

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE, INC.,
Petitioner,

v.

UNILOC LUXEMBOURG, S.A.,
Patent Owner.

Case IPR2018-00394
Patent 6,622,018 B1

Before MIRIAM L. QUINN, CHARLES J. BOUDREAU, and
GARTH D. BAER, *Administrative Patent Judges*.

BAER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION

35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Petitioner Apple Inc. filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–27 of U.S. Patent No. 6,622,018 B1 (Ex. 1001, “the ’018 patent”). Pursuant to 35 U.S.C. § 314(a), we determined Petitioner showed a reasonable likelihood that it would prevail in establishing the unpatentability of all challenged claims and instituted an *inter partes* review. Paper 7, 25–26. Patent Owner Uniloc Luxembourg, S.A. filed a Response (Paper 10, “Resp.”), and Petitioner filed a Reply to Patent Owner’s Response (Paper 13, “Reply”). An oral hearing was held before the Board. Paper 19.

We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. Having considered the record before us and as explained below, we determine Petitioner has shown by a preponderance of the evidence that claims 1–27 of the ’018 patent are unpatentable. See 35 U.S.C. § 316(e).

A. RELATED PROCEEDINGS

The parties assert that the ’018 patent is involved in *Uniloc USA, Inc. v. Logitech, Inc.*, 3:17-cv-06733-JSC (N.D. Cal. 2017); *Uniloc USA, Inc. v. Wink Labs Inc.*, 1:17-cv-01656-GMS (D. Del. 2017); *Uniloc USA, Inc. v. Motorola Mobility, LLC*, 1:17-cv-01657-GMS (D. Del. 2017); *Uniloc USA, Inc. v. Peel Technologies, Inc.*, 1:17-cv-01552-UNA (D. Del. 2017); *Uniloc USA, Inc. v. Huawei Device USA, Inc.*, 2:17-cv-00707-JRG (E.D. Tex. 2017); *Uniloc USA, Inc. v. HTC America, Inc.*, 2:17-cv-01558-JLR (W.D. Wash. 2017); *Uniloc USA, Inc. v. LG Electronics U.S.A., Inc.* 4:17-cv-00825-O (N.D. Tex. 2017); *Uniloc USA, Inc. v. Apple, Inc.*, 2:17-cv-00470-

JRG (E.D. Tex. 2017); and concurrently filed IPR2018-00395. Pet. 2–3; Paper 4, 2.

B. THE '018 PATENT

The '018 patent is titled “Portable Device Control Console with Wireless Connection” and describes a system for controlling a remote device over a wireless connection. Ex. 1001, Abstract, 1:27–28. The '018 patent teaches that a portable computer system can control a variety of remote devices, including newly introduced devices. *Id.* at 3:2–4. To discover new devices, the portable computer system transmits a broadcast message to discover compliant devices within range. *Id.* at 8:33–41. Compliant devices receiving the broadcast message then reply to the portable computer system with a response. *Id.* at 8:42–44. After one or more devices are discovered, the portable computer system can transmit a command to a selected remote device based on the type of device and its capabilities. *Id.* at 8:56–61. The '018 patent explains that a user can control a remote device by either touching a rendering on the computer system's display or by using an input device such as a stroke or character recognition pad that can register stylus movements on the portable computer system. *Id.* at 6:20–22, 6:67–7:9, 9:25–50.

C. ILLUSTRATIVE CLAIM

Of the challenged claims, claims 1, 11, and 21 are independent. Independent claim 1 (reproduced below) is representative.

1. A method for controlling a remote devices over a wireless connection, said method comprising:
 - a) establishing said wireless connection between a transceiver and said remote device by:
 - broadcasting a message, said message for locating remote devices within range of said transceiver; and
 - receiving a response from said remote device;
 - b) manifesting said remote device on a display device;
 - c) registering a position where contact is made with a surface of an input device, wherein a particular position on said input device is translated into a particular command for controlling said remote device; and
 - d) transmitting a command to said remote device over said wireless connection.

Ex. 1001, 12:7–20.

D. ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner asserts the following grounds of unpatentability:

References	Basis	Challenged Claim(s)
Ben-Ze'ev ¹ and Idiot's Guide ²	§ 103(a)	1–7, 9, and 10
Ben-Ze'ev, Idiot's Guide, and Dara-Abrams ³	§ 103(a)	8
Ben-Ze'ev, Idiot's Guide, and Osterhout ⁴	§ 103(a)	11–17, 19–25, and 27
Ben-Ze'ev, Idiot's Guide, Osterhout, and Dara-Abrams	§ 103(a)	18 and 26

Pet. 12.

¹ U.S. Patent No. 6,791,467 B1 (Sept. 14, 2004) (Ex. 1007, “Ben-Ze’ev”).

