UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

COMARCO WIRELESS TECHNOLOGIES, INC.,
Patent Owner.

Case No. IPR2015-01879
U.S. Patent No. 8,492,933

NOTICE OF APPEAL TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT OF PATENT OWNER COMARCO WIRELESS TECHNOLOGIES, INC.

Pursuant to 37 C.F.R. § 90.2(a) and 35 U.S.C. §§ 141(c) and 142, Patent Owner Comarco Wireless Technologies, Inc., hereby appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision of the Patent Trial and Appeal Board ("Board"), entered in Case No. IPR2015-01879 on February 22, 2017 (Paper No. 28), that claims 1 and 2 of U.S. Patent No. 8,492,933 ("'933 patent") are unpatentable. A copy of the Final Written Decision is attached.

For the limited purpose of providing the Director with the information requested by 37 C.F.R. § 90.2(a)(3)(ii), the issues on appeal may include, but are not limited to, the Board's determination that claims 1 and 2 of the '933 patent are invalid as obvious under 35 U.S.C. § 103, the Board's failure to consider properly evidence of record and its findings that conflict with the evidence of record and are not supported by substantial evidence, legal errors in the Board's obviousness analysis, and any other issue decided adversely to Patent Owner.

This Notice of Appeal is being filed electronically with the Board and by Express Mail with the Office of the General Counsel. In addition, this Notice of Appeal is being filed, together with the required filing fee, with the United States Court of Appeals for the Federal Circuit.

Respectfully submitted,

By: /s/Harris A. Wolin/
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Dated: April 18, 2017

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CERTIFICATE OF FILING

I hereby certify that, in addition to being filed electronically through PRPS system of the Patent Trial and Appeal Board, on this I caused the attached Notice of Appeal to be filed by Express Mail with the Director of the United States Patent and Trademark Office at the following address:

Director, United States Patent and Trademark Office
c/o Office of the General Counsel
P.O. Box 1450
Alexandria, Virginia 22313-1450

CERTIFICATE OF FILING

I hereby certify that on this day I caused the attached Notice of Appeal to be filed electronically by CM/ECF with the Clerk of the United States Court of Appeals for the Federal Circuit, 717 Madison Place, N.W., Suite 401, Washington, D.C. 20439.

CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. 42.6, that on this day I caused the attached Notice of Appeal to be served by Express Mail or an equivalent service and by electronic mail upon the following attorneys for Apple Inc.:

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Paper No. 28
Entered: February 22, 2017

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

COMARCO WIRELESS TECHNOLOGIES, INC.,
Patent Owner.

Case IPR2015-01879
Patent 8,492,933 B2

Before BRIAN J. McNAMARA, PATRICK M. BOUCHER, 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

Apple Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting *inter partes* review of claims 1 and 2 of U.S. Patent No. 8,492,933 B2 (Ex. 1001, "the '933 patent"). Comarco Wireless Technologies, Inc. ("Patent Owner") filed a Preliminary Response. Paper 13. Pursuant to 35 U.S.C. § 314(a), we determined the Petition showed a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 1 and 2 and instituted an *inter partes* review of those claims. Paper 15, 16. Patent Owner filed a Patent Owner Response (Paper 17, "PO Resp.") and Petitioner filed a Reply to Patent Owner's Response (Paper 18, "Reply"). An oral hearing was held before the Board. Paper 26.

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, we determine Petitioner has shown by a preponderance of the evidence that claims 1 and 2 of the '933 patent are unpatentable. *See* 35 U.S.C. § 316(e).

II. BACKGROUND

A. RELATED PROCEEDINGS

The parties assert the '933 patent is involved in *Comarco Wireless Technologies, Inc. v. Apple Inc.*, Case No. 8:15-cv-00145-AG, currently pending in the United States District Court for the Central District of California. Pet. 2; Paper 5, 1.

