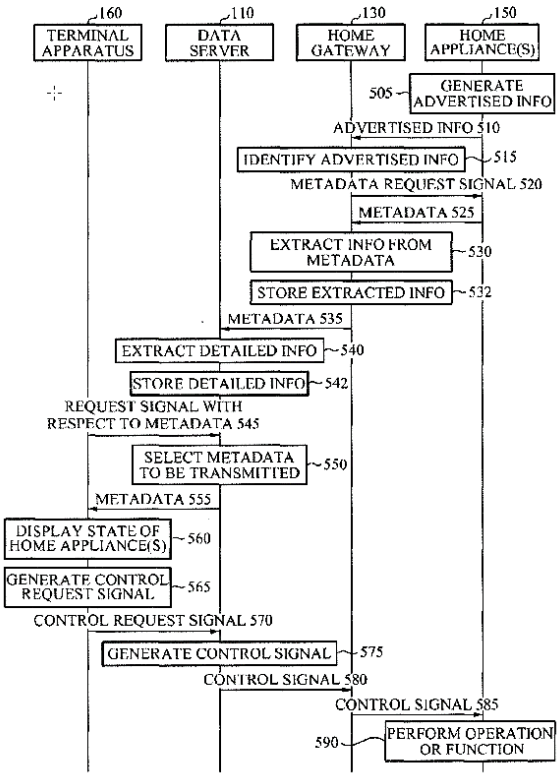


Figure 5 illustrates signals transmitted between networked devices. *Id.* ¶ 47. Initially, "each of the home appliances 150 may generate information . . . related to a current state of each home appliance." *Id.* ¶ 175; *see id.* ¶ 68. The "information generated by each home appliance may correspond 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. 1104, codes (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. 1105, 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.

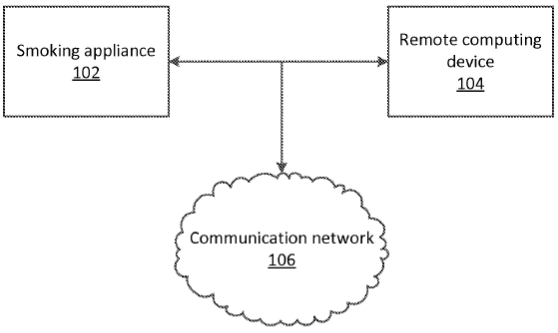


Figure 1

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. 1106, codes (54), (57). Figure 2 of Amer is reproduced below.

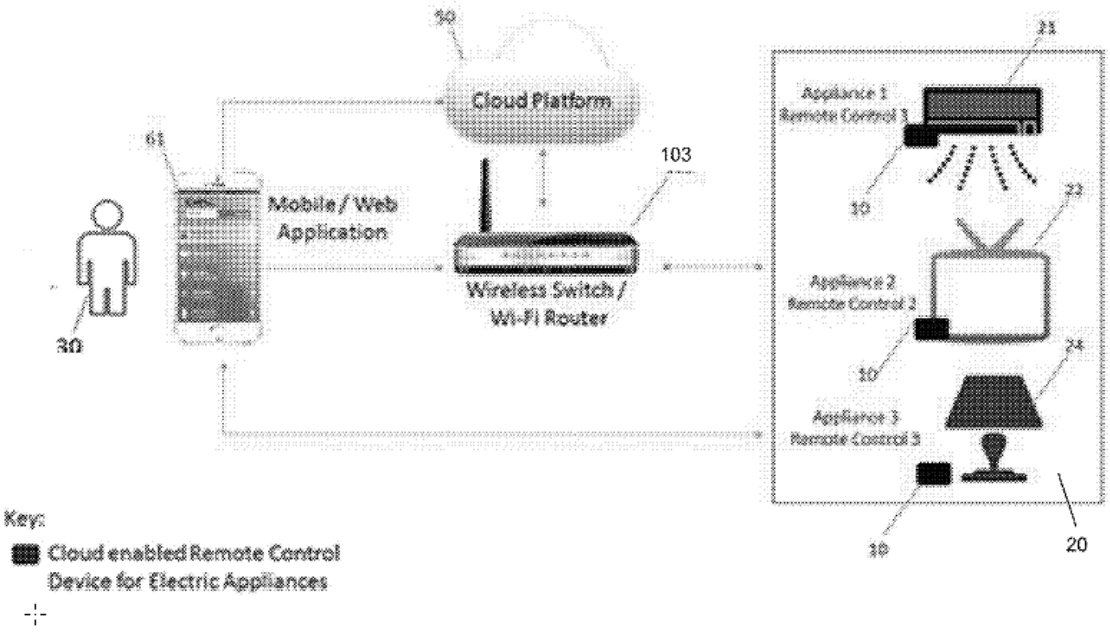


FIG. 2

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.

