

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONOS, INC.,
Petitioner,

v.

GOOGLE LLC,
Patent Owner.

IPR2023-00806
Patent 11,050,615 B2

Before KEVIN F. TURNER, BARRY L. GROSSMAN, and
SCOTT RAEVSKY, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background*

Sonos, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 1–3, 5–12, and 15–19 (the “challenged claims”) of U.S. Patent No. 11,050,615 B2 (Ex. 1001, “the ’615 Patent”). Google LLC (“Patent Owner”) timely filed a Preliminary Response (Paper 6, “Prelim. Resp.”) contending that the Petition should be denied as to all challenged claims.

An *inter partes* review may be instituted only if “the information presented in the petition . . . and any [preliminary] response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons given below, Petitioner has established a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims of the ’615 Patent. Accordingly, we institute an *inter partes* review of claims 1–3, 5–12, and 15–19 of the ’615 Patent on the grounds of unpatentability raised in the Petition.

B. *Real Party-in-Interest*

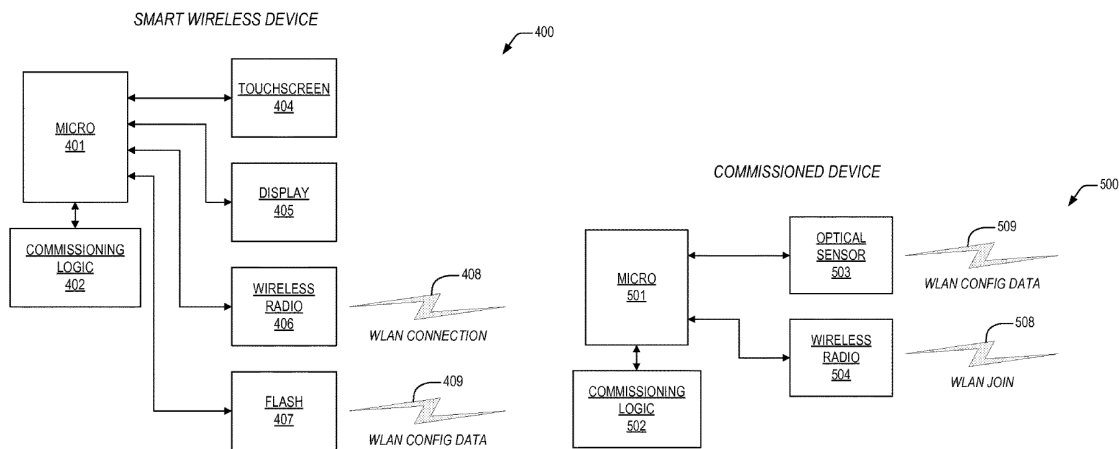
Petitioner identifies itself as the sole real party-in-interest. Pet. 4. Patent Owner identifies itself as the sole real party-in-interest. Paper 4, 2.

C. *Related Proceedings*

The Petition states that the ’615 Patent is asserted in the following litigation: *Google LLC v. Sonos, Inc.*, No. 3:22-CV-04553 (N.D. Cal.); *Certain Audio Players and Components Thereof II*, Inv. No. 337-TA-1330 (U.S. ITC). Pet. 4; Paper 4, 2.

D. The '615 Patent

The '615 patent relates to the “commissioning of electronic devices onto wireless local area networks (WLANs),” whereby wireless electronic devices do not merely connect themselves to the nearest wireless network, but rather they must be “commissioned” or “provided with configuration data to enable them to join” the network. Ex. 1001, 1:37–40, 1:62–2:2. The '615 patent asserts that commissioning can entail complicated sequences and equipment, which can be problematic because it necessitates the device user to “either be very smart,” or seek “assistance from someone who is knowledgeable.” *Id.* at 2:2–14, 6:35–39. The '615 patent seeks to employ a “smart wireless device” with a transducer that can transit “WLAN configuration packets” to a target device to allow that device to join the WLAN. *Id.* at 2:43–64. Per the '615 patent, block diagrams of a smart wireless device and commissioned device (Figures 4 and 5) are reproduced below:



Figures 4 (on the left) and 5 (on the right) of the '615 Patent illustrate block diagrams showing a Smart Wireless [commissioning] Device and a commissioned device, respectively

As shown in Figure 4, smart wireless device 400 includes microcomputer 401 coupled to commissioning logic 402 and touchscreen 404 and display 405, as well as wireless radio 406, that allows the device to participate in and communicate via WLAN 408. Ex. 1001, 9:7–15, 9:44–47. The smart wireless device utilizes a side band, proximity based, communication channel that is established between the smart wireless device and the other device to be commissioned onto the WLAN. This communication channel can be a camera flash, light emitted by the display backlight, a transmitter that utilizes “BLUETOOTH®, near field communications (“NFC”), mechanical vibration/accelerometer transmission, RF identification, Zigbee®, radio frequency for consumer electronics (RF4CE®), Z-Wave®, or other proprietary standards. *Id.* at 8:9–13, 42–67. Irrespective of its form, the transmitting element uses well-known communication protocols, error correcting codes, line coding, and/or modulation techniques, and the WLAN configuration data can include the name of the WLAN, security mode, and any required security passphrase. *Id.* at 10:1–6, 8:32–37.