B. THE '933 PATENT

The '933 patent is directed to power supply equipment for electronic devices. Ex. 1001, Abstract. Figure 3 of the '933 patent is reproduced below:

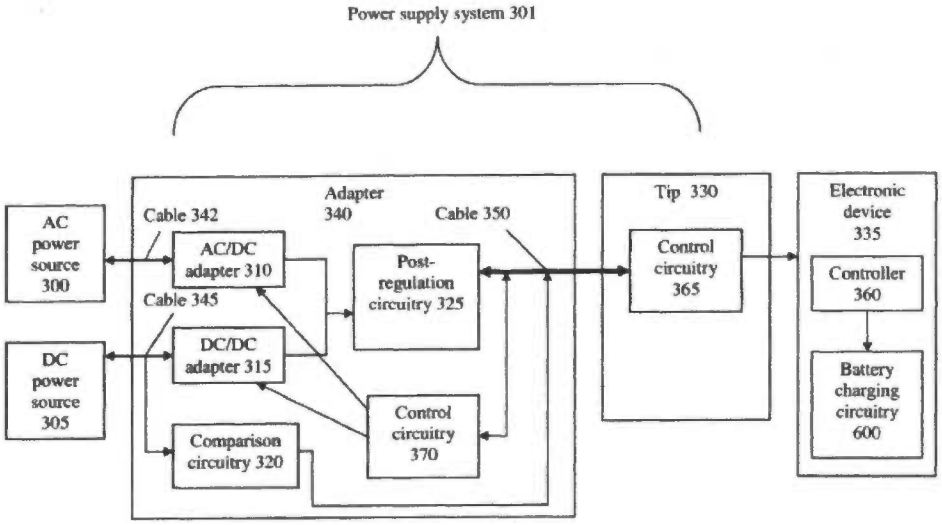

FIG. 3

Figure 3 depicts a power supply system for use with either AC or DC power source 300 or 305, which is connected to adapter 340, which is then connected via cable 350 to tip 330, which provides power to electronic device 335. *Id.* at 3:37–57, 4:19–54. According to the '933 patent, circuitry in adapter 340 may output a signal based on information about the power source, and that signal may be sent via cable 350 to tip 330 and then on to electronic device 335. *Id.* at 4:43–54. Based on the signal, the electronic device 335 may control the amount of power drawn to prevent overheating. *Id.* at 3:26–28, 4:54–63. The '933 patent explains also that tips "may be removable from the cable 350" and "may have different shapes and sizes, depending [on] the shape and sizes of the power input openings of the respective electronic devices 335 being powered." *Id.* at 3:55–60.

C. CHALLENGED CLAIMS

Challenged claims 1 and 2 of the '933 patent recite as follows:

> 1. Power supply equipment comprising:
>
> an adapter to convert power from a power source, external to the adapter, to DC power for powering an electronic device, the adapter including circuitry for producing an analog data signal for use by the electronic device to control an amount of power drawn by the electronic device; and
>
> a cable having proximal and distal ends, the proximal end being electrically coupled to the adapter and the distal end terminating in an output connector, the output connector including:
>
> a plurality of conductors to transfer the DC power and the analog data signal to the electronic device; and
>
> circuitry to receive a data request from the electronic device and in response transmit a data output to the electronic device to identify the power supply equipment to the electronic device.
>
> 2. The power supply equipment of claim 1 wherein the output connector can be detached from the cable.

Ex. 1001, 10:34–52.

D. INSTITUTED GROUNDS OF UNPATENTABILITY

We instituted *inter partes* review of claims 1 and 2 to determine whether they are unpatentable under 35 U.S.C. § 103(a) over the combined teachings of U.S. Patent No. 7,243,246 B2 (issued July 10, 2007) (Ex. 1003, "Allen"), U.S. Patent No. 7,296,164 B2 (issued Nov. 13, 2007) (Ex. 1004, "Breen"), and U.S. Patent No. 6,054,846 (issued Apr. 25, 2000) (Ex. 1005, "Castleman"). Inst. Dec. 16.

