

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONOS, INC.,
Petitioner,
v.
GOOGLE LLC,
Patent Owner.

Case No. IPR2023-00806
U.S. Patent No. 11,050,615

PETITIONER SONOS, INC.'S REPLY

I. INTRODUCTION

Petitioner Sonos, Inc. submits this reply to Patent Owner Google LLC's Response (Paper 9, "Response"). Patent Owner concedes that the vast majority of the '615 patent's claims—including the independent claims—are unpatentable as obvious over both Roberts and Suumäki. Patent Owner focuses its response exclusively on dependent claim 6 and similar claim 19. These claims require transmission of a message—after receipt of network configuration information—"indicating" that a device has "successfully entered" an existing wireless network. Patent Owner has failed to rebut the Petition's showing.

Unlike the Petition, which relies on extensive expert testimony, Patent Owner relies entirely on attorney argument. It submitted no expert declaration, did not cross examine Petitioner's expert, and cites no other evidence. Moreover, Patent Owner repeatedly misinterprets the Petition, the prior art's disclosure, and the '615 patent's claims. The Petition does not "contradict" itself by relying on different embodiments in Roberts when assessing claims 1 and 6. Instead, Roberts itself explains that the same type of confirmation messages are transmitted by its system after an enrollee has been provided with network configuration information regardless of whether an out-of-band or in-band communication channel is used for configuration purposes. Similarly, Roberts's and Suumäki's messages are exactly what claims 6 and 19 require. The claims require only an "indicat[ion]" of network

“entr[y].” A message does not need to be explicit or include any particular information to qualify. Moreover, a message only has to indicate network “entr[y].” Device setup does not need to be complete at the time the message is sent. When the claims are properly interpreted—and the full scope of the prior art’s disclosure is considered as it must be—it is apparent that claims 6 and 19 are invalid.

II. ARGUMENT

Again, Patent Owner’s response discusses only claims 6 and 19 of the ’615 patent. Claim 6 depends on claim 1. As discussed in the Petition, claim 1 is directed to a method for “commissioning” a “target device” onto an existing wireless “communication network.” The claim ends with a limitation requiring that “network configuration data conveyed in ... one or more network configuration packets” relayed to the “target device” from another “wireless device” be “employ[ed] ... to enable the target device to join the communication network.” Claim 6 then adds a further step of “contacting the wireless device via the communication network to indicate that the target device has successfully entered the communication network.” (*See* Ex. 1001, claims 1, 6.) Claim 19 is similar to claim 6, except it depends on “non-transistor computer readable storage medium” claim 16 instead of claim 1. (*See id.*, claims 16, 19.)

There is no dispute that Roberts and Suumäki render claims 1 and 16 obvious. Thus, both references admittedly teach methods and systems whereby a “target

device” receives “network configuration packets” over a “short-range signal transmission path” that is “independent[] of the communication network.” The “target device” then uses the information in the packets to “join the communication network.” The only remaining dispute is whether it also have would have been obvious that the references’ systems transmit messages “indicating” that the “target device” “successfully entered” this “network” as claims 6 and 19 further require.

A. Unlike those in the Petition, Patent Owner’s Arguments Are Not Supported By Evidence

The Petition’s assessment of claims 6 and 19 not only cited to various passages of Roberts and Suumäki but was also supported by expert testimony. (*See* Petition at 36-37, 67-68 (citing Ex. 1003, ¶¶ 246-254, 456-463.) In contrast, Patent Owner relies on nothing more than bare attorney argument. It submitted no expert declaration. In fact, it submitted no factual evidence of any kind. It did not even seek to cross-examine Petitioner’s expert to better understand his testimony.

Despite this, Patent Owner’s response includes lengthy sections purportedly explaining “what Roberts teaches (and does not teach).” (*E.g.*, Response at 7-8.) Similarly, Patent Owner also repeatedly takes positions regarding what Roberts purportedly “does not disclose or suggest” to a POSITA. (*Id.* at 7.) And Patent Owner offers opinions on what certain terms Roberts uses—like “setup”—would be understood to mean. (*Id.* at 13.) It does the same when assessing Suumäki. (*See id.* 15-16.)

