

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

ZIPIT WIRELESS, INC.,
Patent Owner.

IPR2021-01130
Patent 7,894,837 C1

Before TREVOR M. JEFFERSON, NEIL T. POWELL, and
JOHN D. HAMANN, *Administrative Patent Judges*.

JEFFERSON, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision

Determining Some Challenged Claims Unpatentable

Denying Patent Owner's Motion to Exclude

35 U.S.C. § 318(a); 42 C.F.R. §§ 42.64, 42.71

Microsoft Corporation (“Microsoft”) and Apple Inc. (“Apple”) jointly filed a Petition (“Pet.,” Paper 3) pursuant to 35 U.S.C. § 311 to institute an *inter partes* review of claims 2, 13,¹ 19, 23, 24, 27, 29–31, 40–42, 46, 48–50 of U.S. Patent No. 7,894,837 C1² (“the ’837 patent,” Ex. 1001) owned by Zipit Wireless, Inc. (“Patent Owner” or “Zipit”). The Petition is supported by the Declaration of Dr. Patrick Traynor (Ex. 1003, “Traynor Decl.”). Zipit did not file a Preliminary Response.

We determined that the information presented in the Petition established that there was a reasonable likelihood that Apple and Microsoft would prevail with respect to its unpatentability challenges. Pursuant to 35 U.S.C. § 314, we instituted this proceeding on December 21, 2021, as to all challenged claims and all grounds of unpatentability. Paper 7 (“Dec. on Inst.”).

¹ Claims 11 and 12 of the ’837 patent were determined to be unpatentable in *Google LLC et al. v. Zipit Wireless, Inc.*, IPR2019-01568, Paper 39 at 49–51 (PTAB Mar. 9, 2021) (Final Written Decision) (finding that claims 11, 12, 14–16, and 20 of the ’837 patent were unpatentable). Because the challenged dependent claim 13 of the ’837 patent depends from claims 11 and 12, Petitioner addresses claim 11 as a part of addressing the challenged dependent claim 13.

² An *Ex Parte* Reexamination Certificate issued for the ’837 patent on November 23, 2020 with amendments to independent claim 1 and newly added claims 21–50, each of which depend directly or indirectly from claim 1. *See* Ex. 1043, 151–152. Although the Petitioner’s declarant refers to Exhibit 1042 as providing the Reexamination Certificate (*see* Ex. 1003 ¶¶ 68, 71 (referring to the Notice of Intent to Issue Ex. Parte Reexamination Certificate in Exhibit 1042)), no exhibit marked 1042 was filed. Indeed, the exhibit list in the Petition shows the 1042 was “RESERVED.” *Pet. v.* We note that Petitioner filed the Reexamination Certificate as part of Exhibit 1043 (excerpts of the Reexamination file history)). *See* Ex. 1043, 151–152.

During the course of trial, Patent Owner filed a Patent Owner Response (Paper 10, “PO Resp.”), and Microsoft and Apple filed a Reply to the Patent Owner Response (Paper 13, “Reply”). Patent Owner also filed a Corrected Sur-reply. Paper 21 (“Sur-reply”). The parties requested an oral hearing. Papers 16, 17.

Microsoft and Zipit filed a Joint Motion to terminate the proceeding as to Microsoft (Paper 26), which we granted. Paper 28. Thus, the trial proceeded to an oral hearing with Apple as sole Petitioner. An oral hearing was held with Apple (“Petitioner”) and Patent Owner on September 21, 2022, and a transcript of the hearing is included in the record. Paper 29 (“Tr.”).

Petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2019).

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 2, 13, 19, 23, 24, 27, 29–31, 40–42, 46, and 48–50 of the ’837 patent. For the reasons discussed below, Petitioner has demonstrated by a preponderance of the evidence that claims 2, 13, 19, 23, 24, 27, 29–31, 46, and 48–50 of the ’837 patent are unpatentable. Petitioner has not demonstrated by a preponderance that claims 40–42 are unpatentable.

I. BACKGROUND

A. *Real Parties-in-Interest*

The Petition asserts that Apple is the real party-in-interest. Pet. 89. Patent Owner asserts that Zipit is the real party-in-interest. Paper 6, 2.

B. *Related Matters*

Petitioner filed three concurrent Petitions for *inter partes* review of the '837 patent, the instant petition IPR2021-01130 (challenging claims 2, 13, 19, 23, 24, 27, 29–31, 40–42, 46, 48, and 50); *Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01129 (challenging claims 1, 3–7, 10, 11, 17, 21, 22, 28, 33–39, and 43–45); and *Inc. v. Zipit Wireless, Inc.*, IPR2021-01131 (challenging claims 11–13, 17–19). Paper 2, 1–5; Paper 6, 2–3. Adverse judgment against Patent Owner was entered in IPR2021-01129. IPR2021-01129 Paper 30. In addition, Petitioner filed three concurrent Petitions for *inter partes* review of related U.S. Patent No. 7,292,870: *Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01124; *Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01125; and *Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01126. *Id.* Adverse judgment against Patent Owner was entered in each of these three cases. *See* IPR2021-01124 Paper 13; IPR2021-01125 Paper 14; IPR2021-01126 Paper 13.

The Petition provides that the '837 patent was the subject of Final Written Decisions in IPR2014-01506³ and in *Google LLC et al. v. Zipit Wireless, Inc.*, IPR2019-01568, Paper 39 (PTAB Mar. 9, 2021) (Final Written Decision) (“*Google '837 IPR*”) (finding that claims 11, 12, 14–16,

³ *Blackberry Corp. v. Zipit Wireless, Inc.*, IPR2014-01506, Paper 50 (PTAB March 29, 2016) (Final Written Decision) (“*Blackberry IPR*”) (finding that the challenged claims were not shown to be unpatentable).

and 20 of the '837 patent were unpatentable). Pet. 89–90. In addition, related U.S. Patent No. 7,292,870 was the subject of *Google LLC et al. v. Zipit Wireless, Inc.*, IPR2019-01567, Paper 38 (PTAB Mar. 9, 2021) (Final Written Decision) (finding the challenged claims unpatentable). *Id.* Finally, Petitioner states that the '837 patent is involved in *Zipit Wireless, Inc. v. LG Electronics Inc.*, Case No. 6-18-cv-02016 (D. S.C.). *Id.*

Patent Owner indicates that the *inter partes* review of the '837 patent may also affect the following matters: *Ex Parte Zipit Wireless, Inc.*, Reexamination No. 90/014,722; *Apple Inc. v. Zipit Wireless, Inc.*, Case No. 5:20-cv-04448-EJD (N.D. Cal.); *Apple Inc. v. Zipit Wireless, Inc.*, Appeal No. 21-1760 (Court of Appeals for the Federal Circuit); *Zipit Wireless, Inc. v. LG Electronics Inc.*, Case No. 6-18-cv-02016 (D.S.C.) (case currently stayed); and *Zipit Wireless, Inc. v. LG Electronics U.S.A., Inc.*, No. 2:20-cv-01494-KM-JBC (D.N.J.). Paper 6, 3–4.

C. The '837 Patent

The '837 patent relates to a handheld instant messaging (“IM”) device. Ex. 1001, 1:16–18. The '837 patent discloses an IM terminal that includes a display and a data entry device integrated in a housing for the IM terminal. *Id.* at 4:25–28. The data entry device allows entry of graphical symbols (such as emoticons supported by an IM service provider) or textual characters via dedicated or programmable keys, a Wi-Fi communications module for communicating messages with a Wi-Fi access point, and a control module for coordinating authorization to coupling the IM terminal to a local network using a wireless access point and for controlling the IM conversation session. *Id.* at 4:28–35, 4:36–55, Figs. 12a, 12b.

Figure 2, provided below, “shows an embodiment of an instant messaging terminal that operates in accordance with the principles of the present invention.” *Id.* at 8:62–65.

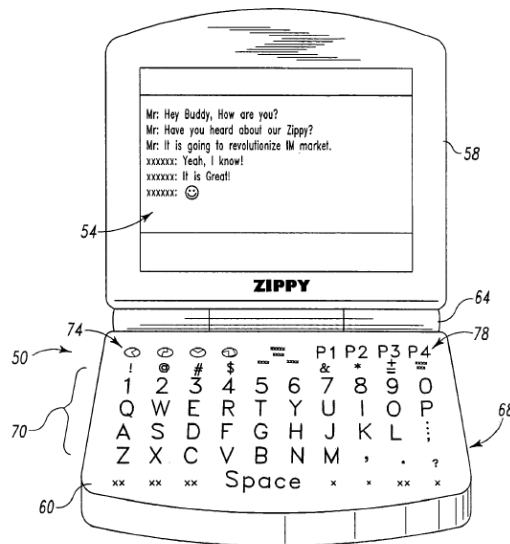


Fig. 2

Figure 2 shows terminal 50, display 54, and located on the bottom of the clamshell configuration 60 is data entry device 68, with QWERTY keyboard section 70, pre-programmed emoticon keys 74, and programmable emoticon keys 78. *Id.* at 11:10–23.