III. ANALYSIS

A. PRINCIPLES OF LAW

Petitioner bears the burden of proving unpatentability of the challenged claims, and that burden 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 establish the facts supporting its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time of the invention. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). 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) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Claim Construction

We conclude that no express claim construction is necessary to resolve whether Petitioner has demonstrated claims 1 and 2 of the '933 patent are unpatentable. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) ("[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.").

C. Asserted Prior Art

1. Allen (Ex. 1003)

Allen discloses power supply equipment for managing power to an electronic device. Ex. 1003, Abstract, 1:10–18. Allen's Figure 4 is reproduced below:

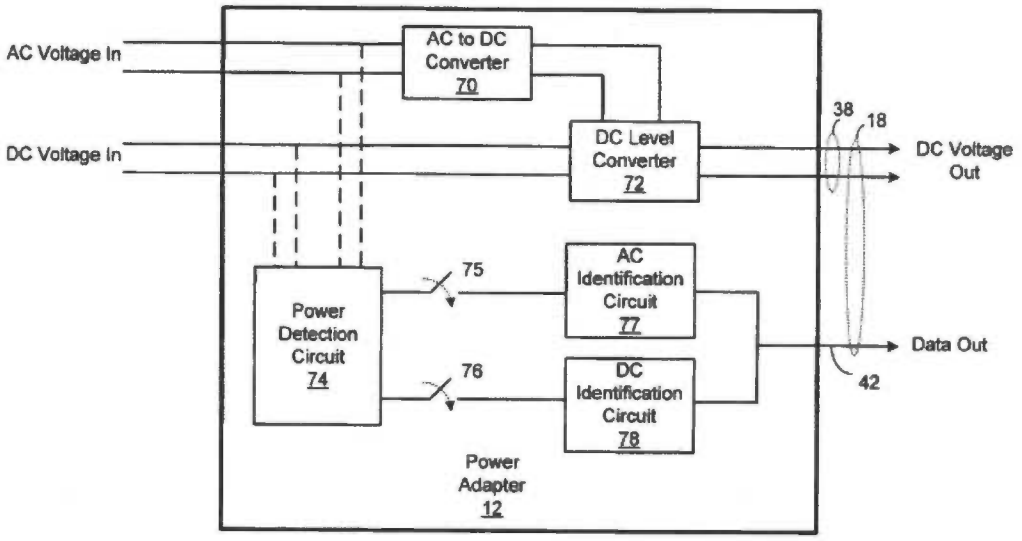

Figure 4

Figure 4 is a block diagram of the system components in Allen's power adapter. *Id.* at 5:6–7. Allen describes that the power adapter includes "[a] power detection circuit . . . operable to detect whether the power source is AC or DC." *Id.* at 5:17–18. The power detection circuit transmits the information via a data signal to the electronic device's power management components, which then use the information to "implement various power management functions." *Id.* at 5:21–34.

2. Breen (Ex. 1004)

Breen discloses power supply equipment for managing power supplied to an electrical device—what Breen refers to as an "Information Handling System" or "IHS"—such as a notebook computer or cellular phone. Ex. 1004, 1:6–19, 4:13–15. Breen's "power supply system includes one or more power peripherals, devices or components, which are inter-connected in an arrangement to provide power to a load device such as the portable IHS device." *Id.* at 4:15–19 (reference numerals omitted). Breen

describes that some power peripherals may "receive and convert power from one form or type to another," while others "may pass through a signal received as an input to generate an output signal, which is substantially the same as the input signal." *Id.* at 4:19–25. Breen discloses further "a power supply identification (PSID) scheme to identify the various types of power supply sources present." *Id.* at 5:1–3. Particularly relevant to this case, Breen explains that "to determine its power source and optimize its performance, a controller included within the portable IHS device sends a request signal to one or more power peripherals over a bi-directional PSID line to request PSID information. Each power peripheral, which is queried, sends a response signal over the PSID line." *Id.* at 5:31–37 (reference numerals omitted). Breen notes "[i]n one embodiment, the PSID may be a certain current or voltage level present on a sense line." *Id.* at 6:2–4