² Preston Gralla, THE COMPLETE IDIOT’S GUIDE TO PALMPILOT AND PALM III (1999) (Ex. 1008, “Idiot’s Guide”).

³ U.S. Patent No. 6,456,892 B1 (Sept. 24, 2002) (Ex. 1010, “Dara-Abrams”).

⁴ U.S. Patent No. 7,149,506 B2 (Dec. 12, 2006) (Ex. 1011, “Osterhout”).

II. ANALYSIS

A. CLAIM CONSTRUCTION

The '018 patent has not expired, and the Petition was filed before November 13, 2018. Therefore, we interpret terms of the challenged claims according to their broadest reasonable interpretation in light of the specification. *See* 37 C.F.R. § 42.100(b) (2017).⁵ Unless the record shows otherwise, we presume a claim term carries its “ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art in question” at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner asserts that “[t]he plain and ordinary meaning of ‘broadcasting a message’ . . . is transmitting the message to all recipients in range.” Reply 2–3 (citing Ex. 1003, 54–55). Patent Owner does not set forth a different construction and appears to adopt the same general understanding for “broadcasting.” *See* Resp. 9 (asserting that “[a] ‘broadcast message’ as required by the claims is a message sent to every device at once”). We agree with Petitioner that in the context of the '018 patent, “broadcasting a message” means transmitting a message to all recipients in range.

⁵ *See also* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,344 (Oct. 11, 2018) (“The Office will continue to apply the BRI standard for construing unexpired patent claims . . . in AIA proceedings where a petition was filed before the [November 13, 2018] effective date of the rule.”).

B. OBVIOUSNESS OF CLAIMS 1–7, 9, AND 10 BASED ON BEN-ZE'EV AND
IDIOT'S GUIDE

As outlined below, we conclude that Petitioner has shown by a preponderance of evidence that claims 1–7, 9, and 10 would have been obvious over Ben-Ze'ev and Idiot's Guide.

1. Overview of Ben-Ze'ev

Ben-Ze'ev is a U.S. patent titled “Adaptive Remote Controller.” It teaches “[a] method and system for the remote controlling of appliances.” See Ex. 1007, Abstract. Ben-Ze'ev's remote control “adapts itself automatically to its environment so as to remotely control a plurality of appliances.” *Id.* Ben-Ze'ev's “remote controller may be, for example, part of a PDA (Personal Digital Assistance) device, such as 3Com's PalmPilot™, or comprise some of the components of such a PDA product or a similar product.” *Id.* at 10:45–48.

Ben-Ze'ev's Figure 6 is reproduced below.

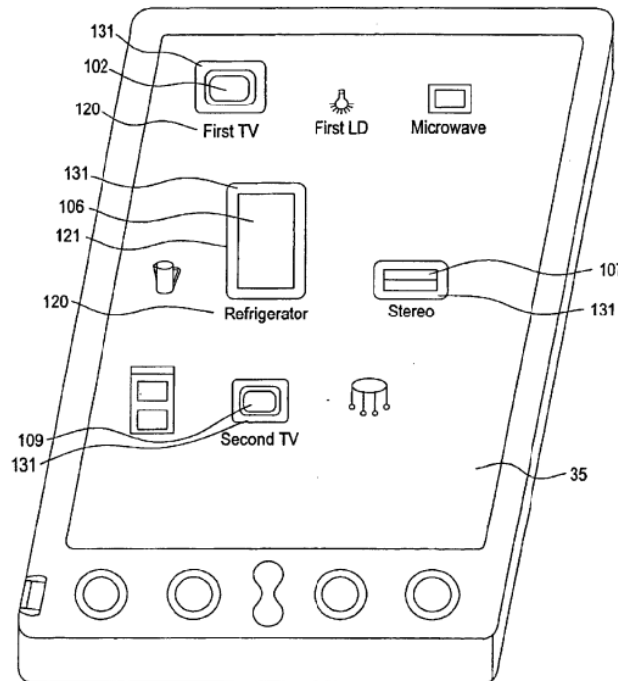


FIG. 6

Figure 6 shows Ben-Ze'ev's adaptive remote controller. *Id.* at 10:66–67. The remote controller uses “a wireless communication protocol . . . such as Bluetooth . . . that manages the communication between all components in the network, including at least the appliances, and the one or more remote controllers in its vicinity.” *Id.* at 9:2–9. Ben-Ze'ev teaches also that its adaptive remote controller includes “an interactive-type display, which can display virtual keys that can be activated by pressing on their display location.” *Id.* at 8:15–17.