Figures 12a and 12b, provided below, show user interface screens that associate emoticon pictorial images with programmable keys. *Id.* at 9:27–28.

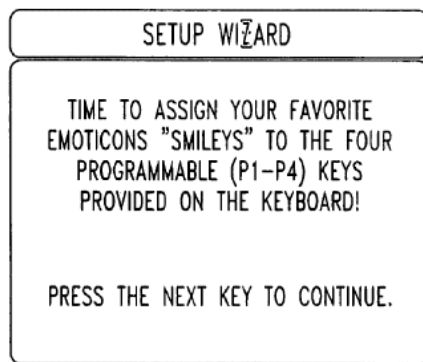


Fig. 12A

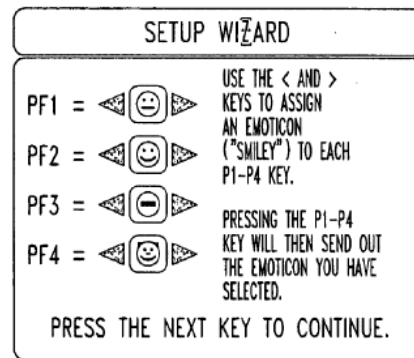


Fig. 12B

Figures 12a and 12b show screens used in the emoticon selection procedure. *Id.* at 9:27–28. Figure 12a identifies keys of keyboard 68 (not shown) that are associated with selected emoticons. Figure 12b shows a screen that instructs the user to use the “<” and “>” keys on either side of the displayed symbol to change the graphical symbol that is associated with a programmable key, e.g., PF2. *Id.* at 16:1–8.

The handheld terminal of the '837 patent manages multiple IM conversations over Internet Protocol (“IP”) through different IM service providers. *Id.* at 5:16–63, code (57). The device generates a buddy list of contacts associated with each IM service provider and displays conversation windows for each buddy with whom the user is engaged in active conversation. *Id.* The device detects signals from local wireless access points, prioritizes the access points according to their signal strength, and selects the one having the strongest signal for local network access. *Id.* at 4:56–62.

D. Illustrative Claims

Claims 11 and 19 reproduced below are illustrative of the challenged claims.

11. A method for managing wireless network access and instant messaging through a wireless access point with a handheld instant messaging terminal comprising:

- generating textual characters and graphical symbols in response to manipulation of keys on a data entry device of a handheld instant messaging terminal;

- displaying the generated textual characters and graphical symbols on a display of the handheld instant messaging terminal;

- generating data messages with the generated textual characters and graphical symbols in accordance with at least one instant messaging protocol that is compatible with an instant messaging service;

- wirelessly transmitting the generated data messages to a wireless network access point through an Internet protocol communications module and wireless transceiver in the handheld instant messaging terminal; and

- controlling a conversation session in accordance with the at least one instant messaging protocol being implemented with a control module located within the handheld instant messaging terminal.

19. The method of claim 11, the conversation session control further comprising:

- parsing textual characters and graphical symbols generated with the data entry device; and

- confirming the entered characters are compatible with the instant messaging service associated with the buddy to whom the message is being sent.

Ex. 1001, 24:55–25:8, 26:22–28.

E. Instituted Grounds

Petitioner relies on the following references. Pet. 2.

Name	Reference	Exhibit
Sidekick-I	T-Mobile Sidekick Owner's Manual, Release 1.01, March 11, 2003	1005
Sidekick-II	T-Mobile Sidekick Owner's Manual, https://web.archive.org/web/20030202154930/http://help.sidekick.dngr.com/OwnersManual.Html	1006
Heikes	Heikes, et al., U.S. Patent App. Pub. No. 2003/0225846 A1, filed Nov. 27, 2002, published Dec. 4, 2003	1007
Jonker	Jonker, et al., U.S. Patent No. 7,483,984 B1, filed Dec. 19, 2002, issued Jan. 27, 2009	1008
Brittan	Brittan, UK Patent App. GB 2,376,379, published Dec. 11, 2002	1009
Miller	Miller, et al., U.S. Patent No. 6,629,793 B1, filed Apr. 26, 2002, issued Oct. 7, 2003	1012
Im	Im, KR Patent Pub. 2003-0068662, published Aug. 25, 2003	1044

We instituted *inter partes* review of claims 2, 13, 19, 23, 24, 27, 29–31, 40–42, and 46 of the '837 patent on the following grounds (Dec. on Inst. 8–9, 23), which are all the grounds presented in the Petition (Pet. 1–2):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
48, 50	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan
13, 27, 49	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller
2	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller, Im
19, 23, 24, 29–31, 40–42, 46	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller, Im

II. ANALYSIS

A. *Level of Ordinary Skill in the Art*

Petitioner asserts the level of skill adopted in the Final Written Decision in IPR2019-01568, *Google '837 IPR* at 8–9. *See* Pet 5 n.3;⁴ Ex. 1003 ¶¶ 37. Our prior decision in IPR2019-01568 found that

A [person of ordinary skill in the art] has an accredited bachelor's degree in computer science, electrical engineering, or a related discipline that included coverage of wireless communications and the use of communication protocols used for real-time communications, and also at least two years of industry experience. In lieu of specific academic training, a [person of ordinary skill in the art] may draw upon appropriate industry experience to meet the foregoing requirements.

Google '837 IPR at 8. Patent Owner does not challenge Petitioner's statement. *See* PO Resp. We apply this level of skill in the present case.

B. *Claim Construction*

In *inter partes* review proceedings based on petitions filed on or after November 13, 2018, such as this one, we construe claims using the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), as articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and its progeny. *See* 37 C.F.R. § 42.100(b) (2020). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the

⁴ We note that the Petition and Petitioner's declarant cite erroneously to Exhibit 1042 here (*see, e.g.*, Ex. 1003 ¶ 66; Pet. 3 n.2, 5 n.3), we view references to Exhibit 1042 in this context as citations to *Google LLC et al. v. Zipit Wireless, Inc.*, IPR2019-01568, Paper 39 (PTAB Mar. 9, 2021) (Final Written Decision), which was not provided as part of Petitioner's exhibits. *See* Pet. v (noting Exhibit 1042 is RESERVED).

specification or during prosecution.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

We now consider claim construction issues only to the extent necessary to dispose of the instant unpatentability grounds. *See, e.g., Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Petitioner offers no proposed claim constructions and applies the constructions determined by the Board in the IPR2019-01568 Final Written Decision. Pet. 3. Petitioner asserts that the remaining terms are given their “ordinary and customary meaning as understood by a Person of Ordinary Skill in the Art as of the Critical Date . . . and the patent’s prosecution history.” *Id.* at 3–4 (citing Ex. 1003 ¶¶ 73–74; 37 C.F.R. §42.100(b)). Patent Owner does not challenge Petitioner’s construction. PO Resp. 10–11.

We adopt the claim constructions determinations in IPR2019-01568 provided in the table below.

Claim Term	IPR2019-01568 Construction
“generating textual characters and graphical symbols in response to manipulation of keys on a data entry device”	“graphical symbols” refers to “graphical emoticons;” phrase is given its “ordinary meaning in the context of the claims”
“a data entry device of a handheld terminal”	“a handheld terminal capable of data entry”

Google ’837 IPR at 9–12.

C. Obviousness of Claims 48–50: Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), and Brittan

Petitioner asserts that claims 48 and 50, which depend from claim 1 are unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, Sidekick (Sidekick-I or Sidekick-II), and Brittan. Pet. 4–53. To support its contentions, Petitioner provides explanations as to how the prior art discloses each claim limitation and the motivations to combine the prior art teachings. *Id.* Petitioner also provides citations to the Traynor Declaration in support of its contentions. *Id.*; Ex. 1003 ¶¶ 199–365. The prior art is summarized below.

1. Heikes (Ex. 1007)

Heikes discloses an Instant Messaging Personalization system (Ex. 1007, code (54)), disclosing IM sender systems communicating with IM recipients system and IM host systems through a communication link including users such as AIM, ICQ, Yahoo Messenger and Microsoft Messenger (*id.* ¶ 50). Figure 4, provided below, illustrates such a communication system. *Id.* ¶ 56.