E. Obviousness Under 35 U.S.C. § 103

Petitioner contends claims 11–25 of the '833 patent would have been obvious over Lee, Tucker, Henderson, and Amer. Pet. 34–101. Petitioner argues that all the features of those claims are present in the prior art. *Id.* at 34–38, 44–45, 48–101. Petitioner also argues that a skilled artisan would have had adequate reason to combine the teachings of Lee, Tucker, and Henderson. *Id.* at 38–43, 46–48 (citing Ex. 1102 ¶¶ 143–148).

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.

1. "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."

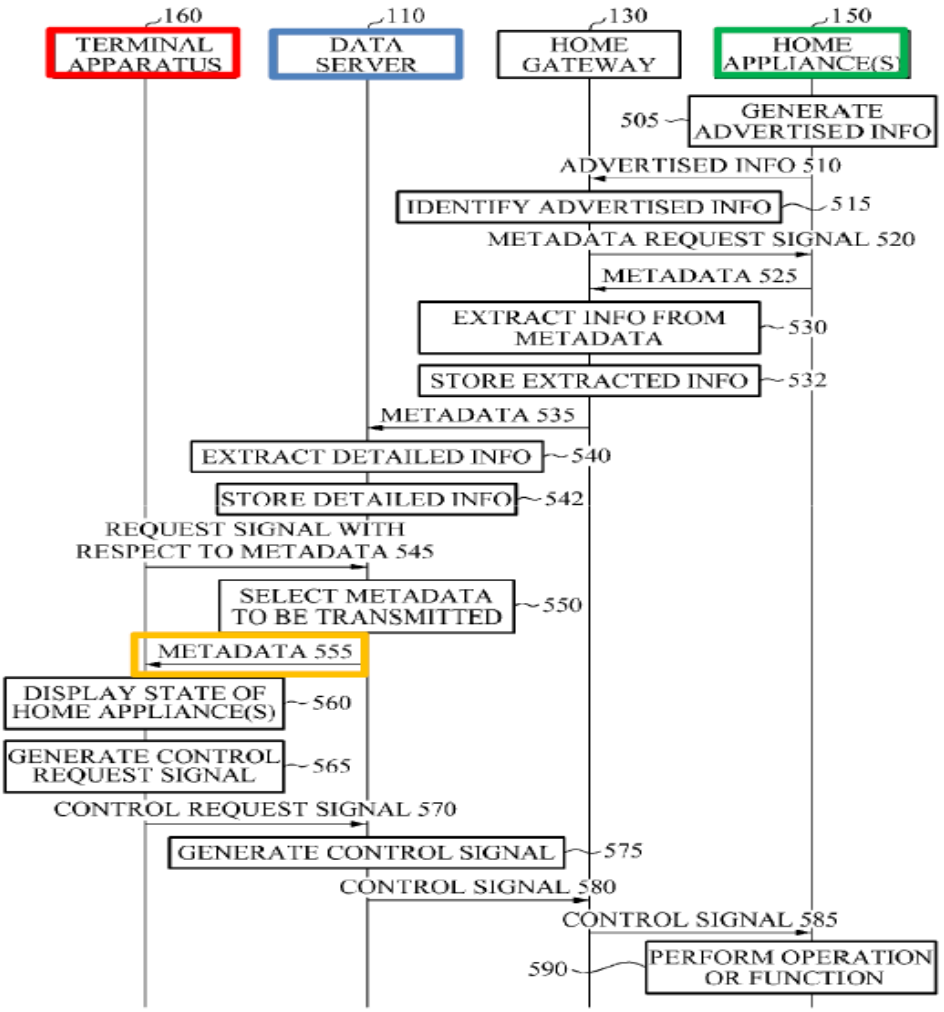
Among other limitations, claim 11 recites "receiving an indication from one or more remote computing systems indicating that the electronically-controlled wood-pellet grill is communicably connected to one or more remote computing systems." *Id.* at 14:60–64.[4] Patent Owner initially focuses its challenge to Petitioner's ground of unpatentability on the requirement that an "indication" is received and conveys that the grill is

[4] Independent claim 18 recites a similar limitation: "a notification field configured to indicate whether the electronically-controlled wood-pellet grill is communicably connected to the one or more remote computing systems." Ex. 1101, 15:56–16:2.

"communicably connected to" the one or more remote computing systems, i.e. the cloud system. PO Resp. 21–27.