The Federal Circuit has repeatedly explained that attorney arguments are not evidence. *See Enzo Biochem, Inc. v. Gen-Probe Inc.*, 424 F.3d 1276, 1285 (Fed. Cir. 2005) (“[a]ttorney argument is no substitute for evidence”); *see also Wasica Finance GmbH v. Continental Auto Sys.*, 853 F.3d 1272, 1284 (Fed. Cir. 2017) (finding that it was “reasonable for the Board to accept” one party’s “expert testimony over” the other party’s “bare attorney argument”). Attorney argument is all that Patent Owner has supplied the Board with here. In so doing, it has failed to rebut the Petition’s showing of obviousness.

In an apparent attempt to shore up this evidentiary deficiency, Patent Owner cites a recent ITC decision noting that “[t]he Administrative Law found... found that Sonos failed to show that Roberts disclosed the limitations recited in claims 6 and 19.” (Response at 1.) The ITC did assess Roberts. But it focused its analysis on whether Roberts anticipates claim 6 of the ’615 patent. (*See* Ex. 2001 at 161-162.) While the ITC also briefly addressed obviousness, in doing so it noted that “Sonos relies entirely on Roberts’ claim 10.” (*Id.* at 176.) According to the ITC, this claim “merely states ... ‘having ... instructions comprising reporting failure conditions or successful results after attempting to connect to the wireless network’ but does not include a “teaching ... of which device receives the report.” (*Id.*)

The Petition here asserted obviousness, not anticipation. And it did not rely “entirely” on claim 10 of Roberts. Instead, the Petition cited portions of Roberts

discussing communications between an enrollee and registrar—including messages relating to “setup progress”—that are sent after the enrollee has been provided with network configuration information. (*See, e.g.*, Petition at 36-37.)

Next, further distinguishing the arguments addressed in the ITC from those raised by the Petition, Suumäki was not considered and was not at issue in the ITC. The decision does not say anything at all about that reference. Suumäki, however, is the primary reference in the Petition’s second ground. Further, in contrast to this proceeding, Patent Owner did present expert testimony in the ITC (albeit directed to the different issues in that proceeding).

Given these differences, the ITC decision is of little pertinence and does not provide meaningful insight into whether Roberts and Suumäki render claim 6 and 19 obvious.

B. Petitioner Established that Roberts Renders Claim 6 Unpatentable

Moving on to the substance of the parties’ various arguments, Ground 1 in the Petition explained why Roberts (Ex. 1004) renders the claims of the ’615 patent obvious. (*See* Petition at 18 *et. seq.*) Again, Patent Owner does not dispute the majority of this. Instead, it focuses its reply solely on claims 6 and 19.

As explained in the Petition, Roberts teaches what claims 6 and 19 require for two, related reasons. First, after an enrollee device is provided with wireless network credentials and “setup succeeds,” Roberts’s system “deletes” the communication

ports on both the enrollee and registrar device that were used to facilitate the transmission of setup information. (*See id.* at 36-37 (quoting Ex. 1004, 13:51-62).) The Petition explained that because this port deletion process occurs after the enrollee device has already successfully joined a wireless network, it would entail (or at least obviously could entail) the transmission of a success-indicating message between the enrollee and registrar device over the wireless network itself. (*See* Petition at 36-37.) Second, confirming that messages indicating the successful joining of a wireless network are in fact transmitted as claims 6 and 19 require, the Petition noted that in Roberts, registrar devices are “give[n] system wide visibility into setup progress.” (*See id.* at 37 (citing Ex. 1004, 11:32-33).) Petitioner’s expert also assessed these same teachings in Roberts and arrived at the conclusion that “messages indicating that an enrollee device successfully joined a network as originally requested” would obviously have been transmitted “over the wireless network” as this claim limitation requires. (*See* Ex. 1003, ¶¶ 248-254.)

Patent Owner makes three arguments in response. Each will be addressed in turn.