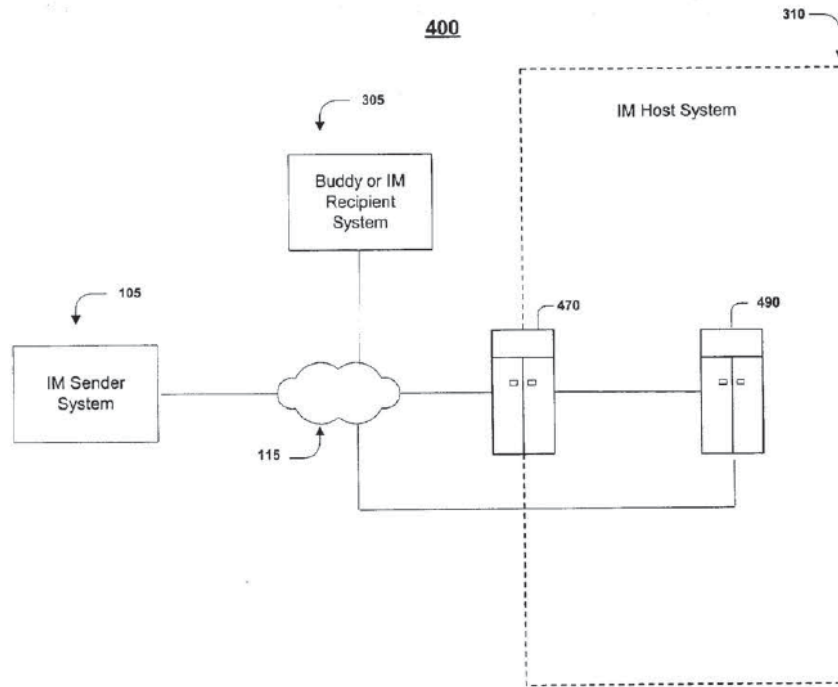


Fig. 4

Figure 4 shows IM host system 310 “support[s] IM services” and “allow[s] users to send and receive IMs” using “standard or exclusive IM protocols.” *Id.* ¶¶ 52, 58. “By accessing the IM host system, an IM sender can use the IM client application to view whether particular users (‘buddies’) are online, exchange IMs with particular buddies, . . . [and] trade files.” *Id.* ¶ 53; *see id.* ¶¶ 54, 55, 60. Heikes provides examples of user interfaces of IM conversation sessions where user select and send emoticons. *Id.* ¶¶ 84, 110–112, 116, Figs. 11, 12, 15. Heikes further shows that IM recipient systems use an IM services over a wireless network or LAN as shown in Figure 1 below. *Id.* ¶¶ 2, 39, 50.

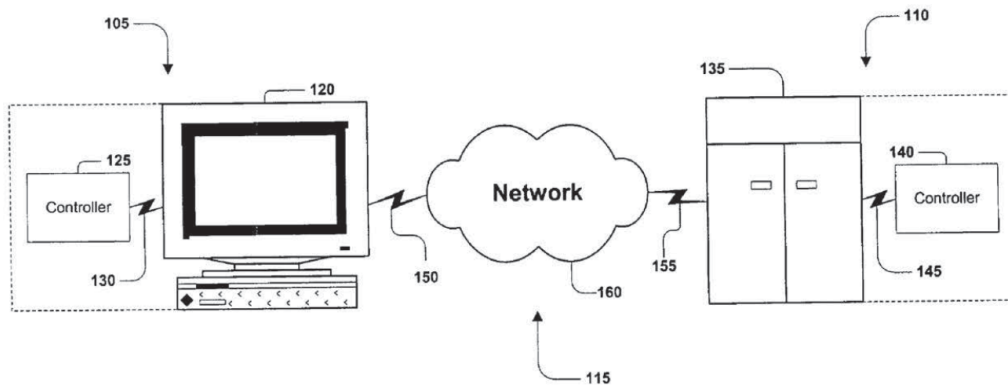


Fig. 1

Figure 1 shows IM sender system 105 typically includes client device 120 and/or client controllers 125 that use an IM service over network 160, which may be a LAN or WAN. IM sender that enables IM sender system 105 to send and receive IMs with IM recipient systems using an IM service and over a wireless network 160 (e.g., LAN). *Id.* ¶¶ 2, 39, 50.

2. Jonker (Ex. 1008)

Jonker discloses “[a] method for accessing wireless carrier networks by mobile computing devices”. Ex. 1008, code (57). Figure 1 below depicts a mobile computing device accessing a network. *Id.* at 3:7–9.

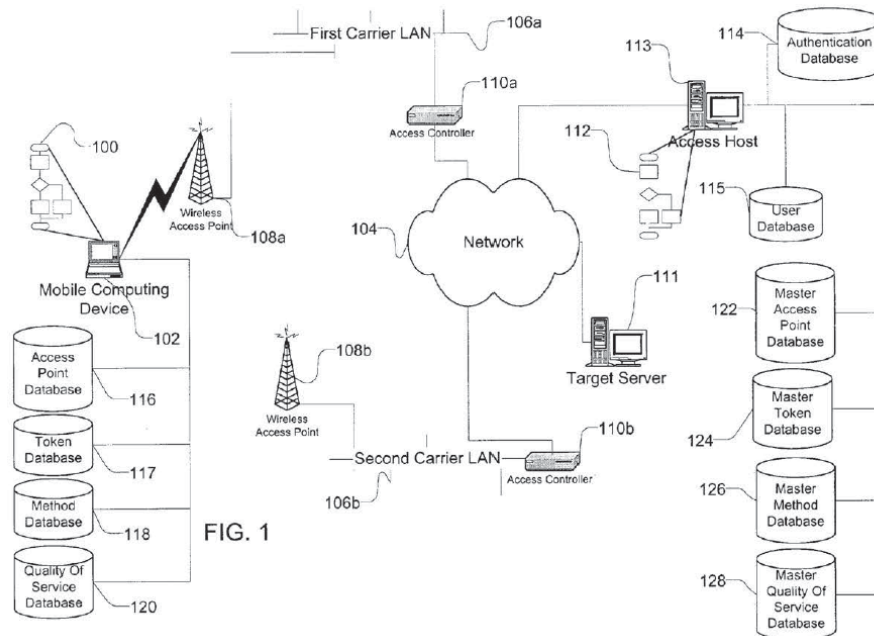


Figure 1 shows mobile device 102 that includes access client 100, which enables access to network 104 via carrier LAN network 106a/106b using Wireless Access Point (AP) 108a. *Id.* at 4:1–8, 26:32–35, Fig. 1. Access client 100 uses a network device “to transmit and receive carrier network signals.” *Id.* at 26:36–41. In addition, Jonker teaches that access client 100 includes sniffer 200 to “detect access points” by receiving “carrier network signals transmitted by the AP,” which include “a carrier network identifier used by devices coupled to the carrier network to identify the network.” *Id.* at 6:54–66. Jonker further teaches that sniffer 200 “continuously polls access points” and if the sniffer logic determines that the access client is not currently connected to a carrier network, it determined if an access point is available. *Id.* at 11:32–12:6.

3. *Sidekick-I (Ex. 1005) and Sidekick II (Ex. 1006)*

Sidekick-I (a PDF manual) and Sidekick-II (an internet-based publication of a user manual) are the user manuals for a handheld mobile communication device that uses IM and wireless networking. Ex. 1005, 1,

9, 14; Ex. 1006, 5, 9. Petitioner cites to the two Sidekick manual in parallel asserting that “Sidekick-II is the earliest publicly accessible portions of a user manual relied upon” and Sidekick-I “has a slightly later known public accessibility date than Sidekick-II.” Pet. 5. Petitioner relies primarily on Sidekick-I, but to the extent that Sidekick-I is challenged, Petitioner also relies independently on Sidekick-II. *Id.*

The Sidekick manuals disclose a device, with display keyboard and control buttons that also has wireless network connectivity to connect to IM functions such as AOL Messenger (AIM). Ex. 1005, 14, 19–22, 43, 46, 73, 75; Ex. 1006, 9–12, 24–26, 52–55. The Sidekick manuals disclose that “[w]ith AIM, you can have up to 10 online [IM] conversations going at the same time.” Ex. 1005, 81–82; Ex. 1006, 47–48. The Sidekick manuals state that the display screen provides indications for when a message has been sent successfully or queued for delivery when a connection is lost when a device was out of radio range. Ex. 1006, 48, 72; Ex. 1005, 81.

4. *Brittan (Ex. 1009)*

Brittan discloses an “emotion key for user selection of an emotion from a set of emotions,” within “text messaging device[s] such as a mobile phone” and utilizing messaging systems such as “instant messaging” systems. Ex. 1009, codes (54), (57). Brittan discloses that keys are assigned “smilies” represented in text form by “corresponding character strings” that can be inserted into messages using the assigned key and displayed on the “sender-device display by the corresponding graphic.” *Id.* at 12, Fig. 4.

5. *Motivation to Combine*

For the motivation to combine Heikes, Jonker, Sidekick (Sidekick-I or Sidekick-II), and Brittan, Petitioner asserts a person of ordinary skill in the art would have been motivated to combine Heikes, Jonker, Sidekick

(Sidekick-I or Sidekick-II), and Brittan, to implement a mobile device in Heikes with connection to a LAN or WAN as disclosed in Jonker in accordance with the Heikes' system. Pet. 14–18; Ex. 1003 ¶¶ 157–170; Ex. 1007 ¶¶ 2, 38, 45–47; Ex. 1005 ¶¶ 39–45, Fig. 1.