2. Overview of Idiot's Guide

Idiot's Guide describes the features and functionality of a PalmPilot PDA. Ex. 1008, 2. According to Idiot's Guide, the PalmPilot can be used as a “universal remote-control device” to “control your TV, your CD player, and other items in your home.” *Id.* at 81. In addition, Idiot's Guide teaches the PalmPilot includes a touch-sensitive display area called the “Graffiti area,” in which a user can enter information using a stylus. *Id.* at 32.

3. “broadcasting a message” in Ben-Ze'ev

Independent claims 1 and 11 recite “broadcasting a message, said message for locating remote devices within range of said transceiver.” Independent claim 21 similarly requires a transceiver “adapted to broadcast a message for locating remote devices within range of said transceiver.” Petitioner asserts that Ben-Ze'ev teaches the broadcasting limitations “because it teaches that its adaptive remote controller ‘periodically interrogates the existence of all appliances in its vicinity’ via an ‘interrogation signal [that] is generally sent periodically to all appliances.’” Pet. 27 (quoting Ex. 1007, 10:49–65, 8:41–58); *see id.* at 79, 81–82. Petitioner explains, with support from its expert, Dr. Houh, that “[a]

POSITA would understand that Ben-Ze'ev's adaptive remote controller broadcasts the interrogation signal because the signal is not transmitted to any one particular recipient—it is transmitted to all appliances in the vicinity.” *Id.* at 27 (citing Ex. 1003, 54–55). Based on its contentions and supporting evidence, we agree with Petitioner that Ben-Ze'ev teaches the independent claims' broadcasting limitation.

Patent Owner argues that Ben-Ze'ev's interrogation signal is not a broadcast message because “[a] ‘broadcast message’ . . . is a message sent to every device at once,” whereas “to ‘interrogate’ multiple machines . . . would have to be done sequentially, one at a time.” Resp. 9. We disagree with Patent Owner that Ben-Ze'ev's interrogation signal is a one-to-one communication.

Patent Owner's assertion that interrogating multiple machines would have to be done “sequentially, one at a time,” *id.*, is undermined by evidence presented by Petitioner's expert, Dr. Houh, who points to several examples describing a singular “interrogation” message that is “broadcast” to multiple recipients. *See* Ex. 1031 (citing Ex. 1032, 1:59–2:2; Ex. 1034, 4:29–36). In addition, as Dr. Houh explains, a wireless message must include an address or other individual recipient identifier for the message to be directed to an individual recipient. Ex. 1031 ¶ 13 (citing Ex. 1013, 6). Yet in Ben-Ze'ev there is no description of the interrogation signal containing any such recipient identifier. To the contrary, Ben-Ze'ev describes its interrogation signal as containing only “the remote controller device code” and “an interrogation code asking the device to identify itself.” Ex. 1007, 10:51–54. As Petitioner explains, “[t]he absence of an appliance identifier in the interrogation signal follows from Ben-Ze'ev's teaching that the signal

explicitly asks a receiving device ‘to identify itself’” and “when the interrogation signal is sent to all appliances, ‘the appliances *respond with their identification.*’” Reply 11 (quoting Ex. 1007, 10:51–54, 10:57–59). Moreover, Ben-Ze’ev explains that the purpose of its interrogation process is to discover “the *existence* of all appliances in its vicinity.” Ex. 1007, 10:49–51 (emphasis added). We agree with Petitioner that “[s]imple logic dictates that if the remote controller does not yet know of the existence of nearby appliances before sending the interrogation signal, the interrogation signal cannot be communicated to a specific appliance.” Reply 10.

4. Combining Ben-Ze’ev and Idiot’s Guide

Petitioner relies on Ben-Ze’ev as disclosing the adaptive remote controller limitations recited by the challenged independent claims, and Idiot’s Guide for disclosing “registering a position where contact is made with a surface of an input device, wherein a particular position on said input device is translated into a particular command for controlling said remote device.” See Pet. 25–40. Specifically, Petitioner asserts that it would have been obvious to one skilled in the art to modify Ben-Ze’ev’s adaptive remote controller to include the Graffiti writing area input device disclosed in the Idiot’s Guide, because Ben-Ze’ev “expressly instruct[s] to consider ‘the components’ and features of personal digital assistants (PDAs), such as 3Com’s PalmPilot devices,” Pet. 21 (citing Ex. 1007, 10:45–48), and “Idiot’s Guide describes the features and functionality of a well-known PDA, the PalmPilot,” *id.* at 22. Petitioner goes on to explain that “by giving the user the choice of inputting commands into Ben-Ze’ev’s adaptive remote controller via the Graffiti writing area or the touchscreen, the user can select the more efficient option in order to ‘save time.’” *Id.* at 23 (quoting Ex.

