

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

ZIPIT WIRELESS, INC.,
Patent Owner.

IPR2021-01125
Patent 7,292,870 B2

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

JEFFERSON, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision on Remand
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318

I. INTRODUCTION

Microsoft Corporation (“Microsoft”) and Apple Inc. (“Apple” or “Petitioner”) filed a Petition (“Pet.,” Paper 3) pursuant to 35 U.S.C. § 311 to institute an *inter partes* review of claims 2–4, 11–14, 22, 23, and 31–33¹ of U.S. Patent No. 7,292,870 B2 (“the ’870 patent,” Ex. 1001). The Petition is supported by the Declaration of Dr. Patrick Traynor (Ex. 1003, “Traynor Decl.”). Zipit Wireless, Inc. (“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 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.”).

Pursuant to the Scheduling Order, Patent Owner was to file a response to the petition or a motion to amend the patent by March 15, 2022. Paper 9, 11 (Due Date 1). Patent Owner did neither. Additionally, the Scheduling Order instructed Patent Owner to arrange for a conference call with the Board if Patent Owner elected to not file a response to the petition. *Id.* Patent Owner did not arrange for such a conference call. Petitioner’s Reply (Paper 10) requested “issuance of an FWD invalidating the Challenged

¹ Claims 20, 21, and 24–30 of the ’870 patent were determined to be unpatentable in *Google LLC et al. v. Zipit Wireless, Inc.*, IPR2019-01567, Paper 38 at 53 (PTAB Mar. 9, 2021) (Final Written Decision) (finding that claims 20, 21, and 24–30 of the ’870 patent were unpatentable). Because the challenged dependent claims 22, 23, and 31–33 of the ’870 patent depend from canceled claims 20, 21, and 30, Petitioner addresses claims 20, 21 and 30 in the Petition.

Claims” in the pending proceeding. Paper 9, 2. Finally, Patent Owner did not file any substantive papers or evidence to the Petition, leaving Petitioner’s contentions un rebutted on the record.

On December 9, 2022, we granted Microsoft and Zipit’s Joint Motion to terminate the proceeding as to Microsoft (Paper 13). Paper 12. Thus, the proceeding continues with Apple as sole Petitioner.

Following an oral hearing in the related cases, we issued an Adverse Judgment Order on December 13, 2022. Paper 14. The Director subsequently *sua sponte* issued an Order “vacat[ing] the Board’s adverse judgment[] and remand[ing] [the proceeding] back to the panel to either issue a show cause order clarifying whether Patent Owner is indeed abandoning the contest or to issue a final written decision addressing the patentability of the challenged claims.” Paper 15, 4 (Director’s decision Ordering Rehearing, Vacating Adverse Judgment, and Remanding to the Patent Trial and Appeal Board Panel for Further Proceeding Petitioner’s Reply). Pursuant to the Director’s order, we issue this Final Written Decision addressing the patentability of the challenged claims.

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).

This Decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the claims on which we instituted trial. Based on the record before us, Petitioner has shown, by a preponderance of the evidence, claims 2–4, 11–14, 23, and 31–33 of the ’870 patent are unpatentable.

A. Real Parties in Interest

Apple asserts that it is the real party-in-interest. Pet. 86.

B. Related Matters

Microsoft and Apple filed three concurrent Petitions for *inter partes* review of the '870 patent, the instant petition IPR2021-01125 (challenging claims 2–4, 11–14, 22, 23, and 31–33); *Microsoft Corporation and Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01124 (challenging claims 1, 5–10, 17–19, and 36–40), and *Microsoft Corporation and Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01126 (challenging claims 22, 23, and 31–40). Paper 2, 1–5; Paper 7, 2–3. In addition, Microsoft and Apple filed three concurrent Petitions for *inter partes* review of related U.S. Patent No. 7,894,837: *Microsoft Corporation and Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01129; *Microsoft Corporation and Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01130; and *Microsoft Corporation and Apple Inc. v. Zipit Wireless, Inc.*, IPR2021-01131. *Id.* We issued Final Written Decision in IPR2021-01130 and IPR2021-01131.