Petitioner further asserts that an ordinarily skilled artisan would have utilized the sidekick features of an integrated display and keyboard into the mobile device of Heikes which does not expressly teach how data is entered or displayed, finding it obvious to implement a well-known PDA device form with IM capabilities to navigate and perform data entry. Pet. 18–20; Ex. 1003 ¶¶ 171–181. Petitioner further contends that “[b]ased on Brittan, a POSITA would have found it obvious to modify the Heikes- Jonker-Sidekick device to enable a key/button on the device to be used to select/add a smiley into the IM conversation from a menu of smilies (as already disclosed and shown in Heikes . . .)” (Pet. 23) as it was well known to use buttons or related menus to select emoticon smilies (*id.* at 24). Petitioner argues that

configuring Heikes-Sidekick-Jonker's device to implement Brittan's teachings would have amounted to the use of a known technique to improve similar devices in the same way, and combining prior art elements according to known methods to yield predictable results—a device that enables pressing one or more buttons to select a smiley from a menu of smilies and providing the selected smiley for display in graphical form in the IM conversation.

Pet. 24–25 (citing Ex. 1003 ¶¶ 195–196).

6. Claims 1, 48, and 50 Analysis

Petitioner provides persuasive and sufficient analysis and citation mapping the limitations of claim 1 to the combination of Heikes, Jonker, Sidekick (with parallel citations to Sidekick-I and Sidekick-II), and Brittan.

Pet. 27–47; Ex. 1003 ¶¶ 199–284. Petitioner provides citation to declarant testimony to support that the Heikes, Jonker, Sidekick, and Brittan device teaches the limitations of claim 1. *Id.* For example, Petitioner provides evidence that “Heikes-Jonker-Sidekick-Brittan provides a device . . . having IM capabilities” and a housing with integrated data entry and display as required in claim 1 (preamble and limitations [1a], [1b], and [1c]). Pet. 26–33; Ex. 1003 ¶¶ 200–224). Further, Petitioner shows that the Heikes-Jonker-Sidekick-Brittan’s device includes an Internet protocol (IP) communication module that performs the controller communications with the wireless transceiver as required in limitation [1d]. Pet. 33–36; Ex. 1003 ¶¶ 225–239. Petitioner’s evidence also supports that the Heikes-Jonker-Sidekick-Brittan’s device based on the disclosures of Heikes and Sidekick teaches a wireless transceiver that transmits data messages over a network in accordance with requirements of limitation [1e]. Pet. 36–40; Ex. 1003 ¶¶ 240–254. Finally, Petitioner provides detailed evidence supporting that Heikes-Jonker-Sidekick-Brittan teaches the control module limitations of claim [1f], [1g], and [1h]. Pet. 40–47; Ex. 1003 ¶¶ 255–284. In particular, Petitioner asserts that Brittan teaches a controller that “‘detect[s] and interpret[s] key presses to output, from an associated memory, the appropriate character string’ corresponding to the selected smiley (i.e., determines the character sequence corresponding to one of the graphical symbols) and display controller 131 then recognizes the character string and displays it using the corresponding graphic” in accordance with limitation [1h]. Pet. 46–47; Ex. 1003 ¶ 282; Ex. 1009, 12–13, Figs. 3, 4.

Petitioner relies on the analysis of claim 1 to support their contentions that Heikes-Jonker-Sidekick-Brittan teach the limitations of claim 11. Pet. 47–52; Ex. 1003 ¶¶ 300–366. Claim 11, which is cancelled (*see Google*

'837 IPR at 49–51), is incorporated into challenged dependent claims in related grounds discussed below.

Claims 48 and 50 provided limitations for independent claim 1 addressing the data entry device keys. Petitioner argues that the Heikes-Jonker-Sidekick-Brittan device includes a data entry key that corresponds to a graphical symbol and when activated as asserted in claim limitation [1g] displays a menu of smilies (graphical symbols) for selection. Pet. 52–53; Ex. 1003 ¶¶ 312–315, 366; Ex. 1009, Abstract, 12–13, Figs. 3, 4; Ex. 1007 ¶¶ 84, 110–116, Figs. 11, 12; Ex. 1010, 90–92.

Patent Owner does not challenge Petitioner's contentions and "takes no position" with respect to the cited evidence. PO Resp. 12; *see* 37 C.F.R. § 42.23(a) ("Any material fact not specifically denied may be considered admitted."); *In re Nuvasive, Inc.*, 842 F.3d 1376, 1379–82 (Fed. Cir. 2016) (holding that patent owner waived arguments on an issue that were not raised in its response after institution).

Based on the full record, we find that Petitioner's evidence and argument establish by a preponderance of the evidence that Heikes-Jonker-Sidekick-Brittan IM device combination and functions teach or suggest the limitations of claims 1, 48, and 50. Accordingly, Petitioner has demonstrated that Heikes-Jonker-Sidekick-Brittan (based on either Sidekick-I or Sidekick-II) would have rendered obvious the limitations of claims 48 and 50.

D. Obviousness of Claims 13, 27, 49: Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, and Miller

Petitioner asserts that claims 13, 27, and 49 are unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, and Miller. Pet. 53–61; *see id.* at 47–52 (addressing

claim 11 from which claim 13 indirectly depends). To support its contentions, Petitioner provides explanations as to how the prior art discloses each claim limitation and the motivations to combine the prior art teachings. *Id.* Petitioner also provides citations to the Traynor Declaration in support of its contentions. Ex. 1003 ¶¶ 434–448.

Miller teaches a computer system (e.g., PDA) that includes a keyboard, an operating system, and a[n] “instant messaging application.” Ex. 1012, 4:13–50, Fig. 1. Miller discloses that when a user selects a key on the keyboard, the corresponding characters or graphical emoticons associated with the key are used to input text or graphics into an IM application display. Ex. 1012, 7:60–8:31, 8:66–9:35, 9:49–52 (stating that an “emoticon can be a set of text characters” or “a graphic”), Fig. 5–7.

Petitioner provides persuasive and sufficient argument that the “Heikes-Jonker-Sidekick-Brittan’s device is the type of device that Miller sought to improve upon” (Ex. 1012, 1:22–2:60) as “Miller explains that conventional devices/software required users to choose a graphic emoticon for display by ‘press[ing] more than one key or using a graphical menu’ of such emoticons, which can ‘be confusing and distracting to the instant messaging experience’” (*id.* at 1:22–2:60). Pet. 54–55 (citing Ex. 1003 ¶¶ 428–429). We find that Petitioner offers persuasive rationales to support that a skilled artisan “would have been motivated to include one or more dedicated emoticon keys, on the combination’s keyboard, which upon being depressed would result in entering a graphical emoticon in the instant messaging application’s display.” Pet. 55–56 (citing Ex. 1003 ¶ 431; Ex. 1012, 2:20–45). Petitioner argues this modification would have been straightforward and used a known technique to improve similar devices. Pet. 55–56; Ex. 1003 ¶¶ 432–433.

1. Analysis of Claims 13, 27, and 49

Petitioner provides persuasive argument and evidence that Heikes-Jonker-Sidekick-Brittan-Miller teaches the limitations of dependent claims 13 (which depends from claims 11 and 12), 27 (which depends from claim 1), and 49 (which depends from claims 1 and 48). Pet. 57–61; Ex. 1003 ¶¶ 437–448. We find above that the cited combination teaches the limitations of claims 1 and 48. Petitioner also provides persuasive argument and evidence that Heikes-Jonker-Sidekick-Brittan teaches claim 11 (Pet. 47–52; Ex. 1003 ¶¶ 300–315). Patent Owner does not challenge Petitioner’s argument or evidence with respect to claim 11. PO Resp. 12.

With respect to claim 12 and 13, Petitioner provides sufficient evidence with citation to the teachings from the references and knowledge of ordinarily skilled artisans that Heikes-Jonker-Sidekick-Brittan-Miller device teaches the conversation session controls of claims 12 and 13, including data entry key and generating a character sequence that represents a graphical symbol. Pet. 56–59; Ex. 1003 ¶¶ 434–443; *see* Pet. 47–52 (mapping limitations for claim 11 to Heikes-Jonker-Sidekick-Brittan).

With respect to dependent claims 27 and 49, Petitioner provides persuasive evidence and argument that Heikes-Jonker-Sidekick-Brittan-Miller teaches the control data entry device and control module limitations for generating character sequences for graphical symbols compatible with at least one instant messaging protocol. Pet. 59–61; Ex. 1003 ¶¶ 444–448.

Patent Owner does not challenge Petitioner’s contentions and “takes no position” with respect to the cited evidence. PO Resp. 12. Based on the full record, we find that Petitioner establishes that Heikes-Jonker-Sidekick-Brittan-Miller in combination teach or suggest the limitations of claims 13, 27, and 49 by a preponderance of the evidence.