1008, 78). Petitioner further supports its proffered reason to combine Ben-Ze'ev and Idiot's Guide with an archived webpage screenshot describing PalmPilot software called "PalmRemote." *Id.* at 22–24. The page shows providing users with the option of using Graffiti commands in a Graffiti writing area to control various functions of a consumer electronic device. *Id.*

Based on its assertions, we conclude Petitioner has articulated sufficient reasoning with some rational underpinning to support the legal conclusion that its proffered combination of Ben-Ze'ev and Idiot's Guide would have been obvious to one of ordinary skill in the art. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). In particular, we agree with Petitioner that its proffered combination "amounts to combining prior art elements according to known methods to yield the predictable and beneficial result of Ben-Ze'ev's adaptive remote controller having an input device, such as the Graffiti writing area, through which a user could remotely control appliances with stylus command strokes." Pet. 24–25; *see KSR*, 550 U.S. at 416 ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.").

We also agree with Petitioner that one skilled in the art would have had the technical skills to successfully combine Ben-Ze'ev's adaptive remote controller to include the PalmPilot's Graffiti writing area. *See* Pet. 24–25 (citing Ex. 1003 ¶¶ 76–77). As Petitioner explains, "[t]he Idiot's Guide and PalmPilot for Dummies provide ample evidence that POSITAs . . . could 'customize the PalmPilot in about a zillion different ways,' for example, to 'add features or to make your PalmPilot behave

differently than a normal PalmPilot.” Reply 17 (quoting Ex. 1008, 96; Ex. 1009, 19); see Pet. 24–25 (citing Ex. 1003; Ex. 1008; Ex. 1009).

Patent Owner argues that Petitioner’s rationale is insufficient for several reasons. First, Patent Owner argues that the PalmRemote software illustrated in Exhibit 1020 does not support that a skilled artisan would have been motivated to modify Ben-Ze’ev’s adaptive remote controller to include the Graffiti writing area. Resp. 13–17. According to Patent Owner a “mere illustration” of the PalmRemote software does not establish that the software actually existed or that a POSITA possessed the “technical ability and know-how” to make the proposed combination. *Id.* at 14–15. Petitioner, however, does not rely on the PalmRemote screenshot to show a skilled artisan’s technical ability or know-how. Rather, Petitioner references PalmRemote software as implicit support for its reason to combine. Petitioner’s evidence supports its contention that “artisans in the field had already contemplated (and most likely implemented) the very combination proposed in the Petition.” Reply 15–16 (citing *Nat’l Steel Car, Ltd. v. Can. Pac. Ry., Ltd.*, 357 F.3d 1319, 1338–39 (Fed. Cir. 2004) (holding that an engineer’s drawing of a rail car, even if it was never built, can “be used to demonstrate a motivation to combine implicit in the knowledge of one of skill in the art”)).

Patent Owner also argues the Petition is deficient because it fails to disclose the necessary modifications to Ben-Ze’ev to arrive at the proposed combination. Resp. 18. We disagree with Patent Owner’s argument. “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference,” *In re Keller*, 642 F.2d 413, 425 (CCPA 1981), but whether “a skilled artisan

would have been motivated to combine the teachings of the prior art references to achieve the claimed invention,” *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007). Although an obviousness challenge needs to account for all claim limitations, we are not aware of any requirement (and Patent Owner cites to none) that a challenge must show all of the unclaimed implementation and design details for an asserted combination. Here, we are persuaded that Petitioner has shown sufficient detail regarding the asserted motivation to combine the teachings of Ben-Ze’ev and the Idiot’s Guide.

Finally, Patent Owner asserts “Petitioner’s declarant merely parrots the same conclusory statements as in the Petition, without providing the required ‘explanation as to how or why the references would be combined to produce the claimed invention.’” Resp. 13 (quoting *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016)). Again, we disagree. Petitioner explains, with relevant support from its expert, the reasons one skilled in the art would have combined the asserted prior-art teachings—i.e., *why* the proffered combination would have been obvious. *See, e.g.*, Pet. 21–22 (asserting that “a POSITA would have found it predictable and advantageous to utilize the PalmPilot’s Graffiti writing area to control the remote appliances described in Ben-Ze’ev”) (citing Ex. 1003 ¶ 71); *id.* at 24 (asserting that “executing a command with the Command stroke in the Graffiti writing area can be ‘much faster’ than tapping on the touch screen”) (citing Ex. 1003 ¶ 75). We are persuaded that, here, Dr. Houh’s testimony on this issue is more than mere conclusory statements, and we credit it accordingly. *See KSR*, 550 U.S. at 418 (distinguishing between “mere

conclusory statements” and “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

5. Undisputed Elements

As outlined below, Petitioner has shown by a preponderance of the evidence that the combination of Ben-Ze’ev and Idiot’s Guide teaches the remaining limitations of claims 1–7, 9, and 10. Patent Owner does not contest Petitioner’s assertions in this regard beyond the arguments addressed above.