As shown in Figure 5, the device commissioned onto the network has microcontroller 501 and wireless radio 504, as well as a receiving element that allows it to receive the configuration data transmitted by the smart device. Ex. 1001, 7:55–59, 10:7–17. The commissioned device extracts the WLAN configuration data from the received configuration message and employs the configuration data in order to join the WLAN. *Id.* at 8:38–41.

E. Illustrative Claim

As noted above, Petitioner challenges claims 1–3, 5–12, and 15–19, with claims 1, 11, and 16 being independent claims. Claim 1 is illustrative of the challenged claims and is reproduced below:

1. A method for commissioning a target device onto a communication network, comprising:
at the target device including a microprocessor, a wireless radio, and commissioning logic:
receiving a request to initiate a commissioning process with the target device;
establishing a short-range signal transmission path with a wireless device independently of the communication network;
in response to receiving the request, receiving one or more network configuration packets from the wireless device via the short-range signal transmission path, wherein the one or more network configuration packets convey network configuration data associated with the communication network according to a predetermined data format, the network configuration data including at least a security passphrase for accessing the communication network;
executing an application on the target device to decode and process the one or more network configuration packets and recover the network configuration data; and
after receiving the network configuration packets, employing via the wireless radio the network configuration data conveyed in the one or more network configuration packets to enable the target device to join the communication network.

Ex. 1001, 13:28–54.

F. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of the challenged claims of the '615 Patent based on the following grounds under 35 U.S.C. § 103, relying on the Declaration from Dr. Douglas C. Schmidt (Ex. 1003). Pet. 6, 18–74.

References	Basis 35 U.S.C. §	Claims Challenged
Roberts ¹ , Asokan ²	103 ³	1–3, 5–12, 15–19
Suumäki ⁴	103	1–3, 5–12, 15–19

II. DISCUSSION

A. The Level of Ordinary Skill in the Art

Petitioner, supported by Dr. Schmidt’s testimony, proposes that a person of ordinary skill in the art at the time of the invention “would have had a degree in computer engineering, computer science, or a similar discipline, along with 2 years of professional experience in the fields of networking and network-based systems or applications, or an equivalent level of skill, knowledge, and experience,” and would have been “aware of and generally knowledgeable about how devices were provisioned onto wireless networks, along with standards applicable to well-known methods for communication such as Wi-Fi, Bluetooth, and NFC available at the time

¹ US 7,616,594 B2, issued Nov. 10, 2009 (Ex. 1004, “Roberts”).

² US 2006/0251256 A1, published Nov. 9, 2006 (Ex. 1006, “Asokan”).

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the application from which the '615 Patent issued was filed before this date, the pre-AIA version of § 103 applies.

⁴ US 9,288,228 B2, filed Aug. 5, 2011, patented Mar. 15, 2016 (Ex. 1005, “Suumäki”).

the '615 patent was filed.” Pet. 18 (citing Ex. 1003 ¶¶ 37–39). Patent Owner does not challenge the qualifications proposed by Petitioner for a person of ordinary skill in the art. *See generally* Prelim. Resp.

At this stage of the proceeding, we find Petitioner’s proposal consistent with the level of ordinary skill in the art reflected by the prior art of record, *see Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978), and, therefore, we adopt Petitioner’s unopposed position as to the level of ordinary skill in the art for purposes of this Decision.

B. Claim Construction

In this *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b) (2022). The claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art at the time of the invention. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc). In construing claims in accordance with their ordinary and customary meaning, we take into account the specification and prosecution history. *Phillips*, 415 F.3d at 1315–17.

Petitioner asserts that the terms of the '615 patent’s claims do not require further construction and can be afforded their plain and ordinary meaning. Pet. 14 (citing Ex. 1003 ¶¶ 79–82). Patent Owner does not assert any express constructions. *See generally* Prelim. Resp. Given the lack of controversy, we need not explicitly adopt or discuss any constructions in this

decision. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

C. Legal Standards – Obviousness

The U.S. Supreme Court sets forth the framework for applying the statutory language of 35 U.S.C. § 103 in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966):

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

As explained by the Supreme Court in *KSR International Co. v. Teleflex Inc.*,

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”)).

“Whether an ordinarily skilled artisan would have been motivated to modify the teachings of a reference is a question of fact.” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1327 (Fed. Cir. 2016) (citations omitted). “[W]here a party argues a skilled artisan would have been motivated to combine references, it must show the artisan ‘would have had a reasonable expectation of success from doing so.’” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1360–61 (Fed. Cir. 2017) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)).