Microsoft and Apple provide that the '870 patent was the subject of Final Written Decisions in IPR2014-01507² and in *Google LLC et al. v. Zipit Wireless, Inc.*, IPR2019-01567, Paper 38 at 53 (PTAB Mar. 9, 2021) (Final Written Decision) (“*Google IPR*”) (finding that claims 20, 21, and 24–30 of the '870 patent were unpatentable). Pet. 90–91. In addition, related U.S. Patent No. 7,894,837 (the '837 patent) was the subject of *Google LLC et al. v. Zipit Wireless, Inc.*, IPR2019-01568, Paper 39 (PTAB Mar. 9, 2021) (Final Written Decision) (finding the challenged claims unpatentable). *Id.*

² *Blackberry Corp. v. Zipit Wireless, Inc.*, IPR2014-01507, Paper 50 (PTAB March 29, 2016) (Final Written Decision) (“*Blackberry IPR*”) (finding that the challenged claims were not shown to be unpatentable).

Finally, Microsoft and Apple state that the '870 patent is involved in *Zipit Wireless, Inc. v. LG Electronics Inc.*, Case No. 6-18-cv-02016 (D.S.C.). Pet. 90.

Patent Owner indicates that the *inter partes* review of the '870 patent may 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 7, 3–4.

C. The '870 Patent

The '870 patent relates to a handheld instant messaging (“IM”) device. Ex. 1001, 1:6–9. The '870 patent discloses an IM terminal that includes a display and a data entry device integrated in a housing for the IM terminal. *Id.* at 4:38–41. 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 4:28–55, 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 9:41–43.

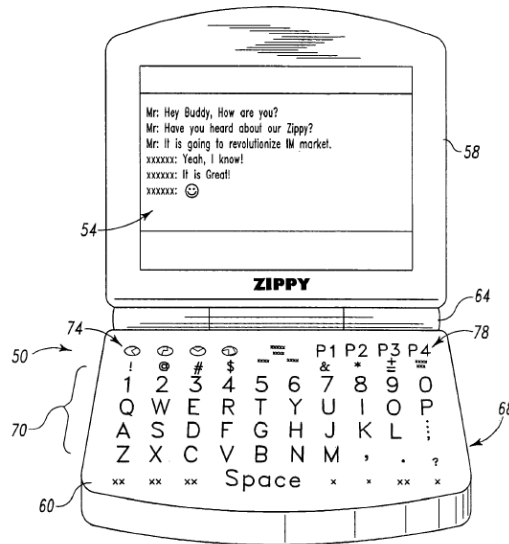


Fig. 2

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 9:40–42.

Figures 12a and 12b, provided below, show user interface screens that associate emoticon pictorial images with programmable keys. *Id.* at 10:6–7.

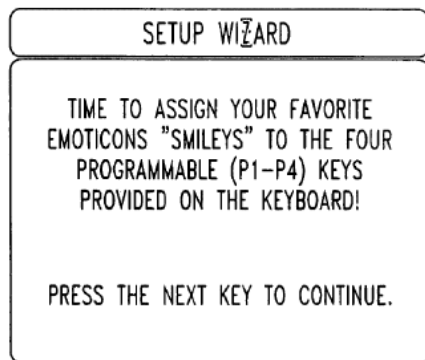


Fig. 12A

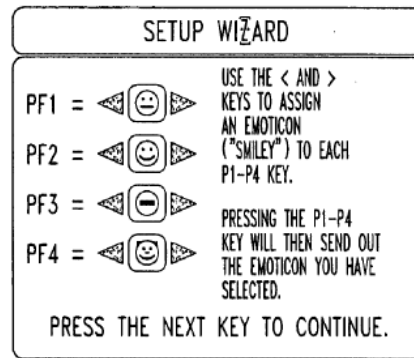


Fig. 12B

Figures 12a and 12b show screens used in the emoticon selection procedure. Figure 12a identifies keys of keyboard 68 (not shown) that are associated

with selected emoticons. *Id.* 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 16:62–17:5.

The handheld terminal of the ’870 patent manages multiple IM conversations over Internet Protocol (“IP”) through different IM service providers. *Id.* at 5:32–6:15, 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.* at 5:32–51. 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 5:4–11.

D. Illustrative Claims

Claims 2 and 31 are illustrative. Claim 2 depends from, independent claim 1, and claim 31 depends from canceled claims 20 and 30. Claims 1, 2, 20, 30, and 31 are reproduced below with bracketed lettering added.