1. Petitioner’s Arguments Are Not “Contradictory”

Patent Owner begins by arguing that the Petition’s claim 6 and 19 arguments somehow “contradict” those made in connection with claim 1. (Response at 9-10.) According to Patent Owner, the Petition “mapped only” Robert’s “out-of-band

system” to claim 1, but then purportedly “change[d] course and instead relies on disclosures from Roberts of setting up an enrollee device that uses an in-band WiFi communication channel to send configuration information.” (*Id.* at 10.) This somehow “undermines” the “entire argument that Roberts discloses claim 6.” (*Id.*)

Patent Owner’s argument is premised on a misunderstanding of Roberts’s teachings. The Petition did not “change[] course.” Instead, the portions of Roberts cited by the Petition in connection with claim 6 apply with equal force to all of Roberts’s embodiments. While Roberts does provide the example of the use of the specific “L2 data port” when engaging in “setup ... in content of IEEE 802.11 technology” (Ex. 1004, 9:8-9), it explains that it is not so limited. Instead, “[u]sing the L2 data port as a control channel ... open for only setup traffic ...*decouples actual setup exchange from the specific wireless technology*, which means *the same exchange* could be used for *other wireless technologies*.” (*Id.*, 11:18-21 (emphasis added); *see also id.*, 11:41-42 (“[u]sing this method also represents out of band channel in the same way as in band channel”).) In other words, in Roberts, communication ports analogous to the exemplified dedicated L2 data port can be used to convey network configuration information from a registrar to an enrollee device regardless of whether an in-band or out-of-band communication method is employed.

This portion of Roberts was cited in the Petition and discussed by Petitioner’s expert. (*See, e.g.*, Petition at 26 (citing 11:19-22 of Roberts and explaining that use of “a dedicated ‘L2 data port’ ‘control channel’ ... ‘de-couples’ the ‘setup exchange from the specific wireless technology’); Ex. 1003, ¶¶ 171-172 (discussing the same passage of Roberts).) It was not, however, discussed by Patent Owner. Instead, Patent Owner simply posits—without expert support—that Roberts’s use of a dedicated port to communicate network information relates only to its in-band embodiment. This not only misreads Roberts, but it is bare attorney argument that Board should not (and cannot) credit.

2. The Petition Established that Roberts’s Enrollee Transmits the Type of Message Claims 6 and 19 Require

Patent Owner next argues that “Sonos fails to prove that Roberts’s enrollee device communicates with the registrar device after the enrollee device is successfully set up.” (Response at 11.) Here, however, Patent Owner does nothing more than address the portions of Roberts cited in the Petition in isolation. It fails to account for the reference’s collective teachings to a POSITA. This was improper: “a reference must be considered not only for what it expressly teaches, but also for what it fairly suggests.” *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994); *see also Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1049 (Fed. Cir. 2019) (holding that prior art need not “explicitly disclose” claim limitations). When all of Roberts’s

teachings are considered—as they must be in an obviousness analysis—it is apparent that claims 6 and 19 are obvious.

More particularly, Patent Owner posits that Roberts does not disclose the “contacting” claims 6 and 19 require because its system purportedly “always delete[s] the] L2 ports, regardless of whether the process is successful and even when no response is received.” (Response at 11-12.) Patent Owner separately takes issue with Roberts’s teaching that it provides “system wide visibility” into its setup progress. (Response at 12.) According to Patent Owner, this passage “only describes the system *during channel setup process* and is silent as to any general messaging between the devices about system statuses.” (*Id.*)

Once again, these characterizations of Roberts are nothing more than unsupported attorney argument. Patent Owner submitted no supporting expert testimony. This lack of supporting evidence is particularly problematic because, as Patent Owner admits, Roberts does not specifically detail “what happens after the enrollee device is successfully set up with connection information.” (Response at 7.) In other words, Roberts itself does not mandate that it operates in the way Patent Owner argues it does.