D. Obviousness over Roberts and Asokan

Petitioner asserts that claim 1–3, 5–12, and 15–19 are unpatentable over Roberts and Asokan. Pet. 6. Petitioner addresses each limitation of the independent claims and provides the testimony of Dr. Schmidt in support of its position with respect to them. Pet. 18–33; Ex. 1003 ¶¶ 120–222.

Patent Owner does not contest Petitioner’s assertions regarding the limitations of the independent claims. *See generally* Prelim. Resp. With respect to this ground of unpatentability, Patent Owner argues that the Petition fails to provide an adequate reason to modify Roberts with Asokan, discussed further below. *Id.* at 3–6.

We begin with brief discussions of Roberts and Asokan, then consider Petitioner’s arguments with respect to the independent claims, as well as Patent Owner’s arguments concerning the adequacy of this ground of unpatentability.

1. Roberts

Roberts relates to a system for establishing communication with a wireless network, where before joining such a network, a device needs WiFi

specific settings, such as a service set identifier (SSID), a cryptographic key, and operating channels. Ex. 1004, 1:12–14, 29–32. Roberts discusses that existing methods for configuring a device are “difficult,” such that a user must often manually enter the configuration in the device, “which can be a very confusing process.” *Id.* at 1:26–35.

To address this problem, Roberts teaches a system in which a new “enrollee device” is automatically provided with the “necessary configuration settings” by a “registrar” device that “is already connected to the network, as illustrated in Figure 5 of Roberts, reproduced below:

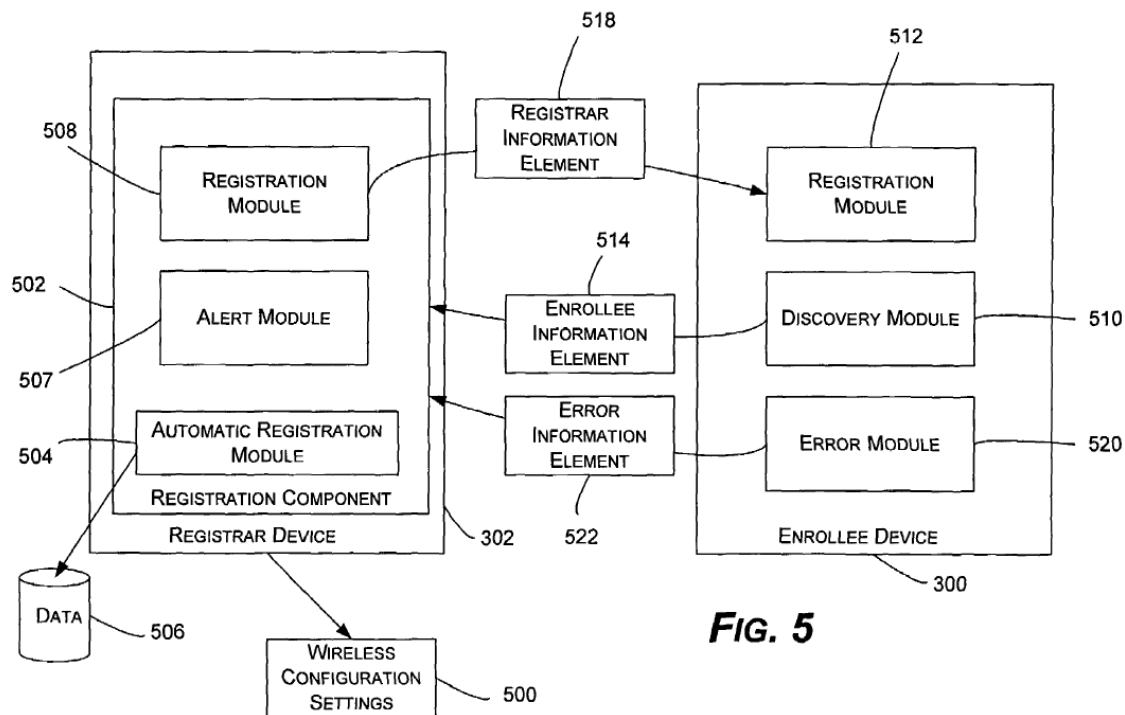


Figure 5 illustrates the architectures of the registrar and enrollee devices

Enrollee device 300 transmits enrollee information element 514, and in response, a communication channel is established, and registrar device 302 transmits back registrar information element 518 over this channel. Ex. 1004, 2:6–10, 7:43–52, 9:17–20, 42–45, 11:18–21, 33–40, 62–65, 12:1–6,

Figs. 5, 6. Either an “in band” or “out of band” communication channel, such as BLUETOOTH®, can be employed. *Id.* at Abstr., 1:66–2:19; 6:26–28, 7:43–52. Registrar information element 518 includes the network configuration information—the network SSID and key—the enrollee device needs to join the network. *Id.* at 7:30–42, Fig. 8.