1. [pre] An instant messaging terminal comprising:
 - [a] a handheld terminal housing;
 - [b] a display mounted in the terminal housing for displaying textual characters and graphical symbols;
 - [c] a data entry device integrated in the terminal housing for the display, the data entry device for generating textual characters and graphical symbols;
 - [d] a wireless, Internet protocol communications module coupled to a wireless transceiver, both being within the housing, for communicating messages with a wireless, Internet protocol access point; and
 - [e] a control module within the housing, the control module including at least one processor for executing an application program to implement instant messaging and session

protocols for at least one conversation session that is communicated by the wireless, Internet protocol communications module and the wireless transceiver through the wireless, Internet protocol access point, [f] the control module, in response to a loss of a network connection, displays conversation histories for conversations that were active when the network connection was lost, and [g] automatically searches for wireless, Internet protocol network beacons upon all of the conversation histories being displayed.

2. The terminal of claim 1, the data entry device further comprising:

a plurality of keys for graphical symbols, each graphical symbol key including indicia identifying the graphical symbol generated by depressing the key bearing the indicia.

20. [pre] A method for managing wireless network access and instant messaging through a wireless access point with a handheld instant messaging terminal comprising:

[a] entering textual characters and graphical symbols with a data entry device of a handheld terminal to form instant messages for delivery to an instant messaging service;

[b] displaying the entered textual characters and graphical symbols on a display of the handheld terminal;

[c] communicating instant messages with a wireless, Internet protocol access point, the instant messages being communicated with a communications module and wireless transceiver in the handheld terminal;

[d] coordinating authentication for coupling the handheld instant messaging terminal to a local network through the wireless, Internet protocol access point;

[e] implementing instant messaging and sessions protocols to control a conversation session through the wireless, Internet protocol access point, the instant messaging and session protocols being implemented within the handheld instant messaging terminals;

[f] displaying conversation histories for active conversations terminated by a loss of a network connection; and

[g] automatically searching for wireless, Internet protocol network beacons after the conversation histories are displayed.

30. The method of claim 20, the conversation session control further comprising:

accessing at least one instant messaging service provider through the access point.

31. The method of claim 30, the conversation session control further comprising:

generating a buddy list identifying buddies coupled to each instant messaging service accessed by the handheld instant messaging terminal controlling the conversation session and displaying the buddy list in response to a buddy list key being depressed on the data entry device.

Ex. 1001, 25:12–41, 26:41–65, 27:44–28:3 (bracketed letters added).

E. Evidence and Instituted Grounds

Petitioner relies on the following references. Pet. 1–3.

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
Rucinski	Rucinski, U.S. Patent App. Pub. No. 2003/0130014 A1, filed Aug. 20, 2002, published July 10, 2003	1040
Im	Im, KR Patent Pub. 2003-0068662, published Aug. 25, 2003	1044

Petitioner also relies on the declarations of Patrick Traynor, Ph.D. (Ex. 1003) and Duncan Hall (Ex. 1021).

We instituted the proceeding on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
11	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan
2	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller
12–14, 31–33	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan
12–14, 31–33	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Rucinski
3, 4, 22, 23	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller, Im

Dec. on Inst. 25; Pet. 1–2.

II. ANALYSIS

A. Legal Standard

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)); *see also* 37 C.F.R. § 42.104(b) (requiring a petition for *inter partes* review to identify how the challenged claim is to be construed and where each element of the claim is found in the prior art patents or printed publications relied upon).

A patent claim is unpatentable under 35 U.S.C. § 103 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 ordinary skill in the art; and (4) when presented, objective evidence of nonobviousness, i.e., secondary considerations.³ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)). Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements,” but “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).

B. Level of Ordinary Skill in the Art

Petitioner asserts the level of skill adopted in the Final Written Decision in IPR2019-01567, *Google IPR* at 8. *See* Pet. 4 n.2; Ex. 1003 ¶¶ 37–38. Our prior decision in IPR2019-01567 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

³ Patent Owner did not provide any evidence or argument contesting Petitioner’s unpatentability arguments. Thus, Patent Owner presents no secondary considerations evidence.

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 IPR at 8. We apply this level of skill in the present case.

C. Claim Construction

Petitioner offers no proposed claim constructions and applies the constructions determined by the Board in the IPR2019-01567 Final Written Decision. Pet. 3–4. Petitioner argues 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 4 (citing Ex. 1003 ¶ 69; 37 C.F.R. §42.100(b)).