E. Obviousness of Claim 2: Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller, and Im

Petitioner asserts that claim 2 is unpatentable under 35 U.S.C. § 103(a) as obvious over the Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller and Im. Pet. 61–67; Ex. 1003 ¶¶ 449–477; *see* Pet. 25–47 (addressing claim 1 from which claim 2 depends). To support its contentions, Petitioner provides explanations as to how the prior art discloses each claim limitation and the motivations to combine the prior art teachings. *Id.* Petitioner also provides citations to the Traynor Declaration in support of its contentions. Ex. 1003 ¶¶ 199–284, 464–477.

Im teaches “shortcut key[s]” on a keyboard of a device (e.g., a PDA) that can be programmed to be associated with a “character string” that can be input into applications. Ex. 1044, Abstract, 2. Petitioner argues that an ordinarily skilled artisan would have been motivated to apply the techniques of programmable keys disclosed in Im with Miller’s contemplation of user-definable emoticons. Pet. 62; Ex. 1003 ¶¶ 453–456; Ex. 1012, 1:60–67, 2:20–24; Ex. 1044, 2–3. Petitioner provides multiple rationales to combine Im with Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, and Miller based on the disclosures in Im, Heikes, and Brittan. Pet. 62–64; Ex. 1003 ¶¶ 457–463; Ex. 1009, 12–13.

With respect to claim 2, Petitioner asserts that Heikes and Brittan teach “the combination’s IM client application would provide a list of supported smileys/emoticons and their corresponding character strings, and display a selected graphical smiley/emoticon for display within the IM conversation upon being selected.” Pet. 66 (citing Ex. 1007 ¶¶ 84, 110–112, Figs. 11, 12; Ex. 1009, 12–13, 23 Figs. 3, 4; Ex. 1010, 90–92; Ex. 1003 ¶ 475). Petitioner provides sufficient and persuasive evidence that Heikes,

Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller and Im teach the programmable key, plurality of keys and control module limitations of claim 2. Pet. 64–87; Ex. 1003 ¶¶ 492–506; *see* Ex. 1044, 2–4; Ex. 1007 ¶¶ 110–112, Figs. 11, 12; Ex. 1010, 90; Ex. 1009, 11–13, Figs. 3, 4.

Patent Owner does not challenge Petitioner’s contentions and “takes no position” with respect to the cited evidence. PO Resp. 12. Based on the full record, we find that Petitioner establishes that Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller and Im teach or suggest the limitations of claim 2 by a preponderance of the evidence.

F. Obviousness of Claims 19, 23, 24, 29–31, 40–42, and 46: Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller, and Im

Petitioner asserts that claims 19, 23, 24, 29–31, 40–42, and 46 are unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller and Im. Pet. 67–85; Ex. 1003 ¶¶ 561–638; Pet. 25–47 (addressing claim 1 from which claim 2 depends); Ex. 1003 ¶¶ 199–284. To support their contentions, Petitioner provides explanations as to how the prior art discloses each claim limitation and the motivations to combine the prior art teachings. *Id.*

Petitioner asserts that the combination of Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller and Im teach the parsing textual characters and graphical symbols in IM limitations (claims 19, 23, 24, and 29–31) and the control module and confirming the compatibility of the data for at least one IM service limitations (claims 40–42 and 46). Pet. 67–85.

1. Claim 19 Analysis

Claim 19 depends from claim 11 and recites the further limitation that “the conversation session control further comprising: parsing textual characters and graphical symbols generated with the data entry device; and

confirming the entered characters are compatible with the instant messaging service associated with a buddy to whom the message is being sent.”

Ex. 1001, claim 19. Petitioner and Patent Owner dispute that the combination teaches the parsing and confirming limitations of claim 19 and related dependent claims. We address the parties’ contentions below.

a) Petitioner’s Contentions

Petitioner argues that claim 19’s limitation of “parsing textual characters and graphical symbols” does not appear in the ’837 patent specification, which “only states that the ‘control module parses the characters within a message generated by a user with the data entry device.’” Pet. 68 (citing Ex. 1001, 5:49–57, 7:59–8:2; Ex. 1003 ¶ 568). Petitioner argues that the Heikes-Jonker-Sidekick-Brittan-Miller-Im combination teaches claim 19’s “recitation of ‘parsing textual characters and graphical symbols generated with the data entry devices’ [as it] encompasses parsing characters, which collectively includes textual characters and the characters associated with emoticons as generated by the programmable pre-programmed keys or as keyed-in/typed by the user.” Pet. 68–69 (citing Ex. 1003). Further, Petitioner provides testimony that it would have been obvious “for the character string that is assigned to a programmable key to be one of the character strings corresponding to a graphical emoticon/smiley supported by the IM service (e.g., the AIM client and service).” Pet. 69 (citing Ex. 1003 ¶ 572; Ex. 1007 ¶¶ 110–112, Figs 11–12; Ex. 1010, 90). In accordance with the arguments and evidence presented for claim 2, Pet. 61–67, Petitioner argues that the combination teaches a graphical emoticon or symbol supported by an instant messaging service. *Id.* Where that character string is not recognized by the IM client, however, “the character string (e.g., generated by pressing the programmable key) is provided for display as-is.”

Pet. 70 (citing Ex. 1044, 2–4; Ex. 1009, 12–13, Figs. 3–4; Ex. 1010, 90; Ex. 1003 ¶¶ 573–574). Petitioner argues that a person of ordinary skill in the art would have understood that when the IM client determines whether the textual characters and character strings associated with graphical symbols/emoticons are associated with a IM service, e.g., AIM-supported graphical emoticon, it discloses the parsing limitation as described in the ’837 patent. Pet. 68–70; Ex. 1001, 5:49–57, 7:59–8:2, 18:1–4, 18:35–42; Ex. 1003 ¶ 576.

With respect to the confirming limitation of claim 19, Petitioner argues that the ’837 patent does not use the phrase “confirming the entered characters are compatible with the instant messaging service.” Rather, the ’837 specification

states that its “control module . . . confirms the sequence is compatible with the messaging service being used to conduct the conversation with the recipient buddy,” and if “not compatible with the service,” the control module “determines the corresponding sequence for the symbol in the messaging service and substitutes that sequence in the message before transmitting the message” [Ex. 1001, 5:49–57, 7:59–8:2; Ex. 1003 ¶ 579].

Pet. 71. Petitioner argues that this function is disclosed in the process that generates, transmits and displays the IM messages (Pet. 50–52 (discussing claim 11)), and processes a character string that is either recognized as corresponding to a graphical emoticon as part of the IM service or displayed as-is. *Id.* at 72 (citing Ex. 1003 ¶¶ 584–585; Ex. 1007, Figs. 11–12; Ex. 1010, 90; Ex. 1013 ¶ 82; Ex. 1060 ¶ 56; Ex. 1009, 12–13)).

b) Patent Owner Contentions

Patent Owner argues that the Petition fails to show that the cited references teach “parsing textual characters and graphical symbols” or

“confirming the entered characters are compatible with the instant messaging service associated with a buddy” as recited in claim 19.

With respect to “parsing,” Patent Owner argues that Petitioner misunderstands the function of the programmable key in the ’837 patent. PO Resp. 17; Ex. 2001 ¶ 54. Patent Owner argues that in Petitioner’s combination a skilled artisan would have understood that the presented programmable keys would *only* display emoticons adopted and assigned by the instant messaging service in use. PO Resp. 22–23; Ex. 2001 ¶ 59; *see* PO Resp. 17–22 (discussing claim 11 and assigned programmable keys); Ex. 2001 ¶¶ 53–58. Thus, a parsing is not satisfied by evaluating a generated string upon pressing a programmable key to determine if it is supported by an IM service, as that key had already been approved and supported in the programming step. PO Resp. 23; Ex. 2001 ¶ 60.

Patent Owner also asserts that Petitioner conflates the parsing requirement with displaying, rendering the terms redundant with independent claim 11’s displaying limitation. PO Resp. 23–24, 27. Because “[t]he second limitation of independent claim 11, from which claim 19 depends, calls for “displaying the generated textual characters and graphical symbols on a display of the handheld instant messaging terminal,” the further parsing of claim 19’s conversation session control limitation, requires more than simply displaying characters or symbols as recited in claim 11. PO Resp. 24; Ex. 2001 ¶ 62.

Patent Owner argues that this understanding of parsing is supported by the plain and ordinary meaning (PO Resp. 24 (citing Ex. 2001 ¶ 63)); and dictionary definitions (Ex. 2006, 585; Ex. 2005, 627), requiring more than simply analyzing a character string to determine if it compatible with a language or protocol. PO Resp. 25; Ex. 2001 ¶ 63.

In addition, Patent Owner argues that parsing is consistent with the '837 patent. PO Resp. 25–26; Ex. 2001 ¶ 64; Ex. 1001, 5:49–58, 7:61–8:2. Thus, Patent Owner argues that

the ['837 patent] specification explains to a POSITA that parsing is used not for displaying emoticons but to confirm that “the sequence is compatible with the messaging service” of a buddy; and if it is not compatible, “the control module determines the corresponding sequence for the symbol in the messaging service and substitutes that sequence in the message before transmitting the message.”