With respect to each of claims 11 and 18, Petitioner contends that "Lee and Tucker collectively disclose this limitation." Pet. 50, 80.[5] Lee's Figure 5, as annotated by Petitioner, is reproduced below.

FIG. 5



[5] Petitioner relies on Tucker in connection with the noted limitation for only the particular recitation in the claim of a "wood-pellet grill." Pet. 53, 82.

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. 1103 ¶ 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. 50–51, 80–81 (citing Ex. 1103 ¶ 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. 51–52 (quoting Ex. 1103 ¶ 68; Ex. 1102 ¶ 160); Pet. 81 (citing Ex. 1102 ¶ 263). 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 52 (citing Ex. 1102 ¶¶ 160–162).

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. 24–25. 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. 1102 ¶ 162). 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 25. Patent Owner has now availed itself of the opportunity to do both.

With support from the testimony of its declarant, Mr. Minoli (Ex. 2106), 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. 23 (citing Ex. 2106 ¶ 91). 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. 2106 ¶ 91 (*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. 1103 ¶¶ 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. 1103 ¶ 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. 51–53 (citing Ex. 1102 ¶¶ 161–163; Ex. 1103 ¶¶ 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 11; Ex. 1146 ¶ 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. 23–24 (citing Ex. 2106 ¶ 92). 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. 2106 ¶ 92. 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. 1103 ¶¶ 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. 2106 ¶ 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 10 ("As explained in the Petition (Pet. 50–53), 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. 52 (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. 1146 ¶ 14 ("[Petitioner's] Petition makes clear that Lee's signal 555 is the claimed 'indication' (Pet. 50–53)."

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 "stale" simply because it is not up to the minute current. At least Petitioner has not explained why it would be so. For instance, it is not explained why the temperature within a refrigerator a minute ago should be deemed "stale"

and useless. Thus, receipt of non-stale metadata does not equate to current 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. 2106 ¶¶ 97–103; Ex. 1148 (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. 2106 ¶ 100.

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.

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

Claim 11 also requires that a "notification" is provided to a software application indicating that wood-pellet grill "is available to receive

instructions."[6] 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.[7]

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 appliances 150 based on the . . . metadata' received in step 555." Pet. 54 (quoting Ex. 1103 ¶ 204).[8] 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.* (citing Ex. 1102 ¶ 167). 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

[6] Claim 18 similarly requites a notification field "to further provide notifications indicating that the electronically-controlled wood-pellet grill is available to receive instructions." Ex. 1101, 16:2–4.

[7] Petitioner asserts that "Lee, Tucker, and Amer collectively disclose this limitation." Pet. 53. Tucker and Amer, however, are only cited to account for additional disclosure of a "software application" and a "wood-pellet grill." *Id.* at 55. Thus, it is apparent that Petitioner relies on Lee's disclosure to meet the claim requirements pertaining to a notification that the grill is "available to receive instructions."

[8] Pages 53 through 55 of the Petition present arguments addressing the pertinent limitation as it appears in claim 11. Petitioner makes similar arguments on pages 80 through 83 addressing the limitation as it appears in claim 18.

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. 1102 ¶ 168).

The testimony of Dr. Houh (Ex. 1102 ¶¶ 167–168)[9] 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. 30–31 (quoting Pet. 54; Ex. 1102 ¶¶ 167, 203). 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. 31 (citing Ex. 2106 ¶ 105).

Having carefully reviewed the record at hand, we conclude that Petitioner's accounting for the requirement of (1) "providing a notification in the software application indicating that the electronically-controlled wood-pellet grill is available to receive instructions" as recited in claim 11, and (2) "to further provide notifications indicating that the electronically-controlled wood-pellet grill is available to receive instructions" as recited in claim 18, suffers from the same or similar deficiencies as those discussed above with respect to the indication that the grill is communicably

[9] The referenced testimony pertains to claim 11. In conjunction with claim 18, Dr. Houh provides similar testimony. *See* 1102 ¶¶ 263–264.

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 those elements taught in the prior art of record.

3. 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 either claims 11 or 18 would have been obvious over the teachings of Lee, Tucker, Henderson, and Amer. Claims 12–17 and ultimately depend from claim 11 and claims 19–25 ultimately depend from claim 18. We also conclude that Petitioner has not shown that those dependent claims would have been obvious.

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 11–25 of the '833 patent are unpatentable.

In summary,

Claims	35 U.S.C. §	Basis/Reference(s)	Claims Shown Unpatentable	Claims Not shown Unpatentable
11–25	103	Lee, Tucker, Henderson, Amer		11–25
Overall Outcome				11–25

IV. ORDER

It is

ORDERED that Petitioner has *not* shown by a preponderance of the

evidence that claims 11–25 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.

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