Next, the Petition did not cite Roberts’s references to the “L2 data port” and its “system wide visibility into setup progress” because they are verbatim recitations of what claims 6 and 19 require. Instead, the Petition cites these portions of Roberts

because they show that Roberts renders the claimed subject matter *obvious*. In particular, as explained in the Petition and by Petitioner’s expert, Roberts contemplates the transmission of various messages between a registrar and enrollee, including (1) messages relating to dedicated L2 port deletion and (2) general setup progress. (*See, e.g.*, Ex. 1003, ¶¶ 248-254.) These messages are sent after the enrollee has already been provided with wireless network configuration information. (*See id.*) Given this, Petitioner’s expert arrived at the entirely unsurprising conclusion that one obvious way to accomplish what Roberts teaches would be to transmit the type of messages claims 6 and 19 require. (*See id.*, ¶¶ 253, 251.) While there could of course be other ways to achieve the same result—as Patent Owner speculates in its response—this does not mean that it was not also obvious for Roberts to operate in the way claims 6 and 19 require. *See, e.g., In re Gurley*, 27 F.3d 551, 552-53 (Fed. Cir. 1994) (holding that even non-preferred, “inferior” embodiments in a prior art reference can render another patent’s claims obvious.)

Patent Owner also takes issue with Petitioner’s expert testimony, arguing that it is “conclusory” and provides no “additional support or technical reasoning.” (Response at 11.) But in the very same response, Patent Owner characterizes Petitioner’s expert declaration as including “argument ... not present in the Petition.” (*Id.* at 13.) Not only is this contradictory, but it is wrong. Petitioner’s expert cites the very same portions of Roberts as the Petition and arrives at the same conclusion.

(*Compare* Petition at 36-37 with Ex. 1003, ¶¶ 246-254.) Further, Petitioner’s expert *did* explain why it would have been obvious for Roberts’s system to transmit the type of message claims 6 and 19 require. In particular, Roberts discusses communications between an enrollee and registrar regarding network setup—including L2 port deletion—that occur “after the enrollee has already joined the wireless network.” (Ex. 1003, ¶¶ 250-251.) And Roberts also generally contemplates transmission of messages relating generally to the “setup process.” (*Id.*, ¶ 252.) Patent Owner has done nothing to rebut this.

3. Patent Owner Misconstrues the Claims

Patent Owner concludes its discussion of Roberts by arguing that “Sonos ... fails to allege or prove” that the messages Roberts’s system transmits relate to an enrollee “*successfully connecting to the WiFi network*, as claim 6 requires.” (Response at 13.) Similarly, Patent Owner characterizes any messages Roberts sends as only “inform[ing] the registrar that the enrollee device was successfully set up, not that it successfully connected to the WiFi network.” (*Id.* at 14.) This, however, appears to be premised on an overly narrow interpretation of claim 6.

Claims 6 and 19 require only transmission of a message “indicating” that “the target device has successfully entered the communication network.” (Ex. 1001, claims 6, 19.) The transmitted message does not need to be explicit, be in any particular form, have any particular format, or include any particular type of

information. Patent Owner is improperly grafting additional limitations onto the claim. Rather than simply “indicating” network “entr[y],” according to Patent Owner the message transmitted by Roberts’s enrollee must be “about” network connection. (Response at 13-14.) Moreover, rather than simply relating to network “entr[y,]” according to Patent Owner the message must also inform the registrar that the enrollee completed setup such that it is now “successfully connect[ed] to the WiFi network.” (*Id.*) Patent Owner points to nothing in the claims or specification supporting this narrowing.

Likewise, Patent Owner is also wrong when it argues that Roberts’s transmission of a “notification that ‘the setup was successful’” is not what claims 6 and 19 require because it is purportedly sent before, not “*after* the setup succeeds.” (*Id.* at 14.) Claims 6 and 19 do not require that setup be totally complete when Roberts’s enrollee “contact[s] the wireless device.” Instead, all that is required is that enrollee “successfully *enter[]* the communication network” and transmit a message to that effect. For example, claim 7, which depends on claim 6, confirms that claim 6 does not require transmission of a message indicating setup completion. This claim further requires “after contacting the wireless device, continuing the commissioning process.” (Ex. 1001, claim 7; *see also* claim 20.) In other words, further setup steps can be performed *after* the message indicating network “entr[y]” is transmitted. Thus, while claim 6’s message could indicate that setup is complete,

the claim must also embrace intermediate communications sent after a new device has “entered” a network, but before the “commissioning process” is complete. If this were not the case, claim 7 would be rendered meaningless. *See Littlefuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022) (explaining that a “claim construction that leads” to claims being “meaningless” “is generally disfavored”).