We adopt the claim constructions determinations in IPR2019-01567 provided in the table below in this Final Written Decision for the reasons discussed there.

Claim Term	IPR2019-01567 Construction
“a data entry device of a handheld terminal” (claim 20)	“a handheld terminal capable of data entry”
“network connection” (claim 20)	No construction required
“graphical symbols” (claim 20)	“graphical emoticons that differ from textual characters representing emoticons”
“entering textual characters and graphical symbols with a data entry device” (claim 20)	“ordinary meaning in the context of the claims”

Google IPR at 9–13.

D. Obviousness of Claim 11: Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), and Brittan

Apple asserts that claim 11, which depends from claim 1, is unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), and Brittan. Pet. 28–54. Claim 11 limits the control module of claim, stating that “terminal of claim 1 wherein the control module accesses at least one instant messaging service provider through the access point.” Ex. 1001, cl. 11. To support their contentions, Apple provides explanations as to how the prior art discloses each claim limitation and the motivations to combine the prior art teachings. Pet. 28–54. Petitioner also provides citations to the Traynor Declaration in support of their contentions. Ex. 1003 ¶¶ 208–330. 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.

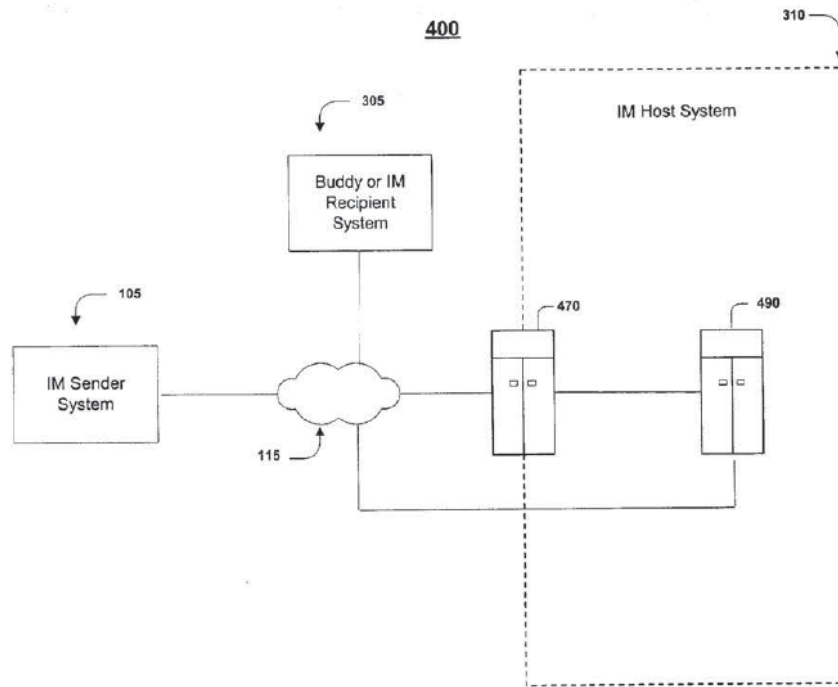


Fig. 4

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.

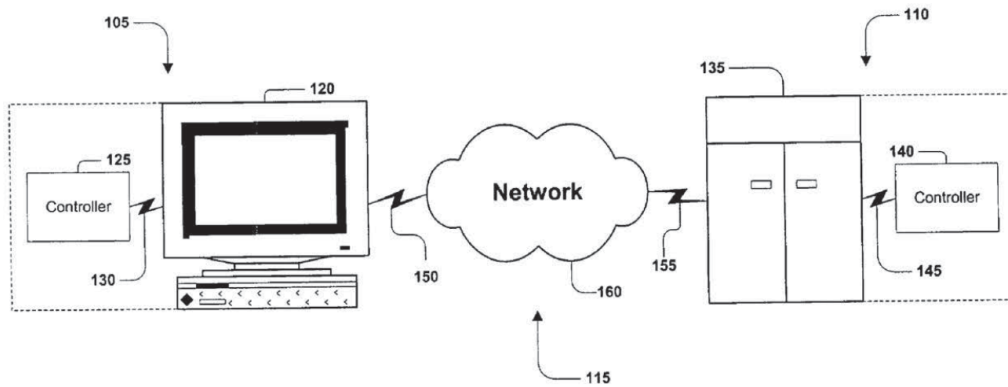


Fig. 1

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.