3. Castleman (Ex. 1005)

Castleman teaches a single power supply for multiple electronic devices with different power requirements. Ex. 1005, 4:44–50. Information about an individual electronic device is encoded in a memory chip associated with that device, and is provided to the power supply when the electronic device is connected to the power supply. *Id.* at 4:60–65. The power supply "accepts and analyzes information from the individual-device memory chips," and controls the power supply to provide power to the electronic device at the appropriate level. *Id.* at 4:51–5:2. Particularly important to this case, Castleman includes an embodiment in which an output connector of a cable that plugs into an electronic device contains the memory chip that identifies the individual electronic device to the power supply. *Id.* at 9:31–35, 16:58–68.

D. Obviousness of Claims 1 and 2 Based on Allen, Breen, and Castleman

Petitioner asserts the challenged claims would have been obvious over Allen in combination with Breen and Castleman. Pet. 30–41. Patent Owner responds, arguing the combination of Allen and Breen fails to teach "the adapter including circuitry for producing an analog data signal for use by the electronic device to control an amount of power drawn by the electronic device," as claims 1 and 2 require. PO Resp. 15–23. Patent Owner challenges also Petitioner's proffered reason for combining Allen's, Breen's, and Castleman's teachings. *Id.* at 24–33. Based on our review of the arguments and evidence in the Petition, Response, and Reply, we determine Petitioner has demonstrated, by a preponderance of evidence, the subject matter of claims 1 and 2 would have been obvious over Allen, Breen, and Castleman, as explained below.

1. *The Combination of Allen and Breen Teaches the Disputed Limitation "the adapter including circuitry for producing an analog data signal for use by the electronic device to control an amount of power drawn by the electronic device"*

Claim 1 (and, by dependence, claim 2) requires "the adapter including circuitry for producing an analog data signal for use by the electronic device to control an amount of power drawn by the electronic device." We agree with Petitioner that the combination of Allen and Breen teaches this limitation. *See* Pet. 16–18, 27, 33–34, 39–40. In particular, as Petitioner explains, Allen teaches an adapter with identification circuits that produce data signals, which are transmitted to an electronic device. Pet. 16 (citing Ex. 1003, Fig. 4, 5:21–42). Allen teaches also that the electronic device uses those transmitted data signals "to implement various power management functions," including "reduc[ing] the total power drawn by the device,

thereby controlling the amount of power drawn by the electronic device from the adapter." *Id.* (citing Ex. 1003, Fig. 4, 5:21–42; Ex. 1010 ¶ 71). Although Allen does not teach explicitly that the outgoing signal from the adapter to the electronic device is analog, we agree with Petitioner that Breen discloses circuitry for producing an outgoing analog signal. Pet. 33–34. In particular, Breen teaches generating an analog power event signal that is "a pulse signal having a predetermined width," Ex. 1004, 6:35–42, as well as an analog output signal transmitting PSID information through a "current or voltage level present on a sense line," *id.* at 6:2–4. *See* Ex. 1010 ¶ 89.

Patent Owner raises two arguments in challenging whether the combination of Allen and Breen teaches the disputed limitation (i.e., "an adapter including circuitry for producing an analog data signal for use by the electronic device to control an amount of power drawn by the electronic device"). Patent Owner does not dispute that Breen teaches circuity for producing an analog signal. *See* PO Resp. 22–26; Ex. 1021, 116:22–25. Instead, Patent Owner argues (1) Breen's output signal is not generated by circuitry in an adapter and (2) Breen's electronic device does not use the power event signal to control the amount of power drawn by the electronic device because that signal prompts another signal—a PSID request/response—that the electronic device uses to adjust power parameters and device performance. PO Resp. 23.

We disagree with Patent Owner's first argument because, although Breen teaches an embodiment in which an external battery generates the power event signal, *see* Ex. 1004, 6:35–40, Breen teaches another embodiment without an external battery, in which the first power peripheral