C. Petitioner Also Established that Suumäki Renders Claim 6 Unpatentable

The petition also explained why Suumäki renders claim 6 obvious. Suumäki teaches a multi-step commissioning process. First, an out-of-band NFC channel is used to provide a new device with initial network configuration information. Then, the new device uses this information to communicate with a network hub over the wireless network itself for purposes of continuing the configuration process. (*See* Petition at 17-18, 67-68.) The Petition went on to explain that multiple of the messages transmitted over the wireless network during the second part of this process—including the transmission of authentication information and a later “WSC_Done message”—satisfy claim 6. (*See id.* at 68; Ex. 1003, ¶¶ 451-463 (similarly explaining that Suumäki transmits various messages that “indicat[e]” that a device has “successfully entered” an existing wireless network).)

Patent Owner’s sole response to this is that Suumäki’s messages are purportedly sent too early in the process. According to Patent Owner, the

“communications ... occur before device B or the Enrollee device connect to the WiFi network, i.e., device B is not connected to the WiFi network at the time it sends the authentication information, and the Enrollee device is not connected to the WiFi network at the time it sends the WSC_Done message.” (Response at 3, 17.)

Again, Patent Owner is misreading claims 6 and 19. These claims require only transmission of a message “indicat[ing]” that a device has “successfully entered the communication network.” They do not require that the network configuration process be completely finished. This is exactly what Suumäki teaches: a device seeking to join an existing wireless network transmits various messages to a hub over that network. And these messages “indicat[e]” that the device has “successfully entered” the network such that device configuration can proceed.

The “WSC_Done message” discussed in the Petition is exemplary. After the performance of an NFC touch event, Suumäki explains that the enrollee device “decides to *connect to the network*” for purposes of running a “Wi-Fi Simple Configuration EAP method.” (Ex. 1005, 14:53-64 (emphasis added); 15:10-12 (explaining that an enrollee can “*stay connected* to the AP and rerun the Wi-Fi Simple Configuration EAP method by sending another EAPoL-Start message” if the first configuration attempt was unsuccessful) (emphasis added).) The “WSC_Done message” is the last message sent by the temporarily connected device to the network hub during this process. (See *id.*; see also *id.*, 27:22-46 (similarly explaining that a

device transmits various “messages” to a “hub device” as part of a “Wi-Fi Simple Configuration EAP” performed after the “hub ... grant[s] network access to” the “device” and the device “connects to the hub” wirelessly.) As can be seen, Suumäki itself says that the new device is “connect[ed]” to the network at the time the message is transmitted. (*Id.*) And because this message will only be transmitted if the device did in fact connect to the hub device at the start of the configuration process, it “indicat[es]” that the device has “successfully entered” the network just as this claim limitation requires. (*See* Ex. 1003, ¶¶ 461-463.) Patent Owner is correct that Suumäki explains that the new device “disassociates and reconnects” with the hub after sending the “WSC_Done message” (albeit with different credentials). (*e.g.*, Ex. 1005, 14:65-15:2.) But, rather than distinguishing Suumäki, this merely serves to further confirm that it teaches what is required. Suumäki could not “reconnect” to the wireless network if it was not connected to that network in the first place.

III. CONCLUSION

For the above reasons, and as further explained in the Petition, Petitioner requests that the '615 patent's claims be found obvious.

Respectfully submitted,

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Dated: April 23, 2024

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The undersigned certifies that the foregoing paper complies with the type-volume limitation in 37 C.F.R. § 42.24. According to the utilized word-processing system's word count, the paper contains 3,492 words.

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The undersigned hereby confirms that the foregoing paper was caused to be served on April 23, 2024 via email upon the following counsel of record for Patent

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