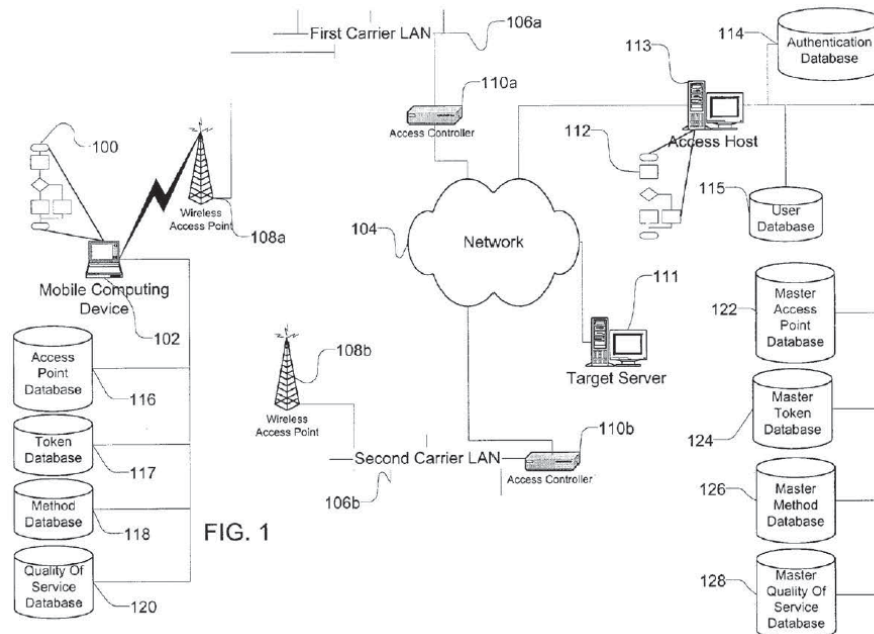


Figure 1 shows mobile device 102 that includes access client 100, which enables access to network 104 via carrier LAN network 106a/106b using Wireless Access Point (AP) 108a. *Id.* at 4:1–8, 26:32–35, Fig. 1. Access client 100 uses a network device “to transmit and receive carrier network signals.” *Id.* 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 manuals in parallel asserting that “Sidekick-II is the earliest publically accessible portions of a user manual relied upon” and Sidekick-I “has a slightly later known public accessibility date than Sidekick-II.” Pet. 3. 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*

Apple asserts that Heikes, Jonker, Sidekick (Sidekick-I or Sidekick-II), and Brittan teach the limitations of claims 1. Pet. 14–28; Ex. 1003 ¶¶ 150–207. For the motivation to combine the references, Apple 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. 14–17; Ex. 1003 ¶¶ 152–160; Ex. 1007 ¶¶ 2, 38, 45–47; Ex. 1005 ¶¶ 39–45, Fig. 1. Apple argues that both Heikes and Jonker teach wireless communication and that it was “well known and common knowledge for wireless LANs (as described in Heikes) to operate and be implemented in either an ad-hoc mode or an infrastructure mode, in which a device connects to an access point associated with the LAN.” Pet. 17; *see id.* 17–18; Ex. 1003 ¶¶ 161–166.

Apple further asserts that an ordinarily skilled artisan would have utilized the Sidekick features of an integrated display and keyboard in 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 with IM capabilities and form to navigate and perform data entry. Pet. 18–20; Ex. 1003 ¶¶ 167–177. Apple also argues that “based 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 27). 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. 25 (citing Ex. 1003 ¶¶ 191–192).

Finally, Apple argues that it would have been motivated to implement Sidekick’s teachings of displaying chat history and when the network connection is lost and re-connecting to the network after such a connection is lost. Pet. 25–28; Ex. 1003 ¶¶ 195–207. By a preponderance of the evidence, Apple provide persuasive rationales to combine the teachings of Heikes, Sidekick, Jonker, and Brittan as adding Sidekick’s well-known teachings amounted to using known techniques to improve similar devices in the same way, yielding predictable results for handheld IM devices that that lose connectivity. Pet. 27–28.