2. *Asokan*

Asokan is directed to “[m]ethods and systems for managing access to a wireless local area network” by new or guest devices. Ex. 1006, Abstract, ¶ 2. Asokan explains that its system utilizes an out-of-band channel to communicate authentication key and network address information to that device. *Id.* ¶ 10. The employed out-of-band channel can be based on “NFC, short range wireless communication infrared, Bluetooth, UWB, WiFi, RFID, USB memory stick, etc.” *Id.* ¶ 25. Asokan discloses that the use of an out-of-band channel, as opposed to the in-band channel, allows for “simpler and more efficient wireless network setup and administration” and “provides for an increase to security and usability.” *Id.* at Abstract, ¶¶ 8, 10, 25.

3. *Independent Claims 1, 11, and 16*

Petitioner asserts that

Claims 1, 11, and 16 are all independent. These claims embrace the same, basic subject matter. The only difference is that claim 1 is directed to a “method.” Claim 11 is directed to a “target device.” And, claim 16 is directed to “non-transitory computer readable storage medium.” Because of their similarity, this petition will discuss the claims together.

Pet. 19. We agree with Petitioner with respect to the independent claims. For purposes of our analysis, claims 11 and 16 are similar to claim 1, and Patent Owner does not contend otherwise. *See generally* Prelim. Resp. Petitioner provides a clause-by-clause analysis

identifying each clause of claims 1, 11, and 16, and asserting where the claimed limitation is shown in the references, as discussed below.

i) Petitioner's Assertions

Petitioner asserts that Roberts relates to a system for establishing communication with a wireless network, where a wireless device that desires to be connected to the network is provided with the necessary configuration setting by a device already connected to the network. Pet. 20 (citing Ex. 1004, 1:12–14, 47–55). Petitioner also asserts that Roberts provides an example of a basic configuration for a computer, containing at least one processing unit and memory that can store instructions to carry out tasks, with the computer either being a “registrar device” or an “enrollee device.” *Id.* at 22–23 (citing Ex. 1004, 3:15–16, 54–60, 4:51–54, Fig. 2). Petitioner also asserts that persons of ordinary skill in the art would have recognized that Roberts would have employed wireless radio to engage in wireless communications and transmit modulated signals wirelessly. *Id.* at 23 (citing Ex. 1004, 1:27–29, 56–65, 3:41–46, 4:18–32, 9:8–10; Ex. 1003 ¶¶ 137–145).

With respect to the step of receiving a request to initiate a commissioning process, Petitioner asserts that Roberts discloses that the process for configuring a new device begins when the power for the enrollee device is turned on, and then, either automatically or upon user initiation, the enrollee device broadcasts information about itself and its capabilities in the form of an enrollee information element. Pet. 24 (citing Ex. 1004, 5:44–53). With respect to the step of establishing a short-range signal transmission path, Petitioner asserts that Roberts explains that as part of this process, a connection between the enrollee and registrar is created to facilitate the communication of configuration information, wherein the connection can be

either “in band” or “out-of-band” communication, with “a Bluetooth™ connection” serving as an example of out-of-band communication. *Id.* at 26 (citing Ex. 1004, 1:66–2:19, 2:6–10, 6:26–28, 7:43–52, 9:17–20, 42–45, 11:18–22, 33–40, 62–65, 12:1–6).

Petitioner acknowledges that Roberts discloses both in-band and out-of-band communication, but asserts that a person of ordinary skill in the art would have selected, and considered obvious, the use of an out-of-band channel when implementing Roberts. Pet. 27. Petitioner asserts that Roberts provides instructions to do so, and that Asokan confirms that a person of ordinary skill in the art not only would have considered use of an out-of-band channel with Roberts, but would have preferred such a method of communication. *Id.* at 26–27 (citing Ex. 1004, 2:6–10; 7:46–52; Ex. 1006, Abstr., ¶¶ 2, 3, 10, 23, 25; Ex. 1003 ¶¶ 178–186.).

With respect to receiving one or more network configuration packets from the wireless device limitation, Petitioner further asserts that Roberts discloses that after element 514 is received by a registrar device, the registrar provides configuration information to the enrollee. Pet. 28 (citing Ex. 1004, 1:66–2:2, 5:44–53, 7:11–12, 25–29, 31–33, Fig. 6). The configuration information is sent “via the same channel through which the enrollee information element 514 was broadcast,” using “media specific data frames,” and can include various information fields, including a header and address “to ensure that the targeted enrollee device . . . directly receives the packet.” *Id.* at 28–29 (citing Ex. 1004, 7:43–52, 11:65–67, 12:7–11, 28–29, 12:64–13:11; Ex. 1003 ¶¶ 194–197). Additionally, Petitioner asserts that even if Roberts did not itself already teach the use of packets with defined formats, a person of ordinary skill would have considered this obvious

because Bluetooth, employed by Roberts, utilizes a standardized packet format. *Id.* at 29–30 (citing Ex. 1004, 2:6–10; Ex. 1003 ¶¶ 198–202; Ex. 1017, 2:15–17, 4:57–58, 5:59–61, Fig. 3). In addition, Petitioner asserts that Figure 8 of Roberts illustrates that the configuration information that can be conveyed to an enrollee includes the wireless network name and encryption information, such as an encryption key, for the network. *Id.* at 30–31 (citing Ex. 1004, 1:29–32, 7:30–42, Fig. 8).