a. Claim 1

Petitioner has shown that Ben-Ze’ev teaches “[a] method for controlling a remote devices over a wireless connection,” as claim 1 requires. *See* Pet. 25 (citing Ex. 1007, Abstract, 1:5–11, 5:10–20, 6:34–48, 7:62–65, 9:2–12; Ex. 1003, 46–49). Petitioner has shown that Ben-Ze’ev teaches “establishing said wireless connection between a transceiver and said remote device,” as claim 1 requires. *See id.* at 26–27 (citing Ex. 1007, Fig. 3 Abstract, 2:34–47, 6:34–48, 7:8–17, 8:12–15, 8:41–58, 9:2–9, 12:37–40, 15:21–23; Ex. 1003, 49–53). Petitioner has shown that Ben-Ze’ev teaches “broadcasting a message, said message for locating remote devices within range of said transceiver,” as claim 1 requires. *See id.* at 27–28 (citing Ex. 1007, 2:58–63, 8:41–58, 10:49–65; Ex. 1003, 53–55). Petitioner has shown that Ben-Ze’ev teaches “receiving a response from said remote device,” as claim 1 requires. *See id.* at 28 (citing Ex. 1007, 8:41–58, 10:49–65; Ex. 1003, 55–56). Petitioner has shown that Ben-Ze’ev teaches “manifesting said remote device on a display device,” as claim 1 requires. *See id.* at 28–29 (citing Ex. 1007, Fig. 6, 10:66–11:14, 11:21–24; Ex. 1003, 56–58). Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s

Guide teaches “registering a position where contact is made with a surface of an input device,” as claim 1 requires. *See id.* at 29–33 (citing Ex. 1007, Fig. 7, 4:42–46, 8:15–17, 10:45–48, 12:25–31; Ex. 1008, 26, 32, 33, 35, 64–66; Ex. 1003, 58–62). Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide teaches “wherein a particular position on said input device is translated into a particular command for controlling said remote device,” as claim 1 requires. *See id.* at 33–39 (citing Ex. 1007, 4:42–46, 8:15–17, 9:46–51, 9:60–10:25, 10:36–41, 12:25–40, 14:7–14; Ex. 1008, 4, 32–33, 64, 66–69, 78; Ex. 1003, 61–70). Petitioner has shown that Ben-Ze’ev teaches “transmitting a command to said remote device over said wireless connection,” as claim 1 requires. *See id.* at 39–40 (citing Ex. 1007, Abstract, 5:21–37, 8:41–58, 9:2–12, 10:36–41, 12:35–40; Ex. 1003, 70–72).

b. Claim 2

Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide teaches the additional limitation in dependent claim 2: “wherein said step c) comprises the step of: registering a position where a stylus element makes contact with said surface of said input device.” *See id.* at 40–41 (citing Ex. 1007, 10:45–48; Ex. 1008, 64–65; Ex. 1003, 72–73).

c. Claim 3

Petitioner has shown that Idiot’s Guide teaches “wherein said step c) further comprises the step of: recognizing a movement of said stylus element over said surface of said input device,” as dependent claim 3 requires. *See id.* at 41–42 (citing Ex. 1008, 25, 32, 64–65, 68; Ex. 1003, 73–75).

Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide also teaches “wherein a particular movement of said stylus element is translated into a particular command for controlling said remote device,” as

claim 3 requires. *See id.* at 42–44 (citing Ex. 1007, 12:25–40; Ex. 1008, 25, 64, 66, 68; Ex. 1003, 75–77).

d. Claim 4

Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide teaches “registering a position where said stylus element makes contact with a screen of said display device,” as dependent claim 4 requires. *See id.* at 44–45 (citing Ex. 1007, 4:42–46, 8:15–20, 12:31–35; Ex. 1008, 27, 42–43; Ex. 1003, 78–80). Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide also teaches “wherein a particular position on said screen is translated into a particular command for controlling said remote device,” as claim 4 requires. *See id.* at 45–46 (citing Ex. 1007, Fig. 7, 4:42–48, 8:15–20, 10:36–41, 12:25–51, 14:6–14; Ex. 1003, 80–83).

e. Claim 5

Petitioner has shown that Ben-Ze’ev teaches “receiving responses from a plurality of remote devices,” as dependent claim 5 requires. *See id.* at 46 (citing Ex. 1007, 7:8–17, 10:54–60, 11:21–24; Ex. 1003, 83–84). Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide also teaches “manifesting each of said plurality of remote devices on said display device” and “selecting one of said plurality of remote devices” as claim 5 requires. *See id.* at 47–48 (citing Ex. 1007, Fig. 6, 10:66–11:7, 11:21–34, 12:25–31; Ex. 1003, 85–87).