6. Claim 11 Analysis

Petitioner provides persuasive analysis and citation mapping the limitations of claim 11, which depends from claim 1, to the combination of Heikes, Jonker, Sidekick (with parallel citations to Sidekick-I and Sidekick-II), and Brittan. Pet. 28–54; Ex. 1003 ¶¶ 208–330. We find Petitioner’s citation to declarant testimony to support that the Heikes, Jonker, Sidekick, and Brittan device teaches the limitations of claim 1 persuasive. Pet. 28–54. For example, Petitioner provides evidence that “Heikes-Jonker-Sidekick-Brittan provides a device . . . having IM capabilities” with a handheld terminal (claim limitation 1[a]). Pet. 28–30; Ex. 1003 ¶¶ 208–214; *see* Ex. 1005, 1, 9, 14; Ex. 1006, 5, 9–11. Petitioner’s evidence supports that the proposed combination teaches limitations 1[b] and 1[c], where the Sidekick manuals disclose a display and data entry keyboard (Pet. 30–36; Ex. 1003 ¶¶ 222–229) and Heikes and Brittan teach “key or a set of keys/buttons on

the data entry device to be used to enter/generate graphical symbols, e.g., for input into an IM conversation session” (Pet. 35 (citing Ex. 1003 ¶ 226)).

Thus, Petitioner asserts that the “Heikes-Jonker-Sidekick-Brittan’s device (*see* [1pre]) includes a data entry device (e.g., a keyboard and additional buttons) that is integrated in the terminal housing (*see* [1a]) for the display and that generates textual characters and graphical symbols (e.g., graphical emoticons).” Pet. 36 (citing Ex. 1003 ¶¶ 222–229).

With respect to the wireless communication limitations 1[d], Petitioner also provides sufficient evidence and argument that the “Heikes-Jonker-Sidekick-Brittan’s device includes wireless, Internet protocol communication module (e.g., client controller 125 and/or access client) coupled to a wireless transceiver, both being within the terminal housing and for communicating messages with a wireless Internet protocol access point.” Pet. 37 (citing Ex. 1003 ¶¶ 230–254); *see* Pet. 37–43. Further, for limitation 1[e], Petitioner provides persuasive evidence that Heikes discloses including “within a client device . . . (1) a ‘central processing unit 282 (CPU) for executing instructions’ and (2) an ‘internal memory’ for storing an ‘instant messaging application’ (e.g., AOL Instant Messenger or another IM application).” Pet. 43–44 (citing Ex. 1007 ¶¶ 45–47, 50, 60; Ex. 1003 ¶¶ 256–257). Finally, Petitioner offers persuasive evidence that “Heikes-Jonker-Sidekick-Brittan’s control module” would respond to a loss of network connection by displaying conversation histories and searching for wireless for active IM conversations as required in limitations 1[f] and 1[g]. Pet. 48–52; Ex. 1003 ¶¶ 271–289.

With respect to dependent claim 11, Petitioner avers that:

Heikes-Jonker-Sidekick-Brittan’s control module
(processor executing the AIM client application or another IM

application—as in [1e]) accesses an IM service (AIM or another service). APMT-1007, [0037] (identifying various IM services), [0045]–[0048] (identifying IM applications executing on the client device), FIGS. 3–4 and [0052]–[0060] (describing IM communications establishment and management between an IM sender and recipient), [0110]–[0116] and FIGS. 11–15 (describing and showing various user interfaces “presented to an IM sender of an IM service provider such as the AOL Instant Messenger (AIM) service”); *see* APMT-1005, 73-82 (describing Sidekick device accessing the AIM service); APMT-1006, 43-48 (same); APMT-1003, ¶326.

Pet. 53. Petitioner asserts that in accordance with the [1d] and [1e] limitations of claim 1, the “Heikes-Jonker-Sidekick-Brittan’s device communicates data over a network, including sending and receiving IM messages while connected to an IM service, via the wireless, . . . the client controller together with the access client[] and the wireless transceiver through the wireless, Internet protocol access point.” *Id.* (citing Ex. 1007 ¶¶ 39–49, 59; Ex. 1008, 4:1–50, 5:55–6:8, 26:32–45; Ex. 1003 ¶ 328).

Based on the full record, we find no deficiency in Petitioner’s evidence and argument regarding the Heikes-Jonker-Sidekick-Brittan IM device combination and functions, as well as knowledge in the art, or in Petitioner’s analysis regarding why one of ordinary skill in the art would have been prompted to implement the Heikes-Jonker-Sidekick-Brittan IM device. We find persuasive Dr. Traynor’s un rebutted testimony concerning the relevant teachings of the cited references and knowledge of an ordinarily skilled artisan. Ex. 1003 ¶¶ 208–330.

Patent Owner provided no opposition contesting Petitioner’s arguments or evidence. Indeed, Patent Owner stated on the record in a hearing for the related IPRs (IPR2021-01130 and IPR2021-01131) that they are not contesting a final written decision or adverse judgment in the cases

where Patent Owner did not file a response. IPR2021-01130 Paper 29, 64:3–64:20 (stating that Patent Owner is not contesting adverse judgment “if the Board determines [Petitioner] met their burden of proof with respect to those claims [where Patent Owner] hasn’t filed any opposition”). IPR2021-01130 Paper 29, 64:3–64:20 (stating that Patent Owner is not contesting adverse judgment “if the Board determines [Petitioner] met their burden of proof with respect to those claims [where Patent Owner] hasn’t filed any opposition”). Accordingly, we find that Petitioner has shown by a preponderance of the evidence that Heikes-Jonker-Sidekick-Brittan (based on either Sidekick-I or Sidekick-II) teach the limitations of dependent claim 11.

7. Analysis of Claims 20 and 30

Petitioner provides analysis of claims 20 and 30, which form the basis of additional grounds in the Petition directed to dependent claims 22, 23, and 31–33 in related grounds discussed below. *See* Pet. 1–2. Having reviewed Petitioner’s record, for the reasons addressed above with respect to claim 11, we find that Petitioner provides persuasive evidence that Heikes-Jonker-Sidekick-Brittan (based on either Sidekick-I or Sidekick-II) teach the limitations of previously canceled claims 20 and 30. Pet. 54–60; Ex. 1003 ¶¶ 331–350. Petitioner addresses claims 20 and 30 as they provide supporting analysis for challenged claims 31–33 addressed below.

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

Petitioner asserts that claim 2 is unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, and Miller. Pet. 60–65; *see id.* at 28–52 (addressing claim 1 from which claim 2 depends). 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 also provide citations to the Traynor Declaration in support of their contentions. Ex. 1003 ¶¶ 408–424.

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 argument and evidence 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. 62 (citing Ex. 1003 ¶¶ 412–413). Based on record evidence that Patent Owner does not challenge, Petitioner provides 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 IM application’s display.” Pet. 63 (citing Ex. 1003 ¶ 418; Ex. 1012, 2:20–45).

1. Claim 2

Claim 2 depends from claim 1. Petitioner argues that “based on Miller, it would have been obvious for the combination’s keyboard to

include multiple (at least two) emoticon keys such that pressing one such key would have resulted in the corresponding graphical emoticon to be displayed (e.g., in the IM application's interface provided on the display).” Pet. 63–64 (citing Ex. 1012, 4:5–12, 7:60–8:31, 8:66–9:35, 9:49–52, Figs. 3–7; Ex. 1003 ¶¶ 421–422).

For the reasons discussed above, we find Petitioner has provided persuasive evidence that Heikes-Jonker-Sidekick-Brittan in combination with Miller teaches the keyboard data entry limitations of claim 2. Petitioner shows Miller's graphical emoticon keys show graphical symbols that generate symbols by depressing the keys in the Heikes-Jonker-Sidekick-Brittan device in combination with Miller. Pet. 63–64; Ex. 1003 ¶¶ 421–422.

We have reviewed Petitioner's arguments and the underlying evidence cited in support and determine that Petitioner establishes that Heikes-Jonker-Sidekick-Brittan device in combination with Miller teaches claim 2 by a preponderance of the evidence.

F. Obviousness of Claims 12–14 and 31–33: Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), and Brittan, or Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, and Rucinski

Petitioner asserts that claims 12–14 and 31–33 are unpatentable under 35 U.S.C. § 103(a) as obvious over the Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan combination in view of the features of the Sidekick, or Rucinski in combination with the Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan combination. Pet. 65–79; *see id.* at 59–60 (addressing claim 30 from which claims 31–33 depend). 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 also provides citations to the Traynor Declaration in support of their contentions. Ex. 1003 ¶¶ 326–330, 350, 429–477.