With respect to decode and process the one or more network configuration packets limitation, Petitioner asserts Roberts discloses that its invention can be implemented by programs on its devices, and that Roberts explains that upon receipt of a packetized registrar information element 518, an enrollee extracts and uses “the configuration information within” the element for purposes of joining a network. Pet. 31–32 (Ex. 1004, 1:47–52, 3:15–16, 58–60, 5:44–47, 8:39–43, 13:16–24, Fig. 6; Ex. 1003 ¶¶ 209–217). With respect to enabling the target device to join the communication network limitation, Petitioner asserts that, in Roberts, upon receipt of a registrar information element, an enrollee device attempts registration with the wireless network using the configuration information within the element. *Id.* at 32–33 (citing Ex. 1004, Abstr., 1:46–55, 4:38–42, 8:39–45, Fig. 6).

Petitioner also asserts that persons of ordinary skill in the art would have considered it obvious and would have been motivated to apply Asokan’s teachings to Roberts. Pet. 43 (citing Ex. 1003 ¶¶ 293–320). Petitioner asserts that Asokan explains that employing only an “in-band” communication channel when commissioning a new network device “present[s] a variety of problems.” *Id.* at 43–44 (quoting Ex. 1006 ¶ 6). Petitioner further asserts that Asokan goes on to explain that its system

overcomes these issues and provides a simpler and more efficient wireless network setup and administration, and the ability to use out-of-band where possible provides for an increase to security and usability. *Id.* at 44 (Ex. 1006 ¶¶ 8, 10, 25). Petitioner asserts that Asokan's teachings would have provided strong motivation to employ a separate, out-of-band communication channel in Robert's system, to improve security of the process and easy management of guest access. *Id.* at 44–45 (citing Ex. 1003 ¶¶ 295–314). Petitioner also points out that Roberts is already open to and allows for the use of out-of-band communication channels during new device commissioning, and that reasonably skilled artisans would have had a reasonable expectation of success that their process can be successfully combined. *Id.* at 46–47 (citing Ex. 1004, Abstr., 1:66–2:19, 2:1–3, 6:26–28, 7:43–52; Ex. 1006 ¶¶ 6, 10, 26; Ex. 1003 ¶¶ 315–324; *KSR Int'l Co.*, 550 U.S. at 406).

ii) Patent Owner's Arguments

Patent Owner argues that the Petition fails to provide an adequate reason to modify Roberts with Asokan. Prelim. Resp. 3–6. Patent Owner argues that the Petition merely asserts what Asokan discloses with respect to specific elements of the challenged claims, but does not provide any rationale for the combination of the references for those specific limitations. *Id.* at 3–4. Patent Owner also argues that the general motivations to combine which are asserted are unpersuasive because they identify a feature in Asokan that is already described in Roberts. *Id.* at 4–5 (citing Pet. 43–47; *South-Tek Sys., LLC v. Engineered Corrosion Sols., LLC*, 748 Fed. Appx. 1003, 1006 (Fed. Cir. 2018); *In re Anova Hearing Labs, Inc.*, 809 Fed. Appx. 840, 843 (Fed. Cir. 2020)). Patent Owner also argues that the

remaining arguments that the Petition asserts are conclusory and unpersuasive. *Id.* at 5. Lastly, Patent Owner argues that the benefits of the combination of Roberts with Asokan cannot be assumed where the Petition fails to provide details of how to modify Roberts to incorporate those benefits from Asokan. *Id.* at 6 (citing *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017); *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1068 (Fed. Cir. 2018)).

iii) Analysis

We are not persuaded by Patent Owner’s arguments with respect to this ground of unpatentability. Petitioner acknowledges that Roberts references “both in-band and out-of-band communication.” Pet. 27. In effect, Roberts provides options but does not favor a specific option. Asokan is cited because it favors one of those options and provides reasons why its option is preferred. Pet. 27–28. Petitioner is asserting, in effect, that Asokan guides one of ordinary skill in the art to select a particular option; in that sense, Petitioner is not advocating the bodily incorporation of some aspect of Asokan into the system of Roberts.

Instead, Petitioner is arguing that one of ordinary skill in the art would have selected a particular embodiment of Roberts based on the teachings of Asokan. It may be that all of the benefits of use of the out-of-band communication detailed by Asokan would not result from the modified system of Roberts or the selection of a single embodiment, but Patent Owner, at this time, has not argued why those benefits would not accrue. Instead, Patent Owner is merely asserting that the arguments provided in the Petition are conclusory. We do not agree; we assume that in view of Asokan one of ordinary skill in the art would have considered the benefits of in-band

and out-of-band communication, and would have made a selection on the basis of the reasons stated therein. Lastly, we are not persuaded that the Petition “omits the details of how to modify Roberts to incorporate this benefit from Asokan.” Prelim. Resp. 6 (citing Pet. 45). We view the motivation-to-combine analysis as a flexible one. *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1379–80 (Fed. Cir. 2023) (“[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” (quoting *KSR*, 550 U.S. at 420 (emphasis added))). As discussed above, we assume that Roberts operates as disclosed using either in-band or out-of-band communication, such that we do not doubt that operating according to one embodiment would be operative. As such, given the subject ground of unpatentability, we are not persuaded that the Petition’s discussion of motivation to combine Roberts with Asokan renders the ground deficient.

iv) Conclusions Regarding Independent Claims 1, 11, and 16

We have considered Petitioner’s evidence and arguments with respect to independent claims 1, 11, and 16, including the relevant testimony of Dr. Schmidt, and Patent Owner’s traversing arguments, and find Petitioner’s evidence and arguments to be sufficient to show that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that Roberts and Asokan teach or suggest all of the limitations of those independent claims.

4. Dependent Claims 2, 3, 5–10, 12, 15, and 17–19

Petitioner also addresses the limitations of dependent claims 2, 3, 5–10, 12, 15, and 17–19. Pet. 33–43. Patent Owner does not separately

address the limitations of the dependent claims. *See generally* Prelim. Resp. We have considered Petitioner’s evidence and arguments with respect to the limitations of the dependent claims and find Petitioner’s evidence and arguments to be sufficient to show that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that Roberts and Asokan teach or suggest the limitations of dependent claims 2, 3, 5–10, 12, 15, and 17–19.

E. Obviousness over Suumäki

Petitioner asserts that claim 1–3, 5–12, and 15–19 are unpatentable over Suumäki. Pet. 6. Petitioner addresses each limitation of the independent claims and provides the testimony of Dr. Schmidt in support of its position with respect to them. Pet. 47–64; Ex. 1003 ¶¶ 329–420.

Patent Owner does not contest Petitioner’s assertions regarding the limitations of the independent claims. *See generally* Prelim. Resp. With respect to this ground of unpatentability, Patent Owner argues that the Petition fails to provide any explanation of how or why the different embodiments of Suumäki would have been combined, discussed further below. *Id.* at 2–3.

We begin with a brief discussion of Suumäki, then consider Petitioner’s arguments with respect to the independent claims, as well as Patent Owner’s arguments concerning the adequacy of this ground of unpatentability.

1. Suumäki

Suumäki is directed to processes related to wireless communication and to connection setup in device-to-device communication using an out-of-band carrier. Ex. 1005, 1:8–10. Suumäki details that this out-of-band

carrier can be near-field communication, that allows for a new device to be added to the network with a “simple wave or touch.” *Id.* at 1:52–2:3. One embodiment, Figure 1D, is reproduced below:

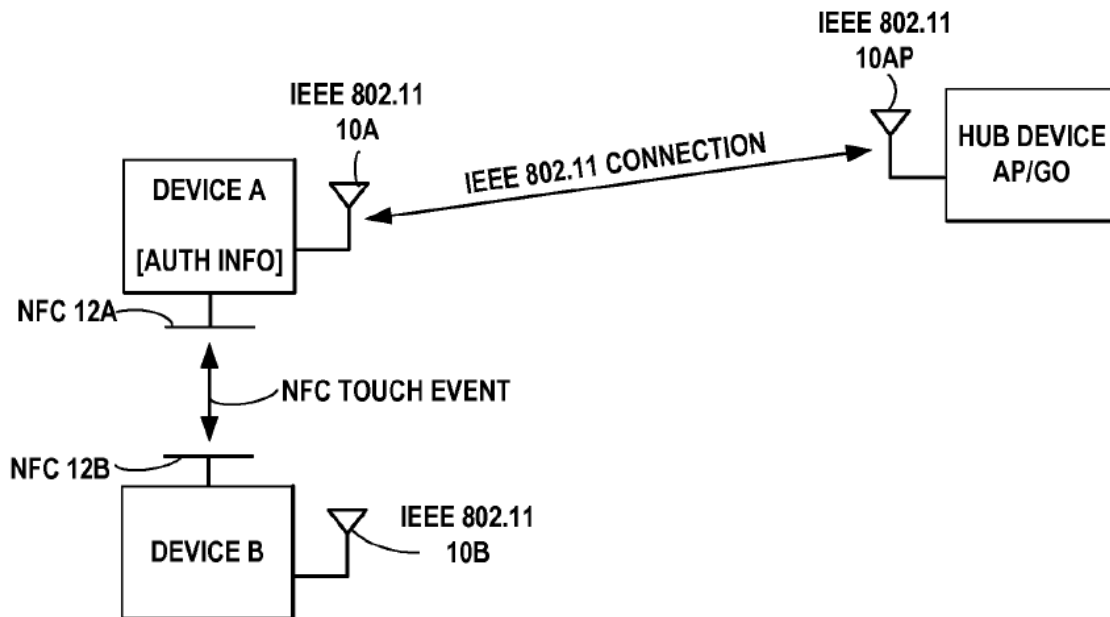


Figure 1D illustrates an NFC touch event to initiate a short-range carrier transport switch procedure

Suumäki discusses an existing IEEE 802.11 in-band WLAN network including device A and a hub device AP/GO, whereby Suumäki’s system operates to commission another device B onto this network, by having the user of device A touch the NFC transponder of device A to the NFC transponder of device B in order to initiate a short-range carrier transport switch procedure with device B. Ex. 1005, 7:20–8:9, 20:65–21:3, 21:37–44. Authentication information and connection information, such as the MAC address of the hub device AP/GO is then transmitted from device A to device B. *Id.* at 21:52–59. Upon receipt of the transmission, device B extracts the network authentication and connection information it contains and uses it to communicate with the hub over the wireless network to

complete the network configuration process. *Id.* at 22:1–13, 27:17–21, Fig. 1G. This allows the new device to be automatically connected to the hub device AP/GO and the network it manages “without requiring the user to type in a PIN number.” *Id.* at 21:32–37.

2. *Independent Claims 1, 11, and 16*

i) *Petitioner’s Assertions*

Petitioner asserts that Suumäki relates to wireless communication connection setup using an out-of-band carrier, where Suumäki discloses a variety of communication technologies, including an “IEEE 802.11 wireless local area network (WLAN).” Pet. 47–48 (citing Ex. 1005, 1:9–11, 39–51, 2:7–10, 3:32–40). Petitioner also asserts that Suumäki discloses that “device A” and “device B” may be a “cellular telephone, PDA, laptop computer, and the like,” with Figure 2 providing a functional block diagram of the devices. *Id.* at 49 (citing Ex. 1005, 8:16–20, 20:50–64, 23:22–23, 34–36, Figs. 1B, 2). With respect to the “receiving a request to initiate a commissioning process” limitation, Petitioner asserts that Suumäki teaches that its system allows “device B,” i.e., the claimed target device, to “activate a different wireless communication protocol” to obtain network access through the hub device AP/GO and join the existing infrastructure network. *Id.* at 50 (citing Ex. 1005, 25:2–6, 21:32–37). Petitioner also highlights Suumäki’s discussion of an “NFC touch event” to enable device B to obtain network access. *Id.* at 51 (citing Ex. 1005, 21:37–50, 23:22–25). Petitioner also asserts this NFC communication link as providing the claimed “short-range signal transmission path” that is independent of the communication network. *Id.* at 52–53 (citing Ex. 1005, 1:39–55, 62–65, 18:67–19:3, 21:31–44, 23:23–32, 24:65–25:1, Figs. 1D, 1E, 1F).

With respect to the “receiving one or more network configuration packets from the wireless device via the short-range signal transmission path” limitation, Petitioner asserts that after performance of the NFC touch event, in Suumäki, device A sends device B a “handover response select message 61,” that includes authentication and connection information, such as the MAC address of the hub device AP/GO, to carry out a connection setup between device B and the hub device AP/GO. Pet. 54 (citing Ex. 1005, 21:52–59, 25:60–61, Fig. 3B). Petitioner further asserts that although Suumäki does not explicitly characterize the NFC-based messages its system transmits as “packets,” a person of ordinary skill in the art would nonetheless consider it obvious that the messages would have been in this form, understanding that the term “packet” to refer simply to “[a] unit of information transmitted as a whole from one device to another on a network.” *Id.* at 57 (citing Ex. 1005, 20:24–31, 21:52–59, 25:34–42, 60–64, Fig. 3B; Ex. 1007, 385; Ex. 1003 ¶¶ 383–389).

With respect the “to decode and process the one or more network configuration packets” limitation, Petitioner asserts Suumäki discloses that the memory of device A and device B include programmed instructions of the NFC Connection Handover protocol implemented as software. Pet. 60 (citing Ex. 1005, 24:33–38). Petitioner also asserts that Suumäki explains that upon receipt of message 61, one of the functions carried out by the NFC Connection Handover program running on device B is to use the connection parameters the message contains to setup an IEEE 802.11 in-band short-range carrier communication connection with the hub device. *Id.* (citing 22:1–13, 27:17–21).

With respect to “enabling the target device to join the communication network” limitation, Petitioner asserts that, in Suumäki, device B includes one or more in-band short-range carrier transceivers that allow it to engage in IEEE 802.11 WLAN communications, and upon receipt of NFC handover select message, device B uses the authentication and connection information the message contains to setup an IEEE 802.11 in-band short-range carrier communication connection with the hub device using this transceiver. Pet. 61 (citing Ex. 1005, 22:1–13, 23:26–30, 47–50, 27:17–21, Fig. 1G).

Petitioner also asserts that persons of ordinary skill in the art would have considered it obvious and would have been motivated to use different embodiments of Suumäki together and would have expected to succeed when doing so. Pet. 73 (citing Ex. 1003 ¶¶ 493–505). Petitioner asserts that Suumäki allows for the use of many different communication methods, incorporating by reference several communication standards. *Id.* (citing Ex. 1005, 3:27–50, 20:20–22 (incorporating Ex. 1008), 19:24–26, 33:58–61 (incorporating Ex. 1012)). Petitioner also asserts that persons of ordinary skill in art would have recognized that use of the standards would ensure that Suumäki’s system is compatible and can be used with the types of NFC hardware present in commercially available devices. *Id.* at 74 (citing Ex. 1003 ¶ 505).

ii) Patent Owner’s Arguments

Patent Owner argues that the Petition fails to provide a complete obviousness ground for Suumäki. Prelim. Resp. 2. Patent Owner argues that nothing in the portion of the Petition devoted to motivation under this ground (Pet. 73) “explains how Petitioner proposes to combine the admittedly different embodiments of Suumäki or ties the stated motivations

to the specific modifications necessary to drive a skilled artisan to arrive at that combination, as required under Federal Circuit law.” *Id.* at 2–3 (citing *KSR Int’l Co.*, 550 U.S. at 401–02, 418; *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012); *Personal Web Techs.*, 848 F.3d at 994; *Polaris*, 882 F.3d at 1068; *Ariosa Diagnostics v. Verinata Health, Inc.*, IPR2013-00276, Paper 43 (PTAB November 23, 2014); *Athena Automation Ltd. v. Husky Injection Molding Systems Ltd.*, IPR2013-00290, Paper 45 (PTAB October 23, 2014)).

iii) Analysis

We are not persuaded by Patent Owner’s arguments with respect to the obviousness ground of unpatentability based on Suumäki. Although Petitioner acknowledges multiple embodiments contained in Suumäki, we are not persuaded that the Petition relies upon multiple embodiments in its ground of unpatentability. We determine that the Petition relies on the “NFC Forum Connection Handover protocol” to teach or suggest the elements of the independent claims. Petitioner does assert that NDEF records comprise packets and is concerned that specific transmissions from NFC devices constitute packets (Pet. 57–59), but does not appear to seek to combine those embodiments with those that do not employ NFC, for example. Patent Owner does not point to specific instances where the Petition combines embodiments, such that it is difficult to determine whether a more robust explanation from Petitioner is necessary. Additionally, looking at the totality of the Petition’s discussion in its “Motivation to Combine” section (Pet. 73–74), this section appears to be concerned that different standards in NFC might provide different functionalities, which seems to hearken back to the section arguing that the use of “packets” would

have been obvious to those of ordinary skill in the art, in view of the different standards. *See* Pet. 54–59. As such, given the subject ground of unpatentability, we are not persuaded that the Petition’s discussion of motivation to combine embodiments in Suumäki renders the ground deficient.

iv) Conclusions Regarding Independent Claims 1, 11, and 16

We have considered Petitioner’s evidence and arguments with respect to independent claims 1, 11, and 16, including the relevant testimony of Dr. Schmidt, and Patent Owner’s traversing arguments, and find Petitioner’s evidence and arguments to be sufficient to show that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that Suumäki teaches or suggests all of the limitations of those independent claims.

3. Dependent Claims 2, 3, 5–10, 12, 15, and 17–19

Petitioner also addresses the limitations of dependent claims 2, 3, 5–10, 12, 15, and 17–19. Pet. 64–73. Patent Owner does not separately address the limitations of the dependent claims. *See generally* Prelim. Resp. We have considered Petitioner’s evidence and arguments with respect to the limitations of the dependent claims and find Petitioner’s evidence and arguments to be sufficient to show that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that Suumäki teaches or suggests the limitations of dependent claims 2, 3, 5–10, 12, 15, and 17–19.

III. CONCLUSION

For the foregoing reasons, Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that at least one claim of the ’615 Patent is unpatentable.

III. ORDER

Accordingly, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted as to claims 1–3, 5–12, and 15–19 of the '615 Patent on the following asserted grounds:

Claims 1–3, 5–12, and 15–19 under 35 U.S.C. § 103(a) as unpatentable over Roberts and Asokan; and

Claims 1–3, 5–12, and 15–19 under 35 U.S.C. § 103(a) as unpatentable over Suumäki; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, the trial commencing on the entry date of this Decision.

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For PETITIONER:

K. Patrick Herman
Alyssa Caridis
ORRICK, HERRINGTON & SUTCLIFFE LLP
P52PTABDocket@orrick.com
A8CPTABDocket@orrick.com

For PATENT OWNER:

Erika Harmon Arner
Cory C. Bell
Alissa E. Green
Umber Aggarwal
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP
erika.arner@finnegan.com
cory.bell@finnegan.com
alissa.green@finnegan.com
umber.aggarwal@finnegan.com