f. Claim 6

Petitioner has shown that Ben-Ze’ev teaches the additional limitation in dependent claim 6: “displaying on said display device a rendering of a mechanism for controlling said remote device.” *See id.* at 48–49 (citing Ex. 1007, Fig. 7, 9:31–45, 12:29–40; Ex. 1003, 87–89).

g. Claim 7

Petitioner has shown that Ben-Ze'ev teaches the additional limitation in dependent claim 7: “contacting a particular position in said rendering wherein said contacting is translated into a particular command corresponding to said particular position.” *See id.* at 49–51 (citing Ex. 1007, Fig. 7, 4:42–48, 8:15–20, 9:31–51, 10:36–41, 12:29–40; Ex. 1003, 90–92).

h. Claim 9

Petitioner has shown that the combination of Ben-Ze'ev and Idiot's Guide teaches the additional limitations in dependent claim 9: “displaying on said display device a menu of commands for controlling said remote device” and “contacting a particular position in said menu, wherein said contacting is translated into a particular command corresponding to said particular position.” *See id.* at 51–54 (citing Ex. 1007, 4:42–48, 10:26–41; Ex. 1008, 42, 43, 68, 77; Ex. 1003, 93–96).

i. Claim 10

Petitioner has shown that Ben-Ze'ev teaches the additional limitation in dependent claim 10: “wherein said transceiver and said remote device are Bluetooth-enabled devices.” *See id.* at 54–55 (citing Ex. 1007, 9:2–9, 6:49–52, 8:41–58, 10:57–65; Ex. 1003, 96–98).

C. OBVIOUSNESS OF CLAIM 8 BASED ON BEN-ZE'EV, IDIOT'S GUIDE, AND DARA-ABRAMS

As outlined below, we conclude that Petitioner has shown by a preponderance of evidence that claim 8 would have been obvious over Ben-Ze'ev, Idiot's Guide, and Dara-Abrams.

1. Combining Dara-Abrams with Ben-Ze'ev/Idiot's Guide

Petitioner relies on Dara-Abrams for teaching dependent claim 8's user-interactive GUI element. *See* Pet. 56. Petitioner explains, with support

from the prior art references, that “like Ben-Ze’ev, Dara-Abrams is concerned with developing a ‘mechanism for interfacing with electronic devices that is flexible and can adapt to new devices and device types within the consumer electronics market.’” Pet. 57 (quoting Ex. 1010, 4:8–11 and citing Ex. 1007, 3:54–57). Petitioner adds that including Dara-Abrams’ animated GUI control elements in Ben-Ze’ev’s GUI “would advance Ben-Ze’ev’s stated goal of ‘provid[ing] an adaptive remote controller that is much more user-friendly’ and that can ‘handle any remote controlled appliance, of any type, model, and with any type of feature.’” Pet. 57–58 (quoting Ex. 1007, 3:18–22, 2:40–44). Patent Owner does not challenge Petitioner’s assertion in this regard. We conclude Petitioner has articulated sufficient reasoning with some rational underpinning to support the legal conclusion that its proffered combination of Dara-Abrams with Ben-Ze’ev and Idiot’s Guide would have been obvious to one of ordinary skill in the art.

2. Claim Elements

Petitioner has shown that Dara-Abrams accounts for the additional limitation in claim 8: “imparting motion to said rendering in response to movement of a stylus element over said surface of said input device.” See *id.* at 62–65 (citing Ex. 1010, Abstract, 5:2–19, 9:30–36, 10:3–14, 19:5–6, 19:53–67, 20:1–12, 20:23–43; Ex. 1003, 108–114). Patent Owner does not contest Petitioner’s assertion in this regard.

D. OBVIOUSNESS OF CLAIMS 11–17, 19–25, AND 27 BASED ON BEN-ZE’EV, IDIOT’S GUIDE, AND OSTERHOUT

As outlined below, we conclude that Petitioner has shown by a preponderance of evidence that claims 11–17, 19–25, and 27 would have been obvious over Ben-Ze’ev, Idiot’s Guide, and Osterhout.

