

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY MOBILE COMMUNICATIONS (USA) INC., SONY MOBILE
COMMUNICATIONS AB, SONY MOBILE COMMUNICATIONS, INC.,
SONY ELECTRONICS, INC., SONY CORP. OF AMERICA, and
SONY CORP.,
Petitioner,

v.

ADAPTIX, INC.,
Patent Owner.

Case IPR2014-01524
Patent 6,947,748 B2

Before HOWARD B. BLANKENSHIP, TREVOR M. JEFFERSON, and
JUSTIN BUSCH, *Administrative Patent Judges*.

BLANKENSHIP, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. BACKGROUND

Sony Mobile Communications (USA) Inc., Sony Mobile
Communications AB, Sony Mobile Communications, Inc., Sony Electronics,

Inc., Sony Corp. of America, and Sony Corp. (collectively, “Petitioner”) filed a request for an *inter partes* review of claims 6, 8, 9, 11, and 19–22 of U.S. Patent No. 6,947,748 B2 (Ex. 1001, “the ’748 patent”) under 35 U.S.C. §§ 311–319. *See* Paper 6 (“Petition” or “Pet.”). Patent Owner Adaptix, Inc. filed a preliminary response. *See* Paper 12 (“Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314. Section 314 provides that an *inter partes* review may not be instituted unless “the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons that follow, we institute an *inter partes* review as to claims 6, 8, 9, and 19–22 of the ’748 patent.

A. Related Proceedings

According to Petitioner, the ’748 patent is involved in the following lawsuits: *Adaptix, Inc. v. AT&T, Inc.*, No. 6:12-cv-00017 (E.D. Tex.); *Adaptix, Inc. v. Pantech Wireless, Inc.*, No. 6:12-cv-00020 (E.D. Tex.); *Adaptix, Inc. v. Cellco Partnership*, No. 6:12-cv-00120 (E.D. Tex.); *Adaptix, Inc. v. Huawei Techs. Co., Ltd.*, Nos. 6:13-cv-00438, ’439, ’440, and ’441 (E.D. Tex.); *Adaptix, Inc. v. ZTE Corp.*, Nos. 6:13-cv-00443, ’444, ’445, and ’446 (E.D. Tex.); *Adaptix, Inc. v. NEC CASIO Mobile Commc’ns, Ltd.*, Nos. 6:13-cv-00585 and ’922 (E.D. Tex.); *Adaptix, Inc. v. Pantech Wireless, Inc.*, No. 6:13-cv-00778 (E.D. Tex.); *Adaptix, Inc. v. Blackberry Limited*, Nos. 5:14-cv-01380, ’386 and ’387 (N.D. Cal.); *Adaptix, Inc. v. Kyocera Corp.*, Nos. 3:14-cv-02894 and ’895 (N.D. Cal.); *Adaptix, Inc. v. Apple, Inc.*, Nos. 5:13-cv-01776, ’1777, and ’2023 (N.D. Cal.); *Adaptix, Inc. v. AT&T, Inc.*,

No. 5:13-cv-01778 (N.D. Cal.); *Adaptix, Inc. v. Cellco Partnership*, No. 5:13-cv-01844 (N.D. Cal.); *Adaptix, Inc. v. Dell, Inc.*, No. 5:14-cv-01259 (N.D. Cal.); *Adaptix, Inc. v. Amazon.com, Inc.*, No. 5:14-cv-01379 (N.D. Cal.); *Adaptix, Inc. v. Sony Mobile Commc'ns, Inc.*, No. 5:14-cv-01385 (N.D. Cal.); *Adaptix, Inc. v. ASUSTek*, No. 5:14-cv-03112 (N.D. Cal.); and *Adaptix, Inc. v. HTC Corp.*, Nos. 5:14-cv-02359 and '360 (N.D. Cal.). Pet. 1–2. The '748 patent is also involved in Case IPR2015-00319 (PTAB Nov. 26, 2014) and was involved in Case IPR2014-01406 (PTAB Aug. 28, 2014), which was terminated by the Board on January 29, 2015.

B. The '748 Patent

The '748 patent relates to subcarrier selection for each of multiple subscribers (e.g., mