

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

ZOMM, LLC,
Patent Owner.

IPR2019-00275
Patent 8,351,895 B2

Before JOSIAH C. COCKS, SHARON FENICK, and JASON W. MELVIN,
Administrative Patent Judges.

FENICK, *Administrative Patent Judge.*

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
Denying Patent Owner's Revised Motion to Amend
35 U.S.C. § 318(a)

We have jurisdiction to conduct this *inter partes* review under 35 U.S.C. § 6(b)(4). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed herein, we determine that Apple, Inc. (“Petitioner”) has shown, by a preponderance of the evidence, that claims 1–6, 12, and 16–20 of U.S. Patent No. 8,351,895 B2 (Ex. 1001, “the ’895 patent”) are unpatentable. We also deny the Revised Contingent Motion to Amend filed by Zomm, LLC (“Patent Owner”).

I. BACKGROUND

A. *Procedural History*

Petitioner filed a Petition (Paper 2, “Pet.”), requesting an *inter partes* review of claims 1–6, 12, and 16–20 of the ’895 patent (“the challenged claims”). Patent Owner did not file a preliminary response. We determined that the information presented in the Petition established that there was a reasonable likelihood that Petitioner would prevail with respect to its unpatentability challenges. Pursuant to 35 U.S.C. § 314, we instituted this proceeding on May 10, 2019, as to all challenged claims and all grounds of unpatentability. Paper 7 (“Dec. on Inst.”).

Patent Owner filed a Patent Owner Response on August 3, 2019. Paper 11 (“PO Resp.”). Patent Owner also filed on the same date a contingent Motion to Amend, including a request for preliminary guidance. Paper 12 (“MTA”). Petitioner filed a Reply (Paper 14, “Pet. Reply”) and an Opposition to Patent Owner’s Motion to Amend (Paper 15) on October 25, 2019. On November 19, 2019, we issued Preliminary Guidance, in which we stated that Patent Owner appeared to have shown a reasonable likelihood that it had satisfied the statutory and regulatory requirements associated with filing a motion to amend but that, preliminarily, the Petitioner or the record

appeared to have shown a reasonable likelihood that the proposed substitute claims in the Motion to Amend would be unpatentable. Paper 15 (“Prelim. Guid.”), 3–11. Patent Owner filed a contingent Revised Motion to Amend on December 6, 2019, including substitute claims 29–36 and 45–48 proposed as substitutes for the challenged claims. Paper 17 (“RMTA”). Patent Owner also filed, on December 20, 2019, a Sur-Reply. Paper 20 (“PO Sur-Reply”). Petitioner filed an Opposition to the RMTA on January 17, 2020. Paper 21 (“RMTA Opp.”). Patent Owner filed a Reply to the Opposition to the Revised Motion to Amend on February 21, 2020 (Paper 28, “RMTA Reply”), and Petitioner filed a Sur-Reply to that Reply on March 2, 2020 (Paper 29, “RMTA Sur-Reply”).

An Oral Hearing on this matter and a related case (IPR2019-00277) was held on March 6, 2020. The Hearing Transcript (“Tr.”) is included in the record as Paper 34.

B. Real Parties in Interest

Petitioner identifies itself as the real party in interest. Pet. 2. Patent Owner identifies itself as the real party in interest. Paper 5, 1.

C. Related Proceedings

Petitioner and Patent Owner each indicate that the ’895 patent is at issue in: *Zomm, LLC v. Apple Inc.*, Case No. 4:18-cv-04969-HSG (N.D. Cal. 2018). Pet. 2; Paper 5, 1. The ’895 patent is also the subject of the petition in IPR2019-00277, filed by Petitioner concurrently with the instant Petition. We instituted *inter partes* review in that case and a final written decision in that case is being entered concurrently with this Decision. *Apple Inc. v. Zomm, LLC*, IPR2019-00277, Paper 7 (PTAB May 10, 2019) (Decision on Institution), Paper 24 (PTAB May 7, 2020) (Final Written Decision).

D. Overview of the '895 Patent

The '895 patent is directed to a wireless security device that can connect to one or more additional devices, such as telephony devices (a wired or wireless telephone) or a media player. Ex. 1001, code (57), 1:43–50, 5:65–6:29. The connection between the wireless security device and the additional devices may be a Bluetooth network connection. *Id.* at 6:53–61. If so, the wireless security device implements one or more Bluetooth wireless protocol profiles for connecting to the additional devices. *Id.* at 1:43–50, 9:1–34. The Bluetooth wireless profiles implemented may include profiles (headset and hands-free) that allow the wireless security device to send commands to a connected telephony device, and to thereby function as a hands-free telephone, with audio for the telephony device routed through a speaker and microphone on the wireless security device. *Id.* at 7:38–8:2, 9:9–34.

The user of the wireless security device can request that the device initiate a call, via a connected telephony device, to emergency services. *Id.* at code (57), 10:1–2. When the user makes a request, the wireless security device determines a current location of the telephony device by requesting the telephone number of the telephony device, the identity of the telephone network providing service to the telephony device, and/or the global positioning system (GPS) location of the telephony device. *Id.* at 10:20–11:8, Fig. 3 (elements 306, 312, 314, 316). Based at least in part on this location information received, the device identifies an emergency phone number and sends commands to the telephony device to place a call to the identified emergency phone number. *Id.* at 11:9–12:48. In order to determine an emergency phone number corresponding to location information, a lookup table may be used, which provides the emergency

telephone number based on the location (e.g., an identified country in which the telephony device is located). *Id.* at 11:56–12:2; Fig. 6. Figure 6, reproduced below, is a data layout view of a lookup table containing geographic locations and emergency numbers. *Id.* at 4:6–7.

EU/Germany	112
USA	911
Japan	110

FIG. 6

Figure 6 depicts a lookup table in which the left column lists countries, and the right column lists corresponding emergency telephone numbers associated with the listed country in each row. *Id.* at 11:61–12:1.

Once an emergency telephone call is connected, the system sends a prerecorded message to the telephony device, including important information about the emergency in order to help facilitate help. *Id.* at 10:9–11, 12:49–65. The prerecorded message may contain data and/or audio. *Id.* at 10:11–13, 12:66–67. If the prerecorded message contains audio, the telephony device plays the audio over the connected emergency phone call. *Id.* at 10:13–15, 12:67–13:5. “Additionally/alternatively, if the prerecorded message contains data and/or text, the telephony device may send the data and/or text to an emergency service center as a data or text message, or through the connected emergency phone call.” *Id.* at 10:16–19; *see also id.* at 13:5–22.

E. Illustrative Claims

Petitioner challenges claims 1–6, 12, and 16–20 of the '895 patent, of which claims 1 and 17 are independent. Claims 1 and 17 are reproduced below:

1. [Preamble ¹] A wireless security device comprising:
 - [a] a processor;
 - [b] a wireless transceiver;
 - [c] a memory; and
 - [d] computer program instructions stored in the memory, which, when executed by the processor, cause the wireless security device to perform operations comprising:
 - [e.i] selecting and implementing a Bluetooth wireless protocol profile from one or more Bluetooth wireless protocol profiles for connecting to one or more Bluetooth enabled devices;
 - [e.ii] wirelessly pairing, via the wireless transceiver over a personal area network, with a Bluetooth enabled telephony device using the selected Bluetooth wireless protocol profile, thus creating a wirelessly paired Bluetooth connection between the wireless security device and the telephony device;
 - [f.i] sending a command to the telephony device requesting one or more of:
 - a telephone number of the telephony device;
 - a telephone network providing service to the telephony device; and
 - a global positioning system (GPS) location of the telephony device;
 - [f.ii] receiving a response from the telephony device including one or more of:
 - the telephone number of the telephony device;
 - the telephone network providing service to the telephony device; and
 - the GPS location of the telephony device; and

¹ The Petition provides bracketed labels for the elements of the independent claims. *See, e.g.*, Pet. 28–48. For clarity, we use these labels in this Decision.

- [f.iii] determining a current location of the telephony device based on one or more of the telephone number, the telephone network, and the GPS location;
- [g.i] accessing a lookup table stored in the memory including one or more location codes and one or more emergency telephone numbers associated with the one or more location codes;
- [g.ii] correlating the location with at least one of the one or more location codes to obtain at least one of the one or more emergency telephone numbers;
- [h.i] sending a command, over the wirelessly paired Bluetooth connection, to the telephony device to place a telephone call to the at least one of the one or more emergency telephone numbers; and
- [h.ii] once the telephone call is placed, sending a prerecorded emergency message to the telephony device over the wirelessly paired Bluetooth connection, causing the telephony device to transmit the prerecorded emergency message.

Ex. 1001, 16:45–17:26.

17. A method comprising:

- [a.i] selecting and implementing, by a wireless security device, a Bluetooth wireless protocol profile from one or more Bluetooth wireless protocol profiles for connecting to one or more Bluetooth enabled devices;
- [a.ii] wirelessly pairing, via a wireless transceiver of the wireless security device over a personal area network, with a Bluetooth enabled telephony device using the selected Bluetooth wireless protocol profile, thus creating a wirelessly paired Bluetooth connection between the wireless security device and the telephony device;
- [b.i] sending a command to the telephony device requesting one or more of:
 - a telephone number of the telephony device;
 - a telephone network providing service to the telephony device; and

- a global positioning system (GPS) location of the telephony device;
- [b.ii] receiving a response from the telephony device including one or more of:
 - the telephone number of the telephony device;
 - the telephone network providing service to the telephony device; and
 - the GPS location of the telephony device; and
- [b.iii] determining a current location of the telephony device based on one or more of the telephone number, the telephone network, and the GPS location;
- [c.i] accessing a lookup table stored in the memory including one or more location codes and one or more emergency telephone numbers associated with the one or more location codes;
- [c.ii] correlating the location with at least one of the one or more location codes to obtain at least one of the one or more emergency telephone numbers;
- [d.i] sending a command, by the wireless security device, over the wirelessly paired Bluetooth connection, to the telephony device to place a telephone call to the at least one of the one or more emergency telephone numbers; and
- [d.ii] once the telephone call is placed, sending a prerecorded emergency message from the wireless security device to the telephony device over the wirelessly paired Bluetooth connection, causing the telephony device to transmit the prerecorded emergency message.

Ex. 1001, 18:49–19:26.

F. Evidence Relied Upon by Petitioner

With respect to the challenged claims, Petitioner relies on the following references:

Reference		Publication Date / Issue Date	Exhibit
Jang et al.	US 7,113,764 B1	Sept. 26, 2006 (filed Sept. 28, 2000)	Ex. 1015
Ayed	US 7,973,657 B2	July 5, 2011 (filed June 3, 2008)	Ex. 1011
Forstall et al.	US 8,275,352 B2	Sept. 25, 2012 (filed Jan. 3, 2008)	Ex. 1009
Berry et al. ("Berry-351")	US 8,903,351 B2	Dec. 2, 2014 (filed Mar. 6, 2009)	Ex. 1007
Kim	US 2008/0039017 A1	Feb. 14, 2008 (filed Aug. 6, 2007)	Ex. 1008
Berry et al. ("Berry-145")	US 2009/0002145 A1	Jan. 1, 2009 (filed June 27, 2007)	Ex. 1014
Hollstien	US 2009/0203349 A1	Aug. 13, 2009 (filed Feb. 9, 2009)	Ex. 1010

Petitioner also relies on declarations from Mark R. Lanning. Ex. 1002; Ex. 1029; Ex. 1034. Patent Owner supports its rebuttal with a Declaration of Tim A. Williams, PhD. Ex. 2001.

G. Asserted Grounds

Petitioner presents the following grounds of unpatentability, in each case on the basis of pre-AIA² 35 U.S.C. § 103:

Claims Challenged	References(s)/Basis
1, 3–5, 12, 17, 19, 20	Berry-351, Kim, Forstall
1, 3–5, 12, 17, 19, 20	Berry-351, Kim, Jang
2, 18	Berry-351, Kim, Hollstien, Forstall
2, 18	Berry-351, Kim, Hollstien, Jang
1–4, 6, 12, 16–19	Berry-351, Ayed, Forstall
1–4, 6, 12, 16–19	Berry-351, Ayed, Jang
1, 3–5, 12, 17, 19, 20	Berry-145, Kim, Forstall
1, 3–5, 12, 17, 19, 20	Berry-145, Kim, Jang
2, 18	Berry-145, Kim, Hollstien, Forstall
2, 18	Berry-145, Kim, Hollstien, Jang
1–4, 6, 12, 16–19	Berry-145, Ayed, Forstall
1–4, 6, 12, 16–19	Berry-145, Ayed, Jang

Pet. 3–4.

² Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011).

II. ANALYSIS

A. Legal Standards

It is a petitioner's burden to demonstrate unpatentability. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations³. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). “To satisfy its burden of proving obviousness, a petitioner cannot employ mere 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 (Fed. Cir. 2016). We analyze the asserted grounds with the principles stated above in mind.

³ While Patent Owner has provided information regarding the development and sale of its products, it acknowledges that no arguments regarding secondary considerations have been presented. PO Resp. 6–8; Tr. 79:6–13; *see* Pet. Reply 33–34.

B. Level of Ordinary Skill in the Art

Petitioner asserts that the proper level of ordinary skill in the art is that of someone with “at least a bachelor’s degree in computer science, electrical engineering, or equivalent, and at least two years of experience related to wireless communication devices or related fields.” Pet. 14 (citing Ex. 1002 ¶¶ 30–32). Patent Owner adopts this definition. PO Resp. 10; RMTA 9. We adopt Petitioner’s provided definition for the level of skill of a person of ordinary skill in the art as reasonable and consistent with the prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art may reflect an appropriate level of skill in the art).

C. Claim Construction

In an *inter partes* review in which a petition was filed before November 13, 2018, the Board construes claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b) (2018); *Cuozzo Speed Techs., LLC v. Lee*, 136 S.Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard); *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, 51,343–44 (Oct. 11, 2018) (adopting, for claim construction in *inter partes* review, the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc), effective November 13, 2018). The Petition was filed before November 13, 2018, thus we apply the broadest reasonable interpretation standard here.

1. “prerecorded emergency message”

Patent Owner requests that we construe the term “prerecorded emergency message” from limitation [h.ii] of claim 1 and [d.ii] of claim 17

as “message recorded prior to placing a telephone call to the at least one or more emergency telephone numbers,” referring to the placing of a telephone call described in limitations [h.i] of claim 1 and [d.i] of claim 17. PO Resp. 11–12 (citing Ex. 2001 ¶ 17).

Petitioner argues that “prerecorded emergency message” should be interpreted as “a message that includes information about an emergency (*e.g.*, the name and address of the device owner and the location of the device after the emergency occurs) that is recorded any time before the call is placed.” Pet. Reply 3–5. As Petitioner notes, the Specification describes the inclusion, in the prerecorded emergency message, of information about the emergency, such as name and address of the owner of the telephony device. *Id.* at 5 (citing Ex. 1003, 12:41–65). One of ordinary skill in the art, Petitioner argues, would have understood this information to have been recorded before the emergency occurs. *Id.* (citing Ex. 1029 ¶¶ 20–21).

The crux of the parties’ disagreement is whether “prerecorded emergency message” must be in its final form, the form in which it is sent to the telephony device and subsequently transmitted by the telephony device, before the telephone call is placed. Petitioner argues that “the intrinsic record suggests that the message may be generated or formatted into its final form any time before it is sent.” *Id.* at 2–5 (citing Ex. 1029 ¶¶ 16–21); Tr. 15:22–17:3. However, the specification of the ’895 patent does not describe the creation of the “prerecorded emergency message,” and thus each party focuses their arguments on how one of ordinary skill would have interpreted the disputed term. Ex. 1001, code (57), 1:53–56, 10:9–19, 12:49–13:22, Fig. 3; *see* Pet. Reply 2–5; PO Resp. 10–12; PO Sur-Reply 17–20.

Patent Owner contends that the message must be in the form in which it is sent before the telephone call, and if a first prerecorded message is

transformed, such as from readable information to speech by a speech synthesizer or by transcoding, after the call is placed, the result is a second, different, message, one which was not prerecorded as it was generated after the telephone call was placed. PO Resp. 32–33; PO Sur-Reply 19–20; Tr. 47:18–50:10.

Patent Owner’s expert, Dr. Williams, in testimony, described stored information, which he equated with the “message”:

Q. If I send a text message that says “The cow jumped over the moon” and each of those words was created and saved before the call was placed, would that text message then qualify as a prerecorded emergency message?

A. In my opinion, yes.

Q. Even if the text message itself wasn’t created from those prerecorded elements until after the call was placed?

A. Yes, because information was created and stored, or the message. I’m equating the message with information. The information was created and stored prior to placing the telephone call. The organization of the message is a secondary consideration.

Ex. 1031, 66:11–25.

Petitioner concludes from Dr. Williams’s testimony that his expert opinion is that for a message to be “prerecorded,” information included in the message must exist in stored form before the phone call occurs. Pet. Reply 3–4 (citing Ex. 1031, 56:4–6, 59:25–66:25, 79:15–25). Patent Owner emphasizes that Petitioner’s expert, Mr. Lanning testified that transcoding would need to be performed before stored digital information can be played to a human listener. PO Sur-Reply 17–20 (citing Ex. 2004, 98:9–18, 107:4–25). However, the record presented does not provide any reason for us to determine that “digital information that’s stored in memory” (Ex. 2004, 107:22–23) before the telephone call is placed would not be a prerecorded

emergency message, even if processing would be required to transmit that message to the telephony device over the wirelessly paired Bluetooth connection in order to cause the telephony device to transmit the prerecorded emergency message. We agree with Petitioner that Dr. Williams’s testimony supports the idea that stored information, even if assembled or processed after a certain point in time, would still qualify as pre-recorded relative to that point in time. Pet. Reply 3–4. We credit Mr. Lanning’s testimony that a message could be prerecorded even if stored and then converted into a different form for transmission or communication, e.g., to a form that a human could (audibly) understand. Ex. 2004, 101:15–109:20.

Therefore, we conclude that the broadest reasonable interpretation of “prerecorded emergency message” in the context of limitation [h.ii] of claim 1 and [d.ii] of claim 17 includes a message consisting of information stored before the telephone call is placed, even if the prerecorded emergency message sent is not in the same form as the stored information.

2. *“sending a prerecorded emergency message”*

Patent Owner additionally argues that “sending” a prerecorded message in limitation [h.ii] of claim 1 and [d.ii] of claim 17 should be interpreted as “transmitting a text message.” PO Resp. 33; PO Sur-Reply 13–17. Patent Owner points to the portion of the ’895 patent that describes prerecorded message as either an audio message that the ’895 patent’s security process will “play . . . through the telephony device” or a data message that the security process will “send . . . as a text message or other type of data message.” PO Resp. 33 (quoting Ex. 1001, 12:66–13:9). Patent Owner argues that “[t]he ’895 Patent draws a clear distinction between audio messages which are ‘played’ and data messages (e.g., text messages, audio data) which are ‘sent.’” *Id.* Patent Owner argues that “[a]s indicated in the

passage quoted above and throughout the '895 Patent, prerecorded audio may be either an audio message (i.e., an analog audio message) that may be 'played' or a data message (e.g., digital audio file or text message) that may be sent." PO Sur-Reply 14–15 (quoting and discussing Ex. 1001, 12:66–13:9).

Petitioner contends that "[u]nder the [broadest reasonable interpretation] standard, the claimed message may be in any format, including any audio format." Pet. Reply 5. Petitioner cites portions of the '895 patent that describe "sending" a prerecorded emergency message that is an audio/voice message. *Id.* at 6 (citing Ex. 1001, code (57), 1:55–56). Patent Owner argues, with reference to such portions of the '895 patent, that these portions "do not specify whether the prerecorded emergency message is an audio message or a data message." PO Sur-Reply 16. However, several of these portions describe a prerecorded emergency message "sent" to a telephony device, which causes the telephony device to "play" the sent prerecorded emergency message. Ex. 1001, code (57), 1:53–56; *see also* Ex. 1001, 2:66–3:3. Thus, Patent Owner's argued distinction between a message that may be "played" and one that may be "sent" is not supported by the Specification of the '895 patent. We decline to hold that the broadest reasonable interpretation of "sending a prerecorded emergency message" in limitation [h.ii] of claims 1 and 17 requires that the prerecorded emergency message be a data message and not an audio message that can be played by the telephony device.

3. "*wireless security device*"

While neither party specifically requests that we construe the term "wireless security device," (from each of the independent claims challenged), the proper construction of the term has been put at issue by

Patent Owner’s arguments that the preamble of claim 1 is limiting and that Petitioner has identified “a potpourri of vehicle components” in Berry-351 and Berry-145 (collectively, “the Berry references”) that include a number of devices, but neither Berry reference discloses a wireless security device. PO Resp. 15–26. Patent Owner argues that the ’895 patent’s disclosure that “a user may attach wireless security device 14 to his/her keychain” contrasts with the vehicle networks in Berry-351 or Berry-145, which “would not be attached to a key chain.” *Id.* at 19–20 (citing Ex. 2001 ¶ 25). Additionally, Patent Owner contends that the disclosure in the ’895 patent that there is an “owner of wireless security device 14” indicate that the Berry references do not teach a wireless security device, as “[o]ne may refer to the owner of an entire vehicle, but not the owner of a network or system within the vehicle.” *Id.* at 20 (citing Ex. 2001 ¶ 25). Patent Owner argues that, “[t]he figures included in the ’895 Patent also consistently depict a ‘wireless security device’—identified as element (14)—as an individual piece of equipment that may be connected to a network.” *Id.*

However, Patent Owner does not point to evidence supporting that the asserted features of the discussed embodiments and those depicted in the figures should be read into the claims. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004) (“[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.”). In addition, we agree with Petitioner that the Specification describes a device that can consist of a computer and an external drive, connected using a USB cable or bus. Pet. Reply 11–12 (citing Ex. 1001, 4:64–67); *see also* Ex. 1001, 4:28–53 (describing, without limitation, a variety of computer-readable storage

media). Therefore, while the '895 patent does describe embodiments in which the wireless security device is “an individual piece of equipment,” as shown in the figures, it also describes an embodiment in which the device has other forms.

Patent Owner attempts to invest the word “device” with inherent meaning that must exclude, e.g., a hypothetical building and the Berry references’ connected vehicle components described in the Petitioner’s grounds. PO Resp. 16–17, 24–25. We decline to do so. *Cf. Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (describing, in a means-plus-function context, that “[g]eneric terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means’ because they ‘typically do not connote sufficiently definite structure’”).

While Patent Owner does not request an express construction of the recited “wireless security device,” on the evidence and arguments provided, we reject the implicit interpretation that this term does not encompass a vehicle security system, such as that taught in each of the Berry references.

D. Alleged Obviousness of Claims 1, 3–5, 12, 17, 19, and 20 over Berry-351, Kim, and Forstall or Jang

1. Overview of Berry-351 (Ex. 1007)

Berry-351 relates to a vehicle communication system that communicates wirelessly with a cellular telephone located “at the vehicle.” Ex. 1007, code (57), 2:6–12, 8:20–32. The vehicle communication system, upon detecting an emergency, sends a signal to the cellular telephone causing the cellular telephone to place an emergency call to an emergency responder or agency. *Id.* at code (57), 2:12–20, 8:44–9:35. The call may

include elements of vehicle or vehicle occupant information collected by the vehicle communication system, such as location information, operation information (e.g., last velocity, type of vehicle emergency condition), vehicle information (e.g., type and color of vehicle), and occupant information. *Id.* at 9:1–12. When the vehicle communication system places an emergency call, the vehicle communication system synthesizes elements of this information into speech signals played to the emergency responder on the call. *Id.* at 9:36–39.

In an alternative embodiment, a transceiver within the vehicle communication system contacts a remotely located Wireless Local Area Network (LAN) / Wide Area Network (WAN) transceiver. *Id.* at 12:3–13. That LAN/WAN transceiver uses its location information or GPS location information from the vehicle communication system or a nomadic device (such as a mobile phone) to determine the IP address or telephone number of an emergency call center. *Id.* at 11:63–64, 12:20–33. A look-up table can be used to determine the nearest call center based on the GPS information received. *Id.* at 12:30–33. The LAN/WAN transceiver establishes a connection with the emergency call center. *Id.* at 12:13–15, 33–35.

2. Overview of Kim (Ex. 1008)

Kim relates to Bluetooth communications between a mobile communication terminal (such as a cell phone) and a device such as a wireless headset in order to allow a user listening to music to continue to listen to music during a received voice call. Ex. 1005, code (57), ¶¶ 14–15, 25. Kim describes the terminal's selection of a specific Bluetooth profile from among a plurality of profiles received from the headset, and transmission of music via a link generated according to the profile. *Id.* ¶ 44. More generally, Kim describes that a terminal connecting to a device via

Bluetooth receives at least one profile that “corresponds to a set of predetermined commands for driving a Bluetooth device according to a service provided by the Bluetooth device.” *Id.* ¶ 7. A terminal receiving two Bluetooth profiles can select a suitable one, which it uses to connect to and operate the Bluetooth device. *Id.* ¶¶ 7, 11.

3. *Overview of Forstall (Ex. 1009)*

Forstall relates to obtaining contact information, such as emergency service contact information, for a mobile device, such as a handheld computer or cellular telephone. Ex. 1009, 1:33–39, 2:22–29. A current geographic location of a device is obtained, and the device receives and stores contact information based on that location. *Id.* at 1:33–39, 8:24–9:33. Forstall includes an example of a data structure storing such received contact information, including the emergency phone number and the United States consulate phone number for one location, exemplary “Country A.” *Id.* at 10:41–57, Fig. 5. Thus, the user has the correct emergency phone numbers for their current location readily available in case of an emergency. *Id.* at 1:56–64.

4. *Overview of Jang (Ex. 1015)*

Jang relates to a method for transmitting an emergency call from a mobile phone. Ex. 1015, code (57). In Jang, a designated key can be used to make an emergency call. *Id.* at 3:37–41. A mapping table includes plural mobile country code (MCC) values, and corresponding emergency call numbers. *Id.* at 3:45–51. When a user requests an emergency call, a component of the mobile phone searches the mapping table to find a MCC matching the current MCC for the mobile phone, and uses the corresponding emergency call number to make an emergency call. *Id.* at 4:29–39.

5. *Claims 1 and 17*

Claim 1 is a system claim directed to a wireless security device including a memory and computer program instructions stored in the memory that cause the wireless security device to perform certain operations. Ex. 1001, 16:46–17:26. Claim 17 is a method claim comprising steps, each largely echoing the operations described in claim 1. *Compare id.*, with *id.* at 18:49–19:26. We address these claims together, as do the parties. *See, e.g.*, Pet. 28–50; PO Resp. 15–33.

Petitioner argues that claims 1 and 17 would have been obvious over a combination of Berry-351, Kim, and one of Forstall or Jang. Pet. 15–49. With the exception of the preamble and limitations 1[g.i] (and 17[c.i]) and 1[h.ii] (and 17[d.ii]), which we discuss below, sections II.D.5.e and II.D.5.h, Patent Owner does not challenge Petitioner’s contention that the combination of references discloses all the limitations of claims 1 and 17. Patent Owner does, however, challenge petitioner’s contention that one of ordinary skill in the art would have had a reason to combine Berry-351, Kim, and one of Forstall or Jang. For the reasons provided below, we are persuaded that claims 1 and 17 would have been obvious over a combination of Berry-351, Kim, and Jang.

a) *Claim 1 [Preamble]: A wireless security device*

Petitioner argues that the claim 1 preamble’s wireless security device⁴ is taught in vehicle components of Berry-351’s system for emergency call handling, including components that connect wirelessly (via Bluetooth) to a cell telephone and are used for security, to make calls for assistance. Pet.

⁴ While not separately discussed by Petitioner or Patent Owner, we note that claim 17, a method claim, also recites “a wireless security device” that performs several of the claimed steps. Ex. 1001, 18:49–19:26.

28–30 (citing, *inter alia*, Ex. 1007, 1:5–6, 2:35–39, Figs. 1, 2, 6; Ex. 1002 ¶ 117).

Patent Owner, arguing that the preamble is limiting, contends that Berry-351 does not disclose a “wireless security device” in its vehicle system and vehicle components according to its interpretation of the term as limited, for example, to a device that may be attached to a keychain or as shown in the ’895 patent’s figures. PO Resp. 16–17; PO Sur-Reply 3. However, as discussed above, *supra* Section II.C.3, we do not agree with the claim construction that Patent Owner advances.

Patent Owner contends that Petitioner did not properly show that Berry-351’s system is a wireless security system because Petitioner divided the term into constituent words and addressed the parts separately, describing Berry-351’s disclosures of “wireless” capabilities and “security” use, rather than providing an analysis of how one of ordinary skill would have interpreted a “wireless security device.” PO Sur-Reply 3–4. But, as Petitioner contends, the Berry-351 system interacts wirelessly with a telephony device (the nomadic device/cell phone of Berry-351) and places emergency calls; in the absence of any evidence from the Specification requiring a different or more nuanced interpretation of “wireless security device,” we agree with Petitioner that this is consistent with the description of the functions of a “wireless security device” in the ’895 patent Specification. Pet. 28–30; Pet. Reply 12–13 (citing Ex. 1001, code (57), 1:39–3:60).

Based on our review of the evidence of record, Petitioner has shown that Berry-351 teaches or suggests the recitations in the preamble of claim 1. In light of this conclusion we need not, and do not, reach a determination regarding whether the preamble is limiting.

b) *Claim 1 limitations 1[a], 1[b], 1[c], and 1[d]: “a processor,” “a wireless transceiver,” “a memory,” and “computer program instructions stored in the memory, which, when executed by the processor, cause the wireless security device to perform operations”*

Petitioner argues that Berry-351 teaches the processor of limitation 1[a] including in data processor 16 shown in Berry-351’s Figure 1 and CPU 72 shown in Berry-351’s Figure 2, alone or in conjunction with a GPS processor. Pet. 30–31 (citing, *inter alia*, Ex. 1007, code (57), 4:26–50, Fig. 1 (elements 14, 16); Ex. 1002 ¶¶ 119–121).

Petitioner contends that Berry-351 teaches a wireless transceiver (limitation 1[b]) in element 38 of Berry-351’s Figure 1, a transceiver that communicates with a cellular telephone via Bluetooth communications protocols. *Id.* at 31–32 (citing *inter alia* Ex. 1007, Fig. 1, 5:28–34; Ex. 1002 ¶¶ 121–122); Ex. 1007, 5:28–34.

Petitioner contends that Berry-351 teaches a memory (limitation 1[c]) in elements 40 (removable memory), 26 (memory), and 22 (storage) of Berry-351’s Figure 1. Pet. 32–33 (citing, *inter alia*, Ex. 1007, Fig. 1; Ex. 1002 ¶¶ 123–124).

Petitioner argues that one of ordinary skill in the art would have understood Berry-351’s teachings regarding algorithms implemented by one or more processors to include instructions related to emergency call functionality stored as computer program instructions in memory. *Id.* at 33–35 (citing, *inter alia*, Ex. 1007, 2:12–43, 8:10–19, Fig. 4; Ex. 1002 ¶¶ 125–128). The “operations” of claim limitation 1[d] are described in the balance of claim 1; these are discussed in the next subsections of this Decision.

Based on our review of the evidence of record, Petitioner has shown that Berry-351 teaches or suggests the recitations in limitations 1[a], 1[b], 1[c], and 1[d] of claim 1.

c) Claim 1[e.i] and claim 17[a.i]: “selecting and implementing . . . a Bluetooth wireless protocol profile from one or more Bluetooth wireless protocol profiles for connecting to one or more Bluetooth enabled devices” and claim 1[e.ii] and claim 17[a.ii]: “wirelessly pairing, via [the/a] wireless transceiver over a personal area network, with a Bluetooth enabled telephony device using the selected Bluetooth wireless protocol profile, thus creating a wirelessly paired Bluetooth connection between the wireless security device and the telephony device”

Petitioner argues that the limitations relating to selection and implementation of a Bluetooth wireless protocol profile would have been obvious in view of Kim, which describes the selection and use in communication of a Bluetooth profile selected from a number of profiles. Pet. 36–37 (citing Ex. 1008 ¶¶ 8, 11, 44). Petitioner submits that one of ordinary skill in the art would have been motivated to combine Berry-351 and Kim due to their similarities, and would have looked to Kim when determining “how to implement and enhance the Bluetooth connection between the vehicle security system and the cell phone” in Berry-351, to enhance remote control call functionality, and to enhance reliability by allowing different modes of communication with a cell phone. *Id.* at 20–22 (citing Ex. 1002 ¶¶ 93–98).

Petitioner contends that Berry-351 teaches the wireless pairing of a Bluetooth-enabled cellular telephone with the vehicle security system via the transceiver. Pet. 37 (citing Ex. 1007, 5:21–31, 6:62–7:30, 11:2–5, Figs. 1, 4, 6). Petitioner refers to its prior arguments regarding Bluetooth profile selection for the teaching or suggestion of a selected Bluetooth wireless protocol profile. *Id.* Petitioner further argues that one of ordinary skill would have understood that such pairing creates a wirelessly paired

connection over a wireless “personal area network.” *Id.* (citing Ex. 1002 ¶¶ 140–141).

Based on our review of the evidence of record, Petitioner has shown that the combination of Berry-351 and Kim teaches or suggests the recitations in limitations 1[e.i] and 1[e.ii] of claim 1 and limitations 17[a.i] and 17[a.ii] of claim 17.

- d) *Claim 1[f.i] and claim 17[b.i]: “sending a command to the telephony device requesting one or more of: a telephone number of the telephony device; a telephone network providing service to the telephony device; and a global positioning system (GPS) location of the telephony device;” claim 1[f.ii] and claim 17[b.ii] “receiving a response from the telephony device including one or more of: the telephone number of the telephony device; the telephone network providing service to the telephony device; and the GPS location of the telephony device;” and claim 1[f.iii] and claim 17[b.iii] “determining a current location of the telephony device based on one or more of the telephone number, the telephone network, and the GPS location”*

Petitioner argues that one of ordinary skill in the art would have found limitations [f.i] and [f.ii] of claim 1 and [b.i] and [b.ii] of claim 17 obvious in view of Berry-351’s cellular phone 50 including a “global positioning signal receiver/processor 53,” which provides position information for the cellular phone. Pet. 38–40 (citing, *inter alia*, Ex. 1007, 4:51–56; Ex. 1002 ¶¶ 142–145, 148). Petitioner’s argument relies on GPS location to teach the claimed “GPS location of the telephony device,” from the “one or more” options presented in the claim limitations at issue. *Id.*

Petitioner additionally cites Forstall’s device retrieving its own location information and Jang’s device obtaining and internally using the MCC upon power-up. *Id.* at 39 (citing Ex. 1009, 8:42–61, 9:34–55; Ex. 1005, 3:54–62). Petitioner, however, does not persuasively explain how

these teachings relate to a command sent to or a response received from a telephony device for GPS information.

Petitioner contends that Berry-351 teaches [f.iii] of claim 1 and [b.iii] of claim 17 in Berry-351's processor determining "a present street location" based on GPS information and map information. Pet. 40 (emphasis omitted) (citing, *inter alia*, Ex. 1007, 4:42–56, 4:61–65; Ex. 1002 ¶ 149).

Based on our review of the evidence of record, Petitioner has shown that Berry-351 teaches or suggests the recitations in limitations 1[f.i], 1[f.ii] and 1[f.iii] of claim 1 and limitations 17[b.i], 17[b.ii], and 17[b.iii] of claim 17.

e) *Claim 1[g.i] and claim 17[c.i]: "accessing a lookup table stored in the memory including one or more location codes and one or more emergency telephone numbers associated with the one or more location codes"*

Petitioner argues that Berry-351 teaches or suggests a lookup table as per these claim limitations, but not one residing on the vehicle security system's local memory. Pet. 41. Petitioner further argues that either Forstall or Jang discloses the feature as claimed. *Id.* at 23–26, 41–42.

Petitioner cites Berry-351's teaching of a "look-up table," which is accessed to determine a telephone number for an emergency call, given a location. *Id.* at 41 (emphasis omitted) (citing Ex. 1007, 12:22–25). Petitioner argues that one of ordinary skill would have understood that a software implementation of such a table would include one or more location codes correlated with telephone numbers, as in the claim limitations. *Id.* (citing Ex. 1002 ¶¶ 151–155).

Petitioner admits that the look-up table in Berry-351 resides remotely from the wireless security device, not in its memory as required by claim 1. *Id.*; *id.* at 30 (Petitioner's annotated version of Berry-351's Figure 6 showing

look-up table 404 outside of the annotation denoting the Berry-351 wireless security device); Ex. 1007, 12:22–25, 12:30–33; PO Resp. 26–27. As we noted in the Decision on Institution, the embodiment of Berry-351 that includes a look-up table is an alternative embodiment to the one Petitioner relies on as describing “an emergency system ‘configured to communicate wirelessly with a cellular telephone’ [to] . . . ‘command’” the cellular telephone to make an emergency call. Pet. 15; Dec. on Inst. 19; *see also* Pet. 34, 47–49; Ex. 1007, 12:3–15. This alternative embodiment describes remote transceiver 401 (not the wireless security device or mobile phone) establishing a connection with a 911 call center. Ex. 1007, 12:22–25, 12:30–33; Pet. 30 (Petitioner’s annotated version of Figure 6, showing transceiver 401 outside of the wireless security device and separate from mobile phone 161).

Petitioner contends that Jang’s mobile phone uses a “mapping table” that correlates location codes with emergency phone numbers. Pet. 23, 27–28, 42 (citing Ex. 1015, code (57), 3:37–50, Fig. 2; Ex. 1002 ¶¶ 103, 113–116, 157). Jang discloses using current location information to search a table and find an emergency number corresponding to that information, and Petitioner argues that, while not taught in Jang, one of ordinary skill would have found it obvious to use a GPS location to determine the current country, and then use Jang’s “mapping table” to determine the emergency phone number for the determined country. *Id.* at 27 (citing Ex. 1002 ¶ 114).

Petitioner argues that one of ordinary skill would have found it obvious to modify Berry-351’s vehicle system to include a table as in Jang for determining an emergency telephone number for the current location so a user need not spend time finding a correct phone number in the event of an

emergency. Pet. 22–23, 27–28 (citing Ex. 1015, code (57), 6:62–71, 7:12–37, Fig. 2; Ex. 1002 ¶¶ 99–103, 113–116, 164–165).

Patent Owner argues that Jang’s disclosure concerns a telephony device, not a vehicle, and that if one of ordinary skill “would think to combine the teachings of . . . Jang with Berry-351, they would logically consider the teaching of [Jang] to apply to the recited telephony device . . . [a]nd . . . would necessarily consider locating any lookup tables disclosed [in Jang], if at all, within the telephony device[.]” PO Resp. 29–30 (citing Ex. 2001 ¶¶ 35, 36). Patent Owner argues that including a lookup table in the vehicle, rather than in the cellular telephone disclosed in Berry-351, would result in a more complicated configuration. *Id.* at 30 (citing Ex. 2001 ¶ 36). Petitioner argues that one of ordinary skill would have, in deciding how to combine Jang with Berry-351, stored the look-up table in the vehicle system, “which controls the emergency call functionality,” to avoid delay in requesting a phone number from the cell phone. Pet. Reply 24 (citing Ex. 1002 ¶¶ 108–110; Ex. 1029 ¶¶ 48–50); Pet. 25 (citing Ex. 1002 ¶ 108; Ex. 1007, 10:39–50).

Obviousness “does not require that the motivation be the best option, only that it be a suitable option from which the prior art did not teach away.” *PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1197–98 (Fed. Cir. 2014) (emphasis omitted) (citing *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 738 (Fed. Cir. 2013)). Here, we are presented with evidence from Mr. Lanning showing that one of ordinary skill in the art would have looked to Jang’s table to provide the prompt performance of an emergency call, in combination with the teachings of Berry-351. Ex. 1002 ¶¶ 113–116 (cited Pet. 27–28). We credit both experts’ testimony that there would have been advantages to storing the table in the vehicle system of Berry-351 or,

alternatively, in the cellular telephone described in Berry-351. However, motivation need not be for the best option, and we find that storage of the table locally in the vehicle system memory would have been a suitable option for one of ordinary skill at the time of the invention.

Patent Owner additionally argues that Jang is not in the same field of endeavor as Berry-154, and thus one of ordinary skill would not think to combine the references. PO Resp. 14–15. However, we agree with Petitioner that Jang and Berry-154 involve similar devices and each addresses the handling of emergency calls placed by a cellphone based on a current location. *See* Pet. Reply. 8; *see also In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992) (“If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection.”).

Petitioner additionally argues that Forstall discloses the feature of limitation 1[g.i] and 17[c.i] in its disclosure of a device storing a location database, mapping GPS information with higher level locations (country or city) and including an address book which correlates location codes with emergency phone numbers. Pet. 23–24, 41–42 (citing Ex. 1009, 7:40–47, 8:42–10:14). Patent Owner argues that Forstall does not disclose a locally stored lookup table, but rather that it discloses contact information items for one location received from a location-based service. PO Resp. 27 (citing Ex. 1009, 8:47–9:4; Ex. 2001 ¶ 32). Patent Owner contends that the address book in Forstall is described as an application that might commonly be found on a mobile phone, and is not a lookup table correlating a location with a location code. *Id.* at 28 (citing Ex. 1009, 7:40–46; Ex. 2001 ¶ 33).

Based on our review of the evidence of record, Petitioner has shown that Jang teaches or suggests the recitations in limitations 1[g.i] of claim 1

and 17[c.i] of claim 17, and that one of ordinary skill in the art would have combined these teachings with those of Berry-351. In light of this determination, we decline to address whether Forstall teaches or suggests these limitations.

f) Claim 1[g.ii] and 17[c.ii]: “correlating the location with at least one of the one or more location codes to obtain at least one of the one or more emergency telephone numbers”

Petitioner argues, as discussed above, that one of ordinary skill would have modified Berry-145’s vehicle security system to include Jang’s local lookup table. Petitioner presents two arguments, relating to two different postulated antecedent bases for “location” – one based on the location being the “GPS location of the telephony device” and the second based on the “current location of the telephony device” (as determined in [f.iii] of claim 1 or [b.iii] of claim 17. Pet. 43–46.

Petitioner argues that, if “location” in this limitation refers to the GPS location of the telephony device, one of ordinary skill would have found it obvious “to use the GPS data received from the cellphone to determine the current location area” and then to use the Jang mapping table to determine the emergency phone number that correlates with the current country. Pet. 44–45 (citing Ex. 1002 ¶¶ 164–165). Alternatively, Petitioner argues that, if “location” in this limitation is the determined current location, one of ordinary skill, having calculated a current country, would have found it obvious to use the Jang mapping table to obtain an emergency telephone number. *Id.* at 46 (citing Ex. 1002 ¶¶ 160–169).

Based on our review of the evidence of record, Petitioner has shown that the combination of Berry-145 and Jang teaches or suggests the recitations in limitation [g.ii] of claim 1 and limitation [c.ii] of claim 17

under both interpretations of the antecedent basis for “location” identified by Petitioner.⁵

g) Claim 1[h.i] and claim 17[d.i]: “sending a command, over the wirelessly paired Bluetooth connection, to the telephony device to place a telephone call to the at least one of the one or more emergency telephone numbers”

Petitioner asserts that a command to the telephony device to place an emergency call is taught or suggested by Berry-351, in which a component of Berry-351’s vehicle system sends a call command to initiate a call on a connected cellular telephone to an emergency responder. Pet. 47 (citing, *inter alia*, Ex. 1007, code (57), 2:6–26, 9:28–31, 11:2–5). As Bluetooth is used to wirelessly pair the telephony device in Berry-351, Petitioner argues, it would have been obvious that such a command would be sent over the wirelessly paired Bluetooth connection. *Id.* (citing Ex. 1002 ¶¶ 160–169).

Based on our review of the evidence of record, Petitioner has shown that Berry-351 teaches or suggests the recitations in limitation [h.i] of claim 1 and limitation [d.i] of claim 17.

h) Claim 1[h.ii] and claim 17[d.ii]: “once the telephone call is placed, sending a prerecorded emergency message to the telephony device over the wirelessly paired Bluetooth connection, causing the telephony device to transmit the prerecorded emergency message”

Petitioner describes the teachings of Berry-351 regarding the collection and storage of vehicle and occupant information, and argues that this information teaches the generation of a prerecorded emergency message, which is speech synthesized and read to an emergency responder. Pet. 48 (citing Ex. 1007, 9:1–6, 9:12–16, 9:28–45). Petitioner argues that

⁵ Accordingly, we need not address and resolve the proper antecedent basis for “location” in these limitations.

one of ordinary skill would have understood Berry-351 to describe the vehicle security system sending a prerecorded emergency message, via Bluetooth, to the telephony device, for transmission to the emergency telephone number. *Id.* at 48–49 (citing Ex. 1007, 1:41–50, 9:1–16, Fig. 1; Ex. 1002 ¶¶ 174–178).

Patent Owner argues, as per the claim construction argument addressed above at sections II.C.1–2, that Berry-351 does not teach sending a prerecorded message, because the speech signals are not generated until after the call is made and because the message is not a text message. PO Resp. 32–33; PO Sur-Reply 13–20. However, as set forth in our claim construction, *supra* Sections II.C.1–2, the broadest reasonable interpretation of “prerecorded emergency message” includes a message consisting of information stored before the telephone call is placed, even if the prerecorded emergency message sent is not in the same form as the stored information, and does not require that the prerecorded emergency message to be sent be a data message. These arguments are based on Patent Owner’s claim construction, which we declined to adopt, and therefore, based on our review of the evidence of record, Petitioner has shown that Berry-351 teaches or suggests the recitations in limitation [h.ii] of claim 1 and limitation [d.ii] of claim 17.

i) Claims 1 and 17 - Conclusion

Based on our review of the evidence of record, Petitioner has shown that claims 1 and 17 are unpatentable as obvious over Berry-351, Kim, and Jang. In light of this conclusion, we need not, and do not, reach a determination on Petitioner’s alternative assertion that claims 1 and 17 would have been obvious over Berry-351, Kim, and Forstall.

6. *Claims 3–5, 12, 19, and 20*

Claims 3–5, 12, 19, and 20 depend from claim 1 or claim 17. Other than the arguments presented with respect to the independent claims, Patent Owner presents no arguments relating to these claims.

a) *Claims 3 and 19*

Claims 3 and 19 add to their respective dependent claims “receiving, over the wirelessly paired Bluetooth connection, a location of the Bluetooth enabled telephony device; and identifying the emergency telephone number based on the location.”

For the first part of this additional limitation, Petitioner refers to its arguments relating to the request/receipt of a GPS location of a telephony device, discussed *supra* in § II.D.5.d. Petitioner additionally argues that the receipt of the GPS location would teach or suggest this claim element. Pet. 49 (citing, *inter alia*, Ex. 1002 ¶ 180).

Additionally, as discussed above, Petitioner contends that one of ordinary skill would have combined a locally stored lookup table, such as Jang’s, with Berry-351’s vehicle emergency system, to correlate a location code with emergency numbers. Petitioner argues that it would have been obvious to use such a lookup table to identify an emergency telephone number based on the received location. *Id.* (citing Ex. 1002 ¶ 181).

Based on our review of the evidence of record, Petitioner has shown that claims 3 and 19 are unpatentable as obvious over Berry-351, Kim, and Jang.

b) *Claim 4*

Claim 4 adds that the wireless security device of claim 1 further comprises “a speaker; and a microphone.”

Petitioner argues that the system of Berry-351 teaches a speaker and a microphone. Pet. 50 (citing Ex. 1007, Fig. 1 (element 32), Fig. 2 (elements 77 and 87), 6:53–54, 6:42; Ex. 1002 ¶¶ 183–184).

Based on our review of the evidence of record, Petitioner has shown that claim 4 is unpatentable as obvious over Berry-351, Kim, and Jang.

c) Claims 5 and 20

Claim 5 adds to the operations of claim 4 the limitation of “sending audio data captured by the microphone to the telephony device via the wireless transceiver; and once the telephone call is placed, audibly playing, by the speaker, audio data received from the telephony device via the wireless transceiver.” Claim 20 adds substantially similar steps to the method of claim 17.

Petitioner notes that Berry-351 describes that in some cases, “a driver/passenger may elect to make a call private” in which case control of the call transfers “from a vehicle system (mic and speakers) to the nomadic device through which the call is being made.” Ex. 1007, 3:31–34 (cited at Pet. 51). From this teaching, Petitioner argues that one of ordinary skill would have understood that if the election is not made to make a call private, the vehicle security system controls the call — communicating audio data captured by the vehicle security system’s microphone to the cellphone, and playing audio data received from the cell phone through the vehicle security system’s speakers. Pet. 51–53 (citing, *inter alia*, Ex. 1007, 6:61–7:5, Fig. 1; Ex. 1008 ¶ 9; Ex. 1002 ¶¶ 186–187, 189).

Based on our review of the evidence of record, Petitioner has shown that claims 5 and 20 are unpatentable as obvious over Berry-351, Kim, and Jang.

d) Claim 12

Claim 12 adds that the wireless security device of claim 1 further comprises “a button.”

Petitioner argues that the system of Berry-351 includes “a button 91 or similar input.” Pet. 53 (citing Ex. 1007, 7:1–5).

Based on our review of the evidence of record, Petitioner has shown that claim 12 is unpatentable as obvious over Berry-351, Kim, and Jang.

E. Alleged Obviousness of Claims 2 and 18 over Berry-351, Kim, Hollstien, and Forstall or Jang

Petitioner argues that claims 2 and 18 would have been obvious over a combination of Berry-351, Kim, Hollstien, and Forstall or Jang. Pet. 53–56. Patent Owner presents no arguments specific to these claims.

1. Overview of Hollstien (Ex. 1010)

Hollstien relates to a wireless security system including a portable apparatus communicating with a personal communication device (such as a cellular phone), to allow remote operation of the personal communication device, for example to make an emergency call when the portable apparatus detects an alarm condition. Ex. 1010, code (57), ¶¶ 5, 7. Hollstien describes that certain Bluetooth profiles (“Hands-Free” and “Dial-Up”) “define commands that allow telephone numbers to be dialed and a telephone connection to be established” via a Bluetooth interface. *Id.* ¶ 33. These profiles allow the portable apparatus to command the personal communication device to place a call upon detecting an alarm condition. *Id.*

2. Claims 2 and 18

Claims 2 and 18 each add to the claims from which they depend the limitation that the “one or more Bluetooth wireless protocol profiles include

one or more of: a Bluetooth hands-free profile; a Bluetooth headset profile; and a Bluetooth advanced audio distribution profile.”

Petitioner argues that adding to the combination of prior art discussed with respect to claim 1, the Hollstien teaching of using the Bluetooth hands-free profile for an apparatus to control a cellular phone to make an alarm call renders claim 2 unpatentable as obvious. Pet. 55–56. Petitioner additionally argues that one of ordinary skill would have been motivated to add the use of a hands-free profile to the Berry-351 system to provide a Bluetooth profile appropriate for remote calling. *Id.* at 54–55 (citing Ex. 1002 ¶¶ 197–199).

Based on our review of the evidence of record, Petitioner has shown that claims 2 and 18 are unpatentable as obvious over Berry-351, Kim, Hollstien, and Jang. In light of this conclusion we need not, and do not, reach a determination on Petitioner’s alternative assertion that claims 2 and 18 would have been obvious over Berry-351, Kim, and Forstall.

F. Alleged Obviousness of Claims 1–4, 6, 12, and 16–19 over Berry-351, Ayed, and Forstall or Jang

Petitioner argues that claims 1–4, 6, 12, and 16–19 would have been obvious over a combination of Berry-351, Ayed, and Forstall or Jang. Pet. 56–65. Patent Owner does not present additional arguments relating to these contentions, but relies on the arguments with reference to the combination of Berry-351, Kim, and Forstall or Jang, addressed above at Section II.D. PO Resp. 13–33.

1. Overview of Ayed (Ex. 1011)

Ayed relates to a “portable proximity alarm [system]” that alarms when a portable electronic device leaves the range of an alarm apparatus. Ex. 1011, code (57). One embodiment allows a button on the alarm

apparatus to switch to an audio mode in which the alarm apparatus establishes a Bluetooth connection with the monitored portable electronic device and send or receive audio to the monitored portable electronic device. *Id.* at 10:24–29. This Bluetooth connection may be established using a “HSP (headset profile) connection or a HFP (Hands-Free profile) connection.” *Id.* at 10:27–29.

2. *Claims 1 and 17*

Petitioner argues that claims 1 and 17 would have been obvious over a combination of Berry-351, Ayed, and one of Forstall or Jang. Pet. 60–62. Petitioner refers to Berry-351 or the combination of Berry-351 and Forstall or Jang for the majority of the claim elements, except limitations [e.i] and [e.ii] of claim 1 and limitations [a.i] and [a.ii] of claim 17. Those limitations require “selecting and implementing a Bluetooth wireless protocol profile” and “wirelessly pairing, via [the/a] wireless transceiver over a personal area network, with a Bluetooth enabled telephony device using the selected Bluetooth wireless protocol profile, thus creating a wirelessly paired Bluetooth connection between the wireless security device and the telephony device.” *Id.* at 60, 62.

For these limitations, Petitioner argues that Ayed’s teachings regarding selection of a headset or hands-free connection, together with Berry-351, teach selection and implementation of an appropriate profile for audio communication and wireless pairing of a vehicle security system and cell phone, creating a wirelessly paired Bluetooth connection between the vehicle security system and cell phone. *Id.* at 61–62 (citing, *inter alia*, Ex. 1011, 5:53–6:11, 10:23–36; Ex. 1007, 6:61–7:5; Ex. 1002 ¶¶ 227–231, 233). Petitioner argues persuasively that one of ordinary skill in the art would have found it obvious to modify Berry-351 to incorporate Ayed’s

teachings with respect to Bluetooth profiles and Bluetooth profile selection to provide one or more profiles compatible with the Bluetooth connection described. *Id.* at 58–59. Our analysis regarding the additional limitations is presented above in Section II.D.5.

Based on our review of the evidence of record, Petitioner has shown that claims 1 and 17 are unpatentable as obvious over Berry-351, Ayed, and Jang. In light of this conclusion we need not, and do not, reach a determination on Petitioner’s alternative assertion that claims 1 and 17 would have been obvious over Berry-351, Ayed, and Forstall.

3. Claims 2 and 18

Petitioner argues that Ayed’s teaching of a headset profile teaches the additional limitation of claims 2 and 18, regarding selecting a Bluetooth profile protocol from a set including one or more of three alternatives, one of which is a Bluetooth headset profile. Pet. 62–63 (citing Ex. 1001, 10:23–36, 19:19–23; Ex. 1002 ¶¶ 236–237).

Based on our review of the evidence of record, Petitioner has shown that claims 2 and 18 are unpatentable as obvious over Berry-351, Ayed, and Jang. In light of this conclusion we need not, and do not, reach a determination on Petitioner’s alternative assertion that claims 2 and 18 would have been obvious over Berry-351, Ayed, and Forstall.

4. Claims 3, 4, 12, and 19

With respect to the additional limitations of claims 3, 4, 12, and 19, Petitioner relies on arguments relating to the combination of Berry-351, Kim, and Forstall or Jang. Pet. 63. Based on our review of the evidence of record, Petitioner has shown that claims 3, 4, 12, and 19 are unpatentable as obvious over Berry-351, Ayed, and Jang. In light of this conclusion we need not, and do not, reach a determination on Petitioner’s alternative assertion

that claims 3, 4, 12, and 19 would have been obvious over Berry-351, Ayed, and Forstall.

5. *Claim 6*

Claim 6 adds that the wireless security device of claim 4 further comprises “generating a panic alarm including generating an audible sound through the speaker.”

Petitioner argues that one of ordinary skill in the art would have understood Berry-351’s teachings relating to “activation of audible vehicle outputs” and “car alarms” in an “SOS mode” to include the generation of audible sound through the speaker. Pet. 63 (citing Ex. 1007, 3:16–22, 11:6–12; Ex. 1002 ¶ 239). Additionally, Petitioner argues that Ayed teaches the generation of an audible alarm through a speaker. *Id.* at 64 (citing Ex. 1011, 7:64–8:32; Ex. 1002 ¶ 241).

Based on our review of the evidence of record, Petitioner has shown that claim 6 is unpatentable as obvious over Berry-351, Ayed, and Jang. In light of this conclusion we need not, and do not, reach a determination on Petitioner’s alternative assertion that claim 6 would have been obvious over Berry-351, Ayed, and Forstall.

6. *Claim 16*

Claim 16 adds to the wireless security device of claim 1 the requirement that “the processor and the wireless transceiver implement Bluetooth low energy technology.”

Petitioner argues that Ayed teaches the use of a low-power mode in a Bluetooth system. *Id.* at 65 (citing Ex. 1011, 18:12–16; Ex. 1002 ¶ 243).

Based on our review of the evidence of record, Petitioner has shown that claim 16 is unpatentable as obvious over Berry-351, Ayed, and Jang. In light of this conclusion we need not, and do not, reach a determination on

Petitioner’s alternative assertion that claim 16 would have been obvious over Berry-351, Ayed, and Forstall.

G. Petitioner’s Additional Challenges

Petitioner also presents additional challenges: that claims 1, 3–5, 12, 17, 19, and 20 would have been obvious over a combination of Berry-145, Kim, and either Forstall or Jang (Pet. 65–81); that claims 2 and 18 would have been obvious over a combination of Berry-145, Kim, Hollstien, and either Forstall or Jang (Pet. 81); and that claims 1–4, 6, 12, and 16–19 would have been obvious over a combination of Berry-145, Ayed, and Forstall or Jang (Pet. 81–86). Because the challenges based on Berry-351, discussed above, are dispositive of all the challenged claims, we need not reach these other challenges as to these same claims. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding that a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”).

III. PATENT OWNER’S CONTINGENT MOTION TO AMEND

We have concluded that challenged claims 1–6, 12, and 16–20 of the ’895 patent are unpatentable. We now turn to Patent Owner’s revised contingent motion to enter proposed substitute claims 29–36 and 45–48. RMTA 4–20. For the reasons that follow, we deny Patent Owner’s motion.

1. Background

In Patent Owner’s Motion to Amend, Patent Owner presented a Claims Appendix with marked-up versions of proposed substitute claims for claims 1 and 17. MTA 16–19. We provided Preliminary Guidance, in which we discussed the statutory and regulatory requirements, which we preliminarily agreed had been met by the Motion to Amend. Prelim. Guid. 3–6. Additionally, we provided guidance describing that the Petitioner or the record at that point preliminarily appeared to establish a reasonable

likelihood that the proposed substitute claims of that Motion to Amend would be unpatentable. *Id.* at 6–11.

Patent Owner then filed the Revised Motion to Amend, proposing substitute claims 29–36 and 45–58. RMTA. Patent Owner requests that if we find any of the challenged claims unpatentable, we grant its Revised Motion to Amend with respect to the respective substitute claim for each challenged claim found unpatentable. *Id.* at 4–5. Claim 29 is proposed as a substitute for claim 1, and is identical to claim 1, with the exception of the preamble and limitation [d], reproduced below with underlining to show the changes from the original claim.

29. [Preamble] A wireless security device capable of being carried by a user comprising:

[d] computer program instructions stored in the memory, which, when executed by the processor, cause the said wireless security device to perform operations comprising:

RMTA, Claims Appendix 1–3. Proposed substitute claim 45 is a similarly amended version of claim 17. *Id.*, Claims Appendix at 5–7. The balance of the proposed substitute claims are amended versions of the dependent claims, identical to the original dependent claims except for proposed amendments to the dependencies, reflecting the original dependencies of the challenged claims. *Id.*, Claims Appendix at 3–5, 7–8.

With respect to the substitute claims proposed in the Revised Motion to Amend, Petitioner relies on the following references, in addition to Berry-351, Berry-145, Kim, Hollstien, Ayed, Forstall, and Jang:

Reference		Publication Date / Issue Date	Exhibit
Tran	US 7,558,622 B2	July 7, 2009 (filed May 24, 2006)	Ex. 1028

Reference		Publication Date / Issue Date	Exhibit
Holder	EP 1 924 069 A1	May 21, 2008 (filed Nov. 7, 2007)	Ex. 1013

With respect to the substitute claims proposed in the Revised Motion to Amend, Petitioner presents the following grounds of unpatentability, in each case on the basis of pre-AIA 35 U.S.C. § 103:

Proposed Substitute Claims Challenged	References
29–36, 45–48	Holder; Berry-351 or Berry-145; Kim, Hollstien, or Ayed; and Forstall or Jang
29–36, 45–48	Tran; Hollstien or Ayed; and Forstall

RM TA Opp. 2–25.

2. Applicable Law

In an *inter partes* review, amended claims are not added to a patent as of right, but rather must be proposed as a part of a motion to amend. 35 U.S.C. § 316(d) (2012). The Board must assess the patentability of proposed substitute claims “without placing the burden of persuasion on the patent owner.” *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290, 1328 (Fed. Cir. 2017) (en banc); *see also Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 at 3–4 (PTAB Feb. 25, 2019) (precedential). Subsequent to the issuance of *Aqua Products*, the Federal Circuit issued a decision in *Bosch Automotive Service Solutions, LLC v. Matal*, 878 F.3d 1027 (Fed. Cir. 2017), as well as a follow-up order amending that decision on rehearing. *See Bosch Auto. Serv. Sols., LLC v. Iancu*, No. 2015-1928 (Fed. Cir. Mar. 15, 2018) (Order on Petition for Panel Rehearing).

In accordance with *Aqua Products*, *Bosch*, and *Lectrosonics*, a patent owner does not bear the burden of persuasion to demonstrate the

patentability of the substitute claims presented in the motion to amend. Rather, ordinarily, “the petitioner bears the burden of proving that the proposed amended claims are unpatentable by a preponderance of the evidence.” *Bosch*, 878 F.3d at 1040 (as amended on rehearing); *Lectrosonics*, Paper 15 at 3–4. In determining whether a petitioner has proven unpatentability of the substitute claims, the Board focuses on “arguments and theories raised by the petitioner in its petition or opposition to the motion to amend.” *Nike, Inc. v. Adidas AG*, 955 F.3d 45, 51 (Fed. Cir. 2020). The Board itself also may justify any finding of unpatentability by reference to evidence of record in the proceeding. *Id.* at 51–53. “The Board has authority to ‘sua sponte identify a patentability issue’ and justify a finding of unpatentability for a proposed substitute claim based on evidence of record, ‘provided that the Board gives the parties notice and an opportunity to respond’ in compliance with the requirements of the Administrative Procedure Act. *Id.* at 51–53.

Notwithstanding the foregoing, a patent owner’s proposed substitute claims must meet the statutory requirements of 35 U.S.C. § 316(d) and the procedural requirements of 37 C.F.R. § 42.121. *Lectrosonics*, Paper 15 at 4–8. Accordingly, a patent owner must demonstrate: (1) the amendment proposes a reasonable number of substitute claims; (2) the amendment does not seek to enlarge the scope of the claims of the patent or introduce new matter; (3) the amendment responds to a ground of unpatentability involved in the trial; and (4) the proposed claims are supported in the original disclosure (and any earlier filed disclosure for which the benefit of filing date is sought). *See* 35 U.S.C. § 316(d); 37 C.F.R. § 42.121.

3. *Analysis – Statutory and Procedural Requirements*

a) *Reasonable Number of Substitute Claims*

35 U.S.C. § 316(d)(1)(B) requires that the number of substitute claims be reasonable. *See also* 37 C.F.R. § 42.121(a)(3). Patent Owner proposes one substitute claim for each challenged claim. RMTA, Claims Appendix. This one-for-one substitution is reasonable. 37 C.F.R. § 42.121(a)(3) (“The presumption is that only one substitute claim would be needed to replace each challenged claim . . .”).

b) *No Enlargement of the Scope of the Claims*

35 U.S.C. § 316(d)(3) requires that the amendment not seek to enlarge the scope of the claims. *See also* 37 C.F.R. § 42.121(a)(2)(ii). Patent Owner contends that the addition of the limitation that the claimed wireless security device be “capable of being carried by a user” does not enlarge the scope of the claims. RMTA 5. We agree.

c) *No Introduction of New Matter / Support in the Original Disclosure*

35 U.S.C. § 316(d)(3) additionally requires that the amendment not introduce new subject matter. *See also* 37 C.F.R. § 42.121(a)(2)(ii). 37 C.F.R. § 42.121(b) requires that a motion to amend set forth the support in the original disclosure for each substitute claim. “Importantly, to meet this requirement, citation should be made to the original disclosure of the application, as filed, rather than to the patent as issued.” *Lectrosonics*, Paper 15 at 8. The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to a person of ordinary skill in the art that the inventor had possession of the claimed subject matter at the time of filing, rather than the presence or absence of literal support in the specification for the claim language. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed.

Cir. 2010) (en banc); *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563 (Fed. Cir. 1991); *In re Kaslow*, 707 F.2d 1366, 1375 (Fed. Cir. 1983).

Patent Owner details that the limitation added to the independent claims, namely, that the “wireless security device” be “capable of being carried by a user” is supported by the original specification, which describes an embodiment in which “[w]ireless security device may . . . include keyring attachment 804, which may be a cut out portion of the outer casing of [the] wireless security device 14. Keyring attachment 804 may allow a user to attach wireless security device 14 to a keyring, purse, article of clothing, or other article.” Ex. 1004, 466–67 (quoted at RMTA 8). Patent Owner also points, as support, to Figure 1 as originally filed. RMTA 8; Ex. 1004, 481.

Petitioner argues that “nothing in the intrinsic record limits or touts the size or structure” of the device. RMTA Opp. 1. Petitioner agrees that the original specification describes that the device may be attached to a keychain, but contends that “the remainder of the specification repeatedly discloses that the invention may be embodied by apparatuses of a wide variety of shapes, sizes, forms, or configurations.” *Id.* at 1–2 (citing Ex. 1001, 4:15–67, 6:62–7:2, 8:52–63). The portions of the ’895 patent’s disclosure cited by Petitioner deal with the form factor of computer-readable media and power supplies for the disclosed device. Ex. 1001, 4:15–67, 6:62–7:2, 8:52–63. While this may be true, we do not agree that the Specification fails to tout the size or structure of the device. The disclosures in the original specification and the Specification of the ’895 patent as issued, describe that a user may attach the wireless security device to a keychain, so if the user “walks away” from their telephone, for example, by forgetting it in a taxi-cab, the device will alert the user. Ex. 1004, 461–462 (original disclosure); Ex. 1001, 14:24–31. We agree with Patent Owner that

the disclosures regarding attaching the wireless security device to a keychain support convey possession of the subject matter of the amendment to the claims at the time of the invention. *See* RMTA 8; RTMA Reply 2–3.

We determine that the amendments of the Revised Motion to Amend do not introduce new subject matter and that Patent Owner has set forth support in the original disclosure for the proposed substitute claims.

d) Responsiveness to a Ground of Unpatentability Involved in the Trial

37 C.F.R. § 42.121(a)(2)(i) specifies that a motion to amend may be denied where it “does not respond to a ground of unpatentability involved in the trial.” Here, each of Petitioner’s grounds in the Petition relies on one of the Berry references, with additional references providing portions of the recited operations or steps. Pet. 15–85. Patent Owner contends, with reference to the Berry references’ vehicle security systems, that the proposed claims “further distinguish” over the Berry references. RMTA 2. We agree that this requirement is met.

e) Conclusion

Patent Owner’s motion meets the statutory requirements of 35 U.S.C. § 316(d) and the requirements of 37 C.F.R. § 42.121.

4. Analysis: Patentability of Substitute Claims

We analyze the proposed substitute claims and have determined that Petitioner has proven, by a preponderance of the evidence, that these proposed substitute claims are unpatentable. We focus on the arguments and theories raised by Petitioner. Specifically, we focus on Petitioner’s arguments regarding the combination of Holder, Berry-351, Hollstien, and Jang, which are dispositive of unpatentability of the proposed substitute claims, as we determine below.

5. *Overview of Holder (Ex. 1013)*

Holder describes an emergency telecommunication device for use with a mobile telephone. Ex. 1013, code (57). Holder's device includes a housing "for being worn or carried about the person of a user" such as a pendant with a neck strap so that a user can wear the pendant around their neck. *Id.* at code (57), ¶ 7. Holder alternatively discloses that the device might be provided in other forms, such as in a brooch wearable on an item of clothing. *Id.* ¶ 36.

Holder's pendant pairs with a mobile telephone for communication, and, in response to a user pressing a button on the pendant, can make an emergency telephone call. *Id.* at code (57), ¶¶ 8, 10–11. A prerecorded message is played when the call is answered, after which the recipient of the emergency call can act to be connected to the user of the pendant to communicate. *Id.* ¶¶ 11, 13, 17.

6. *Alleged Obviousness of Proposed Substitute Claims 29–36 and 45–48 over Holder, Berry-351, Hollstien, and Jang*

a) *Proposed substitute claims 29 and 45*

Petitioner argues that proposed substitute claims 29 and 45 are unpatentable over several combinations of prior art. Our analysis focuses on the combination of Holder, Berry-351, Hollstien, and Jang.

(1) *Proposed substitute claim 29 [Preamble]: A wireless security device capable of being carried by a user*

Petitioner persuasively argues that the wireless security device capable of being carried by a user recited in the preamble of proposed

substitute claim 29⁶ is taught by Holder's pendant. RMTA Opp. 6 (citing Ex. 1013, code (57), ¶¶ 7, 13; Ex. 1034 ¶ 54);

Patent Owner does not respond to Petitioner's contentions with respect to the preamble. *See In re Nuvasive*, 841 F.3d 966, 974 (Fed. Cir. 2016) (explaining that the Board need not make specific findings as to claim limitations that Patent Owner does not dispute are disclosed in the prior art).

Based on our review of the evidence of record, Petitioner has shown that Holder teaches or suggests the recitations in the preamble of proposed substitute claim 29. In light of this conclusion we need not, and do not, reach a determination regarding whether the preamble is limiting.

(2) Proposed substitute claim 29, limitations [a], [b], [c], and [d]: “a processor,” “a wireless transceiver,” “a memory,” and “computer program instructions stored in the memory, which, when executed by the processor, cause the said wireless security device to perform operations”

Petitioner argues that Holder teaches limitation [a] of proposed substitute claim 29 in Holder's microprocessor in the pendant. RMTA Opp. 6 (citing Ex. 1013 ¶¶ 20, 21, Figs. 3, 4; Ex. 1034 ¶ 55). Petitioner contends that Holder teaches limitation [b] in Holder's transceiver. *Id.* (citing Ex. 1013 ¶¶ 8, 22, Figs. 3, 4; Ex. 1034 ¶ 56). Petitioner contends that Holder teaches limitation [c] in Holder's “working memory and storage memory.” *Id.* (citing Ex. 1013 ¶¶ 20, 21, Figs. 3, 4; Ex. 1034 ¶ 57). And Petitioner argues that Holder's memory stores computer program instructions that control the operations of the pendant. *Id.* (citing Ex. 1013,

⁶ While not separately discussed by Petitioner or Patent Owner, we note that proposed substitute claim 45, a method claim, also recites “a wireless security device capable of being carried by a user” that performs several of the method steps. RMTA, Claims Appendix at 5–7.

code (57), ¶¶ 20–24; Ex. 1034 ¶ 58). We agree that Petitioner’s citations show these features of proposed substitute claim 29.

Patent Owner does not address Petitioner’s contentions with respect to these limitations.

Based on our review of the evidence of record, Petitioner has shown that Holder teaches or suggests the recitations in limitations [a], [b], [c], and [d] of proposed substitute claim 29.

- (3) *Proposed substitute claim 29, limitation [e.i] and proposed substitute claim 45, limitation [a.i]: “selecting and implementing a Bluetooth wireless protocol profile from one or more Bluetooth wireless protocol profiles for connecting to one or more Bluetooth enabled devices” and proposed substitute claim 29, limitation [e.ii] and proposed substitute claim 45, limitation [a.ii]: “wirelessly pairing, via [the/a] wireless transceiver over a personal area network, with a Bluetooth enabled telephony device using the selected Bluetooth wireless protocol profile, thus creating a wirelessly paired Bluetooth connection between the wireless security device and the telephony device”*

Petitioner persuasively argues that the limitations of proposed substitute claims 29 and 45 relating to selection and implementation of a Bluetooth wireless protocol profile would have been obvious in view of Hollstien, which describes the selection and use in communication of a Bluetooth profile selected from a number of profiles, and that it would have been obvious to combine Holder’s pendant with Hollstien’s teachings regarding Bluetooth wireless protocol profile selection and implementation to enhance reliability and compatibility and to allow the selection of an appropriate profile for emergency calling. RMTA Opp. 3, 7 (citing Pet. 53–55; Ex. 1002 ¶¶ 197–199; Ex. 1034 ¶¶ 15, 25–30, 59–64, 69–71).

Patent Owner does not respond to Petitioner’s contentions with respect to these limitations.

Based on our review of the evidence of record, Petitioner has shown that one of ordinary skill would have found it obvious to combine Holder and Hollstien, and that the combination teaches or suggests the recitations in limitations [e.i] and [e.ii] of proposed substitute claim 29 and the recitations in limitations [a.i] and [a.ii] of proposed substitute claim 45.

- (4) *Proposed substitute claim 29, limitation [f.i] and proposed substitute claim 29, limitation [b.i]: “sending a command to the telephony device requesting one or more of: a telephone number of the telephony device; a telephone network providing service to the telephony device; and a global positioning system (GPS) location of the telephony device;” proposed substitute claim 29, limitation [f.ii] and proposed substitute claim 29, limitation [b.ii]: “receiving a response from the telephony device including one or more of: the telephone number of the telephony device; the telephone network providing service to the telephony device; and the GPS location of the telephony device;” and proposed substitute claim 29, limitation [f.iii] and proposed substitute claim 29, limitation [b.iii]: “determining a current location of the telephony device based on one or more of the telephone number, the telephone network, and the GPS location”*

Petitioner argues that these limitations of proposed substitute claims 29 and 45 are taught in Berry-351’s “vehicle security system that determines a current location (e.g., the current address) by requesting and receiving GPS location data from a paired cellphone and that incorporates a current location in an emergency message to an emergency responder.” RMTA Opp. 4, 8–9 (emphasis omitted) (citing Pet. 38–40; Ex. 1002 ¶¶ 142–145; Ex. 1007, 9:1–16; Ex. 1034 ¶¶ 37–43, 78–85). We agree that Berry-351 teaches or suggests collecting location information, including using GPS information from a connected cellular phone, and using it in an emergency message. Ex. 1007, 4:51–56, 4:61–65, 6:62–7:5; Ex. 1002 ¶¶ 142–145, 149 (cited at Pet. 38–40).

Petitioner argues that, in light of Holder's discussion of the aim of conveying a user's location to an emergency call recipient, one of ordinary skill would have been motivated to combine with Holder the teachings of Berry-351 relating to the request and receipt of GPS location data from a paired cell phone to convey the location of the pendant or to determine the appropriate phone number to use for the user's current location. RMTA Opp. 4, 8–9 (citing Ex. 1002 ¶¶ 142–145; Ex. 1007, 9:1–16; Ex. 1013 ¶ 13; Ex. 1034 ¶¶ 37–43, 78–85).

Patent Owner argues that because Holder provides a means for a user to convey their location during a call, by verbally describing it to a called party, there would have been no reason to modify Holder's pendant by including Berry-351's teachings. RMTA Reply 3–4. Additionally, Patent Owner argues that because Holder does not disclose generating and transmitting customized messages based on received data, it would not have been obvious to one of ordinary skill to use Berry-351's location determination to allow Holder's message to include the user's location as determined via GPS. *Id.* at 4. We agree, however, with Petitioner that the inclusion in Holder of a prerecorded message including the user's name indicates that a user might be unable to verbally convey information. RMTA Sur-Reply 4–5 (citing Ex. 1003 ¶¶ 2, 7, 10, 12; Ex. 1034 ¶ 40).

Based on our review of the evidence of record, Petitioner has shown that one of ordinary skill would have found it obvious to combine Holder and Berry-351, and that the combination teaches or suggests the recitations in limitations [f.i], [f.ii] and [f.iii] of proposed substitute claim 29 and the recitations in limitations [b.i], [b.ii] and [b.iii] of proposed substitute claim 45.