PO Resp. 25–26 (citing Ex. 2001 ¶ 64; Ex. 1001, 5:49–58, 7:61–8:2).

With respect to the confirming compatibility limitation of claim 19, Patent Owner argues that Petitioner ignored the confirming step (PO Resp. 29), and renders the confirming step redundant with the compatibility step in claim 19. PO Resp. 29–30. Patent Owner argues that Petitioner fails to show that the asserted combination confirms that the entered characters are compatible with the instant messaging service. PO Resp. 34 (citing Ex. 2001 ¶ 78; Pet. 72; Ex. 1003 ¶ 582). Patent Owner further argues that Petitioner fails to show that claim 19's further limitation on claim 11, is not met by a character string that is associated with a graphical emoticon, but “requires an affirmative step of approval to ensure, or double-check, the “compatibility” of the “entered characters” with a recipient buddy's instant messaging service. PO Resp. 35; Ex. 2001 ¶ 81.

c) Analysis

We are not persuaded by Patent Owner's arguments that the Petition fails to teach the limitation of claim 19. Specifically, Patent Owner's arguments are premised on the programmable keys in the '837 patent performing the same functions and limitations as the programmable key in Petitioner's asserted combination. *See* PO Resp. 17–21 (describing the '837

patent programmable key embodiment). Although Petitioner notes that the programmable key is not required in claim 19 or claim 11 from which it depends (Reply 4), Petitioner's proposed Heikes-Jonker-Sidekick-Brittan-Miller-Im combination relies on pre-programmed keys that implements emoticons that *are* and *are not* supported by the IM service used in the conversation. Reply 3–4; Ex. 1003 ¶¶ 572–574; Pet. 71–72. Thus, Petitioner is not asserting that the Heikes-Jonker-Sidekick-Brittan-Miller-Im combination's programmable keys are limited to *only* supporting emoticons supported by the IM service as the Patent Owner asserts. Accordingly, we find Patent Owner's arguments unavailing as they do not address the combination Petitioner asserts. We address Patent Owner's further contentions below.

(1) Parsing Limitation

With respect to “parsing,” Patent Owner states that the “claimed ‘parsing’ means that the IM client application evaluates whether the characters were supported by the instant messaging service” (Sur-reply 11 (citing PO Resp. 23; Ex. 2001 ¶ 60)). We note that the Patent Owner also argues that parsing requires more and “refers to analyzing characters as part of a string or text (in this case, an instant message) to ensure that they are compatible with a ‘grammar,’ i.e., the rules of a language or protocol.” PO Resp. 25; Ex. 2001 ¶ 63.

Under either interpretation Patent Owner advances, we find that Petitioner provides persuasive evidence and argument that the cited art teaches the limitation. The Petition expressly argues that the combination evaluates characters to determine if they are supported by a particular IM supported emoticon. Pet. 69–70; Ex. 1003 ¶¶ 575–576. We credit Dr. Traynor's testimony that the combination's IM client evaluates entered

characters to ensure compatibility with IM supported graphical emoticons. Ex. 1003 ¶¶ 573–575, 584–586; Ex. 1103 ¶¶ 38–40. We find that Petitioner’s argument is consistent with the ’837 patent’s description the control module “parses the characters within a message generated by a user with the data entry device and confirms the sequence is compatible with the message service being used to conduct the conversation.” Ex. 1001, 5:50–54.

Contrary to Patent Owner’s arguments, we do not find that Petitioner conflates “parsing” with “displaying” (PO Resp. 23–24, 27). Instead, we find that the Petition addresses the conversation session control recognizing or not recognizing characters generated by the data entry device as being supported or associated with an IM service as parsing claimed in the ’837 patent. Pet. 70; Ex. 1003 ¶¶ 575–576. We also do not find the Petitioner’s argument regarding “parsing” redundant of claim 11’s “displaying” limitation, as the Petition does not rely on the resulting display to support the parsing limitation. *See* Pet. 70; Ex. 1003 ¶¶ 575–576. Petitioner asserts that when the IM client determines whether the textual characters and character strings associated with graphical symbols/emoticons are associated with a IM service, e.g., AIM-supported graphical emoticon, it discloses the parsing limitation as described in the ’837 patent. Pet. 68–70; Ex. 1001, 5:49–57, 7:59–8:2, 18:1–4, 18:35–42; Ex. 1003 ¶ 576.

We also do not agree with Patent Owner’s arguments that the Petition relies on automatic conversion of entered characters to establish parsing, that Petitioner’s arguments encompass all applications on the asserted device, or that parsing in claim 19 “requires additional logic (computation) that goes beyond ‘displaying’ a character.” PO Resp. 25–27. Patent Owner’s arguments regarding the parsing of other applications that display emoticons

or symbols do not persuasively address Petitioner’s proposed combination that relies on the processing to display recognized or unrecognized entered characters. Further, Patent Owner’s arguments that additional logic or computation is required is not supported by the ’837 patent or commensurate in scope with claim 19’s requirement of parsing. Instead, we are persuaded, as Petitioner argues, that an ordinarily skilled artisan would understand that the entered characters are evaluated or parsed for the following limitation that separately requires ensuring or confirming compatibility with the IM protocols. *See* Reply 4–6.

Finally, Patent Owner argues for the first time in the Sur-reply that Petitioner’s proposed combination improperly involves programmable keys introduced by the Im reference to the Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, and Miller combination cited in the underlying independent claim 11 (Pet. 47–52) from which claim 19 depends. Sur-reply 12–13 (citing Reply 4). In general, a “sur-reply may only respond to arguments raised in the preceding brief. . . . While replies and sur-replies can help crystalize issues for decision, a reply or sur-reply that raises a new issue or belatedly presents evidence may not be considered.” Consolidated Trial Practice Guide 74 (Nov. 2019), <https://www.uspto.gov/TrialPracticeGuideConsolidated> (“TPG”). With respect to the motivation to combine programmable keys in the IM reference with the cited combination for claim 11, Patent Owner raises this argument for the first time in the Sur-reply. Accordingly, we do not consider Patent Owner’s contentions. However, even if we had considered them, Patent Owner’s arguments are unavailing as they fail to address Petitioner’s stated the motivation to combine the references or the evidence cited in support of the combination, which we find persuasive on the full record. Pet. 61–64;

Ex. 1003 ¶¶ 454–455, 460–462. Indeed, Patent Owner did not challenge the motivation to combine same combination as asserted against claim 2 above. *See* 37 C.F.R. § 42.23(a) (“Any material fact not specifically denied may be considered admitted.”). We find Patent Owner’s arguments unavailing.

Patent Owner also argues in the Sur-reply that the asserted combination does not perform parsing when a user presses a programmable key. Sur-reply 13–14. We disagree and find that the Petition persuasively demonstrates that characters generated by programmable keys would be evaluated for compatibility as those keys could have character sequences that are not recognized or supported by the IM service. *See* Reply 3; Ex. 1003 ¶ 575; Ex. 1103 ¶¶ 30–31; *see also* Ex. 1107, 97:15–21 (Patent Owner’s declarant agreeing that a programmable key character sequence would require parsing).

On the full record, we find that Petitioner establishes by a preponderance of the evidence that the cited combination teaches the “parsing” limitation of claim 19.

(2) Confirming Compatibility Limitation

Petitioner and Patent Owner’s dispute regarding claim 19’s confirming compatibility limitation relies on divergent views of the scope of claim 19’s confirming compatibility limitation and the features of Petitioner’s proposed combination. We do not agree with Patent Owner that the Petition conflates confirming and compatibility as recited in claim 19. PO Resp. 30. Petitioner argues that in the proposed combination a character string that is recognized as corresponding to an IM service is displayed and an unrecognized character string is displayed as is based on the IM service supporting the emoticon. Pet. 72 (citing Ex. 1003 ¶¶ 582–586; Ex. 1007,

Figs. 11–12; Ex. 1010, 90, Ex. 1013 ¶ 82, Ex. 1060 ¶ 56; Ex. 1009, 12–13);
Reply 12.

The '837 patent specification states that

the control module parses the characters within a message generated by a user with the data entry device and confirms the sequence is compatible with the messaging service being used to conduct the conversation with the recipient buddy. If it is not compatible with the service, the control module determines the corresponding sequence for the symbol in the messaging service and substitutes that sequence in the message before transmitting the message to the access point for delivery to the messaging service. In this manner, the control module provides transparent support across multiple instant messaging services without requiring the terminal user to be knowledgeable of the different character sequences for graphical symbol generation in each of the instant messaging services with which the user has an account.

Ex. 1001, 5:50–63. Thus, the '837 patent discusses confirming that the entered characters are compatible with the IM message conversation in the same manner Petitioner cites for the cited combination.

Patent Owner argues however that

a POSITA would have understood that the “confirming” step additionally requires an affirmative step of approval to ensure, or double-check, the “compatibility” of the “entered characters” with a recipient buddy’s instant messaging service. Exhibit 2001, Rouskas Declaration at ¶ 81. Thus, “confirming” “compatibility” is not met merely by “a character string that is associated with a graphical emoticon supported by an IM service.” Exhibit 2001, Rouskas Declaration at ¶ 81.

PO Resp. 35–36. Thus, Patent Owner requires the “confirming” step of claim 19 to incorporate the additional step of approval, ensuring, and double-checking the compatibility of entered characters. *Id.* Patent Owner argues that Petitioner’s combination fails because it is premised on the

Sidekick device that is incapable of performing this double-check, because the Sidekick required the user's conversation to take place on a single IM service. PO Resp. 36–37. Thus, Patent Owner argues that no confirmation step was necessary in this single IM service environment. *Id.*

Patent Owner's arguments are not commensurate in scope with claim 19, which does not assert a double-check or approval step, and fail to address persuasively the proposed combination asserted by Petitioner. First, the '837 patent specification and claim 19 does not describe any additional step above the recited "confirming the entered characters are compatible with the instant messaging service associated with a buddy to whom the message is being sent." Indeed, Patent Owner's declarant agreed that a control module's confirmation would mean that "[the] particular sequence that the user types corresponds to an emoticon that is supported by the [IM] service." Ex. 1107, 59:19–60:16; *see also id.* 62:5–16, 63:3–11. We agree as claim 19 is directed to whether the "entered characters are compatible" with the single IM service being used, and does not reference multiple IM services or multiple checks or approvals based on different IM services.

Patent Owner also asserts that because claim 11 requires a character string that is associated with a graphical emoticon and dependent claim 19 adds a confirming compatibility limitation, there must be an additional check performed in claim 19. PO Resp. 35–36. We disagree as claim 11 is silent on whether the characters string associated with a graphical emoticon is compatible with any particular IM service and only recites that the character string is associated with a graphical emoticon and that the instant message protocol itself is compatible with the IM service. Ex. 1103 ¶¶ 79–81. In sum, we do not agree with Patent Owner's argument that determining that the character string is associated with a graphical emoticon in claim 11

encompasses evaluating the compatibility of the entered characters with the IM service. PO Resp. 34–46; Ex. 2001 ¶ 81.

Patent Owner’s arguments are based on the compatibility and confirmation limitations applying to generated characters exchanged in across multiple IM services. PO Resp. 31–36 (discussing compatibility and confirming across IM services); Sur-reply 1–5 (describing claims 11 and 19 in a multiple IM service conversation with a buddy). We find that claims 11 and 19 do not recite or require compatibility between IM services, but instead, require confirming compatibility between an entered character sequence and the IM service used for the IM conversation session with at least one messaging service protocol. *See* Ex. 1001, 5:47–63 (stating that the entered characters are “compatible with the messaging service being used to conduct the conversation with the recipient”), 26:5–7 (claim 19 reciting “confirming the entered characters are compatible with the instant messaging service associated with a buddy . . .”). We agree with Petitioner that compatibility evaluates whether the entered character sequence matches or corresponds to a character sequence associated with an emoticon in the IM service being used by the sender and the recipient. Pet. 72; Reply 20–21; Ex. 1003 ¶¶ 579–585; Ex. 1103 ¶¶ 97–98. Although the ’837 patent addresses multiple IM service environments (Ex. 1001, 5:47–63, 7:59–65), the claims at issue here, claims 11 and 19, are not limited to these embodiments. In contrast to claim 11 and 19, the ’837 patent includes claims that specifically require multiple IM services, such as claims 27 and 47, which recite communicating with different recipients across two IM services). *See* Ex. 1103 ¶ 89; Reply 18.

Accordingly, we credit Petitioner’s evidence and argument that the asserted combination discloses that when the entered characters include a

character string that is “recognize[d]” or determined as corresponding to a graphical emoticon, the corresponding graphical emoticon/smiley is displayed in the IM conversation between the user and the buddy.⁵ Pet. 71–73.

Finally, Patent Owner argues that the Central Reexamination Unit (CRU) concluded that claim 19 was patentable over the submitted Petition and the cited art and the Decision on Institution. PO Resp. 15; Sur-reply 25–26. Patent Owner cites to no analysis or discussion of the cited prior art in the Reexamination in this proceeding as it applies to claim 19 or any other challenged claim.⁶

We have reviewed Petitioner’s assertions and supporting evidence for claims 19 and find that Petitioner has demonstrated by a preponderance of the evidence that claim 19 would have been obvious over Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller and Im.

⁵ Although Patent Owner argues that the Petition ignores the Certificate of Correction for claim 19 that deletes the words “the buddy” and replaced them with “a buddy,” Patent Owner fails to assert how this antecedent correction renders the Petition’s analysis and argument deficient or address how Petitioner’s arguments “partially rest[] on an antecedent basis argument” as Patent Owner asserts. PO Resp. 15–16 (citing Ex. 2001 ¶ 50; Ex. 2004).

⁶ With respect to the reexamination proceeding, our Order denying Petitioner leave to file a motion to stay the then pending reexamination (Paper 9) noted that the reexamination involved different prior art and could be made of record in this proceeding should it address issues relevant to the issues in this proceeding. Patent Owner raises no such issues apart from the bare assertion that the preliminary papers were submitted to the CRU. PO Resp. 15. Accordingly, we do not find that the Office addressed the patentability of claim 19 with respect to the art cited in this proceeding.

2. *Claims 23, 24, 29–31, 40–42, and 46 Analysis*

Claims 23, 24, 29–31, 40–42, and 46 depend from claim 1. We address the parties’ contentions below.

a) *Claims 23, 24, and 29–31*

Petitioner asserts that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches the limitations of claim 1 (Pet. 25–47) and the further limitations of dependent claim 23 (*id.* at 73–74 (citing Ex. 1003 ¶¶ 588–589)); claim 24 (*id.* at 74–75 (citing Ex. 1003 ¶¶ 588–589)); claim 29 (*id.* at 75–76 (citing Ex. 1003 ¶ 596–599)); and claim 30 (*id.* at 76–77 (citing Ex. 1003 ¶¶ 601–603)). Petitioner provides persuasive argument and evidence that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches the confirming limitation of claim 23, and the parsing and confirming limitations of claim 24 and 29. Pet. 73–76.

Claim 30 requires a module to control a second IM communication session and claim 31 requires parsing and confirming characters for the second IM message recipient. Petitioner provides persuasive argument and evidence that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches the control of two IM communication sessions that include the parsing and confirming limitations for each IM communication. Pet 76–77 (citing Ex. 1003 ¶¶ 601–603) (claim 30); *id.* at 77–78 (citing Ex. 1003 ¶¶ 606–608) (claim 31).

Patent Owner notes the similarities between claims 11, from which claim 19 depends, and claim 1, from which claims 23, 24, and 29–31 depend. PO Resp. 39–41. Patent Owner relies on the same arguments addressed above for claim 19 to argue that the parsing and confirming limitations of claims 23, 24, and 29–31 are not taught by the Heikes-Jonker-Sidekick-Brittan-Miller-Im combination. *Id.*; Ex. 2001 ¶¶ 88–92. For the reasons discussed above, we do not find Patent Owner’s argument availing.

Having reviewed the parties' contentions we are persuaded by a preponderance of the evidence that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches the limitations of claims 23, 24, and 29–31.

b) Claims 40–42

Claim 40 further requires the control module of claim 1 to parse and confirm compatibility of the entered characters and “convert graphical symbols in the parsed message not compatible with the IM message protocol.” Claims 41 and 42 further recite transmitting and displaying messages sent to the IM contact in order of transmission and receipt. Petitioner provides persuasive argument and evidence that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches claim 40 (*id.* at 78–84 (citing Ex. 1003 ¶¶ 609–628)); and claims 41 and 42 (*id.* at 84–74 (citing Ex. 1003 ¶¶ 630–635)). Specifically, Petitioner maps the limitations of claim 40 to the Heikes-Jonker-Sidekick-Brittan-Miller-Im combination with citations to the functions of the mapping of graphical symbols to supported character strings. Pet. 80–82. Petitioner argues that when entered characters are not supported, the Heikes-Jonker-Sidekick-Brittan-Miller-Im combination “converts” a graphical emoticon to a character string associated with the unsupported symbol. *Id.* at 81–82. Petitioner further demonstrates that Heikes-Jonker-Sidekick-Brittan-Miller-Im discloses a controller directing the transmission of data via a transceiver in accordance with the limitations of claims 40–42. *Id.* at 82–85.

With respect to the parsing and confirming limitations of claims 40–42, Patent Owner relies on the same arguments addressed above with respect to claim 19. PO Resp. 43–45. For the reasons discussed above we find Patent Owner's arguments unavailing.

Patent Owner also argues that the converting limitation of claims 40–42 is not satisfied when the senders intended graphical emoticon is not supported by the recipients IM terminal or service and displayed as-is. PO Resp. 49; Ex. 2001 ¶ 104. Thus, Patent Owner argues that Petitioner’s argument that converting takes place when an unsupported emoticon’s character string is sent to a recipient is erroneous. Pet. 80–81.