Petitioner provide argument and evidence that in view of the features of the Sidekick device, Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan teach the buddy list and controller limitations of claims 12–14 and 31–33. Pet. 65–79; Ex. 1003 ¶¶ 326–330, 350, 429–477. In the alternative, Petitioner argues that Rucinski discloses a dedicated button to launch a buddy list. Pet. 68 (citing Ex. 1003 ¶¶ 435–436; Ex. 1040 ¶ 50). Petitioner also argues that the combination of Rucinski’s dedicated single buddy list button or key and the Heikes-Jonker-Sidekick-Brittan, the device would display the buddy list upon pressing the device’s buttons (Ex. 1005, 73, 77, 81; Ex. 1006, 43, 45, 48; Ex. 1003 ¶ 438) would motivate a skilled artisan to provide a control module that generates a buddy list as recited in the claims. Pet. 67–69; Ex. 1003 ¶¶ 435–444.

Patent Owner provided no response contesting Petitioner’s arguments or evidence. We have reviewed Petitioner’s arguments and the underlying evidence cited in support and determine that Petitioner establishes a persuasive motivation to combine (Pet. 67–69) and that the Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan combination and the combination of that device with Rucinski both teach the buddy list and controller limitations where the control module functions to control the buddy list key. *Id.* at 65–70; Ex. 1003 ¶¶ 326–330, 350, 429–477.

We have reviewed Petitioner’s arguments and the underlying evidence cited in support and determine that Petitioner establishes that the Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, or Rucinski in combination with the Heikes, Jonker, Sidekick (Sidekick I or Sidekick II)

teach the limitations of claims 12–14 and 31–33 by a preponderance of the evidence.

G. Obviousness of Claims 3, 4, 22, and 23: Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller, and Im

Petitioner asserts that claims 3, 4, 22, and 23 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. 79–87; *see id.* at 54–59, 65 (addressing claims 20 from which claims 22 and 23 depend). 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 cites to the Traynor Declaration in support of their contentions. Ex. 1003 ¶¶ 331–349, 425–428, 478–506.

The additional asserted reference, 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 supports their contentions, arguing that a skilled artisan would have been motivated to “seek out and implement user-definable, programmable emoticon key(s), contemplated by Miller, within the combination [of Heikes].” Pet. 81 (citing Ex. 1003 ¶¶ 483–484). Petitioner also 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. 80–81; Ex. 1003 ¶¶ 483–484; Ex. 1009, 12–13.

Patent Owner provided no response contesting Petitioner’s arguments or evidence. Petitioner provides persuasive argument and evidence that Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller and Im teach the programmable key functions and limitations of claims 3, 4, 22, and

23. Pet. 83–87; 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; *see also* Pet. 54–59, 65 (discussing claims 20 and 21).

We have reviewed Petitioner’s arguments and the underlying evidence cited in support and determine that Petitioner establishes by a preponderance of the evidence that Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller, and Im render claims 3, 4, 22, and 23 unpatentable.

III. CONCLUSION

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) claim 11 is unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), and Brittan; (2) claim 2 is unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, and Miller; (3) claims 12–14 and 31–33 are unpatentable under 35 U.S.C. § 103(a) as obvious over the Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, or Rucinski in combination with the Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan combination; and (4) claims 3, 4, 22, and 23 are unpatentable under 35 U.S.C. § 103(a) as obvious over Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Miller, and Im.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
11	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan	11	
2	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Miller	2	
12–14, 31– 33	103(a)	Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan	12–14, 31–33	
12–14, 31– 33	103(a)	Heikes, Jonker, Sidekick (Sidekick I or Sidekick II), Brittan, Rucinski	12–14, 31–33	
3, 4, 22, 23	103(a)	Heikes, Jonker, (Sidekick I or Sidekick II), Brittan, Im	3, 4, 22, 23	
Overall Outcome			2–4, 11–14, 22, 23, 31–33	

IV. ORDER

Accordingly, it is:

ORDERED that claims 2–4, 11–14, 22, 23, and 31–33 of the '870 patent are unpatentable; and

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.

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FOR PETITIONER:

W. Karl Renner
David Holt
Karan Jhurani
FISH & RICHARDSON P.C.
axf-ptab@fr.com
holt2@fr.com
jhurani@fr.com

FOR PATENT OWNER:

Stephen R. Risley
Cortney S. Alexander
KENT & RISLEY LLC
steverisley@kentrisley.com
cortneyalexander@kentrisley.com