1. Combining Osterhout with Ben-Ze'ev/Idiot's Guide

Petitioner relies on Osterhout for teaching internal structural elements of a PDA, including the screen, pen-type input, wireless transceiver, and processor, each coupled together via bus. See Pet. 67. Petitioner explains, with support from the prior art references and its expert, that although Ben-Ze'ev notes that its adaptive remote controller can be “part of a PDA (Personal Digital Assistance) device,” Ben-Ze'ev does not “provide explicit details with respect to how its components are coupled together.” *Id.* at 66–67 (citing Ex. 1007, 10:45–48; Ex. 1003 ¶ 99). According to Petitioner, one skilled in the art, “when considering Ben-Ze'ev would have naturally considered teachings in the art more fully describing the internal structure of personal digital assistants similar to the adaptive remote controller.” *Id.* at 67 (citing Ex. 1003 ¶ 101). Patent Owner does not challenge Petitioner's assertion in this regard. We conclude Petitioner has articulated sufficient reasoning with some rational underpinning to support the legal conclusion that its proffered combination of Osterhout with Ben-Ze'ev and Idiot's Guide would have been obvious to one of ordinary skill in the art.

2. Undisputed Elements

As outlined below, Petitioner has shown by a preponderance of the evidence that the combination of Ben-Ze'ev, Idiot's Guide, and Osterhout teaches the limitations of claims 11–17, 19–25, and 27. Beyond the arguments addressed above, Patent Owner does not contest Petitioner's assertions in this regard.

a. Claim 11

Petitioner has shown that the combination of Ben-Ze'ev and Osterhout teaches “[a] computer system comprising: a bus,” “a processor coupled to said bus,” “a transceiver coupled to said bus,” and “a display

device coupled to said bus,” as claim 11 requires. *See* Pet. 68–75 (citing Ex. 1007, Fig. 3, Fig. 6, Abstract, 1:5–11, 4:42–46, 5:10–20, 7:62–65, 8:10–40, 8:52–58, 10:45–48, 12: 31–35, 12:37–40, 15:21–23; Ex. 1011, Fig. 3, 8:3–25; Ex. 1003, 118–132). Petitioner has shown that the combination of Ben-Ze’ev, Idiot’s Guide, and Osterhout teaches “an input device coupled to said bus” as claim 11 requires. *See id.* at 75–77 (citing Ex. 1007, 10:45–48; Ex. 1008, 25, 26 32, 35, 64); Ex. 1011, Fig. 3, 8:3–25; Ex. 1003, 132–135).

Petitioner has shown that Ben-Ze’ev teaches “said processor for performing a method for controlling a remote device over a wireless connection, said method comprising the computer-implemented steps of:” as claim 11 requires. *See id.* at 78 (citing Ex. 1007, Abstract, 1:5–11, 5:10–20, 6:34–48, 7:72–65, 8:10–40, 9:2–12; Ex. 1003, 135–139). Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide teaches “a) establishing said wireless connection between said transceiver and said remote device by: broadcasting a message, said message for locating remote devices within range of said transceiver; and receiving a response from said remote device; b) manifesting said remote device on a display device; c) registering a position where contact is made with a surface of an input device, wherein a particular position on said input device is translated into a particular command for controlling said remote device; and d) transmitting a command to said remote device over said wireless connection,” as claim 11 requires. *See id.* at 78–79 (referring to parallel limitations in claim 1 and citing Ex. 1003, 139–140).

b. Claims 12–17, 19, and 20

As Petitioner notes, dependent claims 12–17, 19, and 20 parallel claims 2–7, 9, and 10. Pet. 79. Thus, based on the analysis noted above for

claims 2–7, 9, and 10, Petitioner has shown that the combination of Ben-Ze’ev, Idiot’s Guide and Osterhout teaches the additional limitations in dependent claims 12–17, 19, and 20. *See id.* at 79 (citing Ex. 1003, 140–145).

c. Claim 21

Petitioner has shown that Ben-Ze’ev teaches “[a] hand-held computer system for controlling a remote device over a radio connection,” as claim 21 requires. *See id.* 79–80 (citing Ex. 1007, Abstract, 1:5–11, 5:10–20, 6:34–48, 7:62–65, 8:15–20, 9:2–12, 10:45–48; Ex. 1003, 145–148). Petitioner has shown that the combination of Ben-Ze’ev and Osterhout teaches “a bus,” “a processor coupled to said bus,” and “a transceiver coupled to said bus,” as claim 21 requires. *See id.* at 80–81 (referring to parallel limitations in claim 11 and citing Ex. 1003, 148). Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide teaches “said transceiver for transmitting commands for controlling said remote device over said radio connection,” as claim 21 requires. *See id.* at 81 (referring to parallel limitations in claim 1 and citing Ex. 1007, 5:21–37, 8:12–15, 15:21–23; Ex. 1003, 148–151). Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide teaches “wherein said transceiver is adapted to broadcast a message for locating remote devices within range of said transceiver,” as claim 21 requires. *See id.* at 81–82 (referring to parallel limitations in claim 1 and citing Ex. 1007, Abstract, 8:12–15, 8:41–58, 15:21–23; Ex. 1003, 151–154). Petitioner has shown that Ben-Ze’ev teaches “wherein each remote device responding to said message is indicated on said display device,” as claim 21 requires. *See id.* at 82–83 (citing Ex. 1007, Fig. 6, 10:57–60, 10:66–11:14, 11:21–24; Ex. 1003, 154–155). Petitioner has shown that the combination

of Ben-Ze'ev and Osterhout teaches “a display device coupled to said bus,” as claim 21 requires. *See id.* at 83 (referring to parallel limitations in claim 11 and citing Ex. 1003, 155). Petitioner has shown that the combination of Ben-Ze'ev and Idiot's Guide teaches “said display device adapted to register a position where a stylus element makes contact with a screen of said display device,” as claim 21 requires. *See id.* at 83 (referring to parallel limitations in claim 4 and citing Ex. 1008, 27, 42–49; Ex. 1003, 155–157). Petitioner has shown that the combination of Ben-Ze'ev and Idiot's Guide teaches “wherein a particular position on said screen is translated into a particular command for controlling said remote device” and “an input device coupled to said bus,” as claim 21 requires. *See id.* at 83–84 (referring to parallel limitations in claims 4 and 11 and citing Ex. 1003, 157). Petitioner has shown that the combination of Ben-Ze'ev and Idiot's Guide teaches “said input device adapted to register a position where a stylus element makes contact with a surface of said input device” as claim 21 requires. *See id.* at 84 (referring to parallel limitations in claim 1 and citing Ex. 1008, 64–65; Ex. 1003, 158–160). Petitioner has shown that the combination of Ben-Ze'ev and Idiot's Guide teaches “wherein a particular position on said input device is translated into a particular command for controlling [s]aid remote device,” as claim 21 requires. *See id.* at 84 (referring to parallel limitations in claim 1 and citing Ex. 1003, 160).

d. Claims 22, 23, and 24

As Petitioner notes, dependent claims 22, 23, and 24 recite limitations that parallel those in claims 3, 10 and 6. Pet. 84. Thus, based on the analysis noted above for claims 3, 10, and 6, Petitioner has shown that the combination of Ben-Ze'ev and Idiot's Guide teaches the additional

limitations recited in dependent claims 22, 23, and 24. *See id.* at 84–85 (citing Ex. 1003, 160–162).

e. Claim 25

Petitioner has shown that the combination of Ben-Ze’ev and Idiot’s Guide teaches the additional limitations in dependent claim 25: “wherein said display device is adapted to register a position where said stylus element makes contact within said rendering,” and “wherein a particular position within said rendering is translated into a particular command for controlling said remote device.” *See* Pet. 85–87 (citing Ex. 1007, Fig. 7, 4:42–48, 8:15–20, 9:31–51, 10:36–41, 12:29–40; Ex. 1008, 42–43; Ex. 1003, 162–166).

f. Claim 27

Petitioner has shown that the combination of Ben-Ze’ev, Idiot’s Guide, and Osterhout teaches the additional limitation in dependent claim 27: “wherein said display device is adapted to display a menu of commands for controlling said remote device.” *See id.* at 88 (referencing parallel limitation in claim 9 and citing Ex. 1003, 166).

E. OBVIOUSNESS OF CLAIMS 18 AND 26 BASED ON BEN-ZE’EV, IDIOT’S GUIDE, OSTERHOUT, AND DARA-ABRAMS

Petitioner asserts claims 18 and 26 would have been obvious over Ben-Ze’ev, Idiot’s Guide, Osterhout, and Dara-Abrams. Pet. 88. As noted above, Petitioner has also shown adequately that one skilled in the art would have had reason to combine the relevant teachings of Osterhout and Dara-Abrams with those of Ben-Ze’ev and Idiot’s Guide. Petitioner has also shown that Dara-Abrams accounts for the additional limitation in claims 18 and 26—i.e., imparting motion in response to stylus movement. *See* Pet. 88 (referencing parallel limitation in claim 8 and citing Ex. 1003, 167). Patent

Owner does not challenge Petitioner's assertion in this regard. Thus, we conclude that Petitioner has shown by a preponderance of evidence that claims 18 and 26 would have been obvious over Ben-Ze'ev, Idiot's Guide, Osterhout, and Dara-Abrams.

III. CONCLUSION

Petitioner has shown by a preponderance of the evidence that claims 1–7, 9, and 10 would have been obvious over Ben-Ze'ev and Idiot's Guide; claim 8 would have been obvious over Ben-Ze'ev, Idiot's Guide, and Dara-Abrams; claims 11–17, 19–25, and 27 would have been obvious over Ben-Ze'ev, Idiot's Guide, and Osterhout; and claims 18 and 26 would have been obvious over Ben-Ze'ev, Idiot's Guide, Osterhout, and Dara-Abrams.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1–27 of the '018 patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, the 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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