Having reviewed the parties’ contentions, we are not persuaded by Petitioner’s arguments that the converting limitation of claim 40 encompasses transmitting the character sequence as-is. Pet. 80–81; Ex. 1003 ¶¶ 616–620. Petitioner’s argument and evidence do not persuasively show that the converting limitation, that states that graphical symbols in the parsed message that are not compatible with the IM protocol associated with the selected contact are converted to a character sequence that is compatible with the IM protocol associated with the selected contact. *See* PO Resp. 48; Ex. 1001, 18:39–45. Petitioner’s argument is based on the conversion of graphical symbols that are incompatible with the selected recipients IM protocol. Reply 28–29; Ex. 1103 ¶¶ 118–123. However, the embodiment Petitioner cites in the ’837 patent as supporting the generation and display of the character sequences that are incompatible with the IM service states that such incompatible emoticons are not displayed to remind the user that the IM service does not support the selected emoticon. Reply 29 (citing Ex. 1001, 19:13–23). We find that the ’837 patent describes incompatible character sequences that are displayed as-is as graphical emoticon that are not supported. *Id.* Petitioner’s argument and evidence do not establish by a preponderance of the evidence that the converting limitation of claim 40 includes sending an unsupported character sequence. Pet. 80–81.

Accordingly, Petitioner has not demonstrated by a preponderance of the evidence that Heikes-Jonker-Sidekick-Brittan-Miller-Im combination teaches claim 40, and claims 41 and 42 that depend therefrom.

c) Claim 46

Claim 46 depends directly from claim 1. Petitioner asserts that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches claim 46 (*id.* at 85 (citing Ex. 1003 ¶¶ 636–638)), which requires parsing entered characters and confirming the compatibility with at least one IM service. Petitioner provides persuasive argument and evidence that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches the parsing and confirming limitations of claim 46.

Patent Owner relies on the same arguments addressed above for claim 19 to argue that the parsing and confirming limitations of 46 are not taught by the Heikes-Jonker-Sidekick-Brittan-Miller-Im combination. PO Resp. 43–46; Ex. 2001 ¶¶ 94–100. For the reasons discussed above, we do not find Patent Owner’s argument availing.

Having reviewed the parties’ contentions we are persuaded by a preponderance of the evidence that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches the limitations of claim 46.

d) Summary of Claims 23, 24, 29–31, 40–42, and 46

Petitioner has demonstrated by a preponderance of the evidence that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches the limitations of claims 23, 24, 29–31, and 46. Petitioner has not shown that Heikes-Jonker-Sidekick-Brittan-Miller-Im teaches the limitations of claims 40–42.

III. PATENT OWNER’S MOTION TO EXCLUDE

Patent Owner filed a Motion to Exclude Dr. Traynor’s testimony, Exhibits 1003 and Exhibit 1103, certain of Patent Owner’s evidence. Paper

18 (“Motion” or “Mot.”). Petitioner opposed this motion (Paper 19 (“Opposition” or “Opp.”)) and Patent Owner filed a Reply to Petitioner’s Opposition (Paper 23 (“Opp. Reply”)). For reasons discussed herein, the Motion is denied.

Patent Owner moves to exclude Dr. Traynor’s testimony, Exhibit 1003 and Exhibit 1103, asserting that they are inadmissible based on FRE 702, 703, and 704, and improperly contain hearsay based on FRE 802, 803, 804, 805, 806, and 807. Mot. 2–3. Patent Owner’s contentions regarding admissibility of Dr. Traynor’s declarations and hearsay contained in the declarations all stem from Dr. Traynor’s alleged lack of industry experience sufficient to establish ordinary skill in the art as of the critical date of the ’837 patent. *See* Mot. 3–8; Opp. Reply 2–5. Petitioner opposes, arguing that (1) Dr. Traynor need not be a person of ordinary skill in the art as of the critical date (December 24, 2003); (2) Dr. Traynor is highly qualified in the pertinent art; and (3) Patent Owner’s objections to the declarations were not timely filed and lacked particularity. Opp. 1–2.

We are not persuaded by Patent Owner’s arguments that because Dr. Traynor obtained his undergraduate degree 1 year before the critical date he lacks the requisite 2 years of industry experience as of the critical date. Mot. 3–4. Our Consolidated Trial Practice Guide provides that “[a]n expert witness must be qualified as an expert by knowledge, skill, experience, training, or education to testify in the form of an opinion.” TPG, 34 (citing Fed. R. Evid. 702). Further, the Trial Practice Guide also provides that “[a] person may not need to be a person of ordinary skill in the art in order to testify as an expert under Rule 702, but rather must be ‘qualified in the pertinent art.’” *Id.* (citing *Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1363–1364 (Fed. Cir. 2008)).

Dr. Traynor is qualified in the pertinent art. Dr. Traynor received his Bachelor's degree in Computer Science in May 2002, his Masters' degree in Computer Science in May 2004, and his Ph.D. in Computer Science in 2008. Ex. 1003 ¶ 2; Ex. 1004, 5. He has served as a professor since 2008 and is currently a Professor in the Department of Computer and Information Science and Engineering at the University of Florida. Ex. 1003 ¶¶ 3. He has over 8 years of industry experience and has published 90 articles in the areas of information security, mobility, and networking. Ex. 1003 ¶¶ 6–7, 9–11, Ex. 1004 12–24, 31. We note that Patent Owner did not depose Dr. Traynor or ask him about his post undergraduate experience before the critical date.

Furthermore, Patent Owner provides no persuasive authority to support their contention that Dr. Traynor is required to be an ordinarily skilled artisan as of the critical date. *See, generally*, Mot. None of the cases cited by Patent Owner establish that Dr. Traynor must have two years of industry experience as of the critical date. *See* Mot. 5–6 (citing *Libas, Ltd. v. United States*, 193 F.3d 1361, 1366 (Fed. Cir. 1999); *Unified Patents, LLC v. Ideahub, Inc.*, IPR2020- 01338, Paper No. 48, at 13 (PTAB Feb. 7, 2022); *Disney Enters., Inc. v. Kappos*, 923 F. Supp. 2d 788, 798 (E.D. Va. 2013)). Although *Unified Patents, LLC v. Ideahub, Inc.* case finds that an expert must at a minimum possess ordinary skill in the art, it does not require it such possession as of the critical date. IPR2020-01338, Paper No. 48 at 13. Indeed, the Board in *Unified Patents, LLC v. Ideahub, Inc.*, found that the declarant exceeded the qualifications of an ordinarily skilled artisan. *Id.* at 13–14.

We find that whether Dr. Traynor was an ordinarily skilled artisan as of the critical date of the '837 patent is irrelevant because an expert does not have to be one of ordinary skill in the art during the relevant time frame to

be qualified as an expert. *Bayerische Motoren Werke Aktiengesellschaft v. Paice LLC*, IPR2020-01386, Paper 37, at 73-74 (PTAB Jan. 31, 2022); *T. Rowe Price Inv. Servs., Inc. v. Secure Axxess, LLC*, CBM2015-00027, Paper 31, 22 (PTAB June 13, 2016) (“[T]he Federal Circuit has not placed temporal restrictions, such as requiring an expert be qualified in the pertinent art at the time of the invention.”). Patent Owner’s reliance on *Sundance*, (Mot. 7–8) is not availing, as that case involved an expert that lacked technical qualifications at any time. 550 F.3d at 1359–65. Here, there is no reasonable dispute that Dr. Traynor is highly qualified and presently exceeds the level of ordinary skill in the art. Accordingly, we find that Dr. Traynor is qualified to testify as an expert.

For all the foregoing reasons, we deny Patent Owner’s motion to exclude Dr. Traynor’s testimony.

IV. CONCLUSION⁷

For the reasons given, based on the arguments and evidence of record, Petitioner has met its burden to prove by a preponderance of the evidence that (1) claims 48 and 50 are unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, (Sidekick I or Sidekick II), Brittan; (2) claims 13, 27, 49 are unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller; (3) claim 2 is

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).

unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller, and Im; and (4) claims 19, 23, 24, 29–31, 46 are unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller, and Im. Petitioner has not met its burden to prove by a preponderance of the evidence that claims 40–42 are unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller, and Im.

V. ORDER

Accordingly, it is:

ORDERED that claims 2, 13, 29, 23, 24, 27, 29–31, 46, 48–50 of the '837 patent are unpatentable;

FURTHER ORDERED that claims 40–42 of the '837 patent are not unpatentable;

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

FURTHER ORDERED that Patent Owner's Motion to Exclude is denied.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
48, 50	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan	48, 50	
13, 27, 49	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller	13, 27, 49	
2	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller, Im	2	
19, 23, 24, 29–31, 40– 42, 46	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller, Im	19, 23, 24, .29–31, 46	40–42
Overall Outcome			2, 13, 29, 23, 24, 27, 29–31, 46, 48–50	40–42

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