(5) Proposed substitute claim 29, limitation [g.i] and proposed substitute claim 45, limitation [c.i]: “accessing a lookup table stored in the memory including one or more location codes and one or more emergency telephone numbers associated with the one or more location codes;” and proposed substitute claim 29, limitation [g.ii] and proposed substitute claim 45, limitation [c.ii]: “correlating the location with at least one of the one or more location codes to obtain at least one of the one or more emergency telephone numbers”

Petitioner argues that one of ordinary skill would have found it obvious to modify Holder’s automatic dialing of pre-stored emergency contact numbers to include the mapping table of Jang with emergency numbers mapped to locations, and use of a location to select the appropriate number from the mapping table. RMTA Opp. 5–6, 9 (citing Pet. 19–20, 41–47; Ex. 1002 ¶¶ 113–115; Ex. 1013 ¶ 12; Ex. 1034 ¶ 17). Petitioner argues that one of ordinary skill would have been motivated to determine appropriate phone numbers for a current location. *Id.* at 9 (citing Ex. 1034 ¶ 17).

Patent Owner argues that combining Holder and Berry-351 with Jang would change the principle of operation of Holder. RMTA Reply 5–6. Patent Owner contends that “Petitioner’s proposed combination does not build on the disclosure in Holder, it completely changes the way Holder operates” and that “[t]here is no reason for the pendant disclosed in Holder to look[]up phone numbers based on the pendant’s location because the emergency phone numbers to dial are already stored in the pendant.” *Id.* We find, however, that Holder’s principle of operation would not be destroyed by calling stored emergency phone numbers based on location, rather than stored emergency phone numbers independent of location; the modified version of Holder proposed by Petitioner would operate on the

same principles as before. *See In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012).

Based on our review of the evidence of record, Petitioner has shown that one of ordinary skill would have found it obvious to combine Holder, Berry-351, and Jang, and that the combination teaches or suggests the recitations in limitations [g.i] and [g.ii] of proposed substitute claim 29 and the recitations in limitations [c.i] and [c.ii] of proposed substitute claim 45.

(6) *Proposed substitute claim 29, limitation [h.i] and proposed substitute claim 45, limitation [d.i]: “sending a command, over the wirelessly paired Bluetooth connection, to the telephony device to place a telephone call to the at least one of the one or more emergency telephone numbers;” and proposed substitute claim 29, limitation [h.ii] and proposed substitute claim 45, limitation [d.ii]: “once the telephone call is placed, sending a prerecorded emergency message to the telephony device over the wirelessly paired Bluetooth connection, causing the telephony device to transmit the prerecorded emergency message”*

Petitioner contends that Holder teaches these limitations of proposed substitute claims 29 and 45 when Holder teaches the device sending a command to the paired mobile phone to place a call to an emergency number, and playing a prerecorded message to the called number. RMTA Opp. 9–10 (citing Ex. 1013 ¶¶ 8–22; Ex. 1034 ¶¶ 44–53, 93–94).

Patent Owner disputes Petitioner’s contentions with respect to these limitations by presenting arguments relating to Patent Owner’s proposed construction of “sending a prerecorded emergency message,” which we have addressed and declined to adopt in Section II.C.2 of this Decision. RMTA Reply 6–7. Aside from this issue, Patent Owner does not present any further arguments relating to these limitations.

Based on our review of the evidence of record, Petitioner has shown that Holder teaches or suggests the recitations in limitations [h.i] and [h.ii] of

proposed substitute claim 29 and the recitations in limitations [d.i] and [d.ii] of proposed substitute claim 45.

(7) Conclusion – proposed substitute claims 29 and 45

Based on our review of the evidence of record, Petitioner has shown that proposed substitute claims 29 and 45 are unpatentable as obvious over Holder, Berry-351, Hollstien, and Jang.

b) Proposed substitute claims 30 and 46

Petitioner persuasively argues that Hollstien’s teaching of a headset profile teaches the additional limitation of proposed substitute claims 30 and 46, regarding selecting a Bluetooth profile protocol from a set including a Bluetooth hands-free profile, one of which is a Bluetooth headset profile. RMTA Opp. 10–11 (citing Pet. 53–56 (itself citing Ex. 1010 ¶¶ 33, 37); Ex. 1034 ¶¶ 25–30, 59–64, 69–71, 95–97). Petitioner additionally persuasively argues that one of ordinary skill would have found it obvious to make this modification in view of Hollstien’s teaching that the hands-free profile is preferred for remotely making calls. *Id.* at 3 (citing Pet. 53–56 (itself citing Ex. 1010 ¶¶ 33, 37); Ex. 1034 ¶ 97).

Patent Owner does not present any additional arguments regarding Petitioner’s contentions with respect to these proposed substitute claims.

Based on our review of the evidence of record, Petitioner has shown that proposed substitute claims 30 and 46 are unpatentable as obvious over Holder, Berry-351, Hollstien, and Jang.

c) Proposed substitute claims 31 and 47

Petitioner relies for the additional limitations of these proposed substitute claims on the arguments set forth above with respect to limitation [f.i] of proposed substitute claim 29. RMTA Opp. 11.

Patent Owner does not present any additional arguments regarding Petitioner's contentions with respect to these proposed substitute claims.

Based on our review of the evidence of record, Petitioner has shown that proposed substitute claims 31 and 47 are unpatentable as obvious over Holder, Berry-351, Hollstien, and Jang.

d) Proposed substitute claim 32

For the additional limitation of proposed substitute claim 32, that the device of proposed substitute claim 29 further comprises a speaker and a microphone, Petitioner persuasively relies on Holder's disclosure of a loudspeaker and microphone. RMTA Opp. 11 (citing Ex. 1013 ¶ 25, Figs. 3, 4; Ex. 1034 ¶ 99).

Patent Owner does not present any additional arguments regarding Petitioner's contentions with respect to this proposed substitute claim.

Based on our review of the evidence of record, Petitioner has shown that proposed substitute claim 32 is unpatentable as obvious over Holder, Berry-351, Hollstien, and Jang.

e) Proposed substitute claims 33 and 48

Proposed substitute claims 33 and 48 add to their base claim that the device operations (proposed substitute claim 33) or method (proposed substitute claim 48) further comprises "sending audio data captured by [the/a] microphone to the telephony device via the wireless transceiver; and once the telephone call is placed, audibly playing, by [the/a] speaker, audio data received from the telephony device via the wireless transceiver."

RMTA, Claims Appendix 4, 7–8. Petitioner cites Holder's speakerphone functionality to allow a device user to speak with the called party. RMTA Opp. 11–12 (citing Ex. 1013 ¶¶ 13, 17, 25; Ex. 1034 ¶ 100). We agree that

this teaches or suggests sending audio data and playing audio data as in the additional limitations of claims 33 and 48.

Patent Owner does not present any additional arguments regarding Petitioner's contentions with respect to these proposed substitute claims.

Based on our review of the evidence of record, Petitioner has shown that proposed substitute claims 33 and 48 are unpatentable as obvious over Holder, Berry-351, Hollstien, and Jang.

f) Proposed substitute claim 34

Proposed substitute claims 34 adds to proposed substitute claim 32 the further limitation that the wireless security device generates a panic alarm through the speaker, which Petitioner persuasively argues is disclosed in Berry-351. RMTA Opp. 12 (citing Pet. 63–64 (itself citing Ex. 1007, 3:16–22, 11:6–12; Ex. 1002 ¶ 239)). Petitioner contends, and we agree, that it would have been obvious to add this feature of Berry-351 to Holder to alert others around the user of the emergency. *Id.* (citing Ex. 1002 ¶¶ 240–241; Ex. 1034 ¶¶ 101–102, 104–105).

Patent Owner does not present any additional arguments regarding Petitioner's contentions with respect to this proposed substitute claim.

Based on our review of the evidence of record, Petitioner has shown that proposed substitute claim 34 is unpatentable as obvious over Holder, Berry-351, Hollstien, and Jang.

g) Proposed substitute claim 35

For the additional limitation of proposed substitute claim 32 that the device of proposed substitute claim 29 further comprises a button, Petitioner persuasively relies on Holder's disclosures of an emergency button 220. RMTA Opp. 12 (citing Ex. 1013 ¶ 24; Ex. 1034 ¶ 106).

Patent Owner does not present any additional arguments regarding Petitioner's contentions with respect to this proposed substitute claim.

Based on our review of the evidence of record, Petitioner has shown that proposed substitute claim 35 is unpatentable as obvious over Holder, Berry-351, Hollstien, and Jang.

h) Proposed substitute claim 36

For the additional limitation of proposed substitute claim 36, that the processor and wireless transceiver of proposed substitute claim 29 implement Bluetooth low energy technology, Petitioner relies on Holder's disclosure of a low power transceiver operable according to the Bluetooth standard. RMTA Opp. 12 (citing Ex. 1013 ¶ 8; Ex. 1034 ¶ 107).

Patent Owner does not present any additional arguments regarding Petitioner's contentions with respect to this proposed substitute claim.

Based on our review of the evidence of record, Petitioner has shown that proposed substitute claim 36 is unpatentable as obvious over Holder, Berry-351, Hollstien, and Jang.

7. Conclusion

For the reasons set forth above, while we find that Petitioner's Revised Contingent Motion to Amend meets the statutory and procedural requirements, we determine that Petitioner has proven, by a preponderance of the evidence, that these proposed substitute claims are unpatentable over a combination of Holder, Berry-351, Hollstien, and Jang. Thus, we deny Petitioner's Revised Contingent Motion to Amend.

IV. CONCLUSION⁷

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 3–5, 12, 17, 19, 20	103	Berry-351, Kim, Forstall ⁸		
1, 3–5, 12, 17, 19, 20	103	Berry-351, Kim, Jang	1, 3–5, 12, 17, 19, 20	
2, 18	103	Berry-351, Kim, Hollstien, Forstall		
2, 18	103	Berry-351, Kim, Hollstien, Jang	2, 18	
1–4, 6, 12, 16–19	103	Berry-351, Ayed, Forstall		
1–4, 6, 12, 16–19	103	Berry-351, Ayed, Jang	1–4, 6, 12, 16–19	
1, 3–5, 12, 17, 19, 20	103	Berry-145, Kim, Forstall		
1, 3–5, 12, 17, 19, 20	103	Berry-145, Kim, Jang		
2, 18	103	Berry-145, Kim, Hollstien, Forstall		
2, 18	103	Berry-145, Kim,		

⁷ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

⁸ As explained above, we do not reach certain of these grounds because the challenges based on Berry-351 and Jang, in combination with other prior art references, are dispositive of all the challenged claims. See *SAS*, 138 S. Ct. at 1359.

		Hollstien, Jang		
1–4, 6, 12, 16–19	103	Berry-145, Ayed, Forstall		
1–4, 6, 12, 16–19	103	Berry-145, Ayed, Jang		
Overall Outcome			1–6, 12, 16– 20	

Motion to Amend Outcome	Claim(s)
Original Claims Cancelled by Amendment	
Substitute Claims Proposed in the Amendment	29–36, 45–48
Substitute Claims: Motion to Amend Granted	
Substitute Claims: Motion to Amend Denied	29–36, 45–48
Substitute Claims: Not Reached	

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–6, 12, and 16–20 of the '895 patent have been proven to be unpatentable;

FURTHER ORDERED that Patent Owner's Revised Contingent Motion to Amend (Paper 17) is denied; and

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

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Patent 8,351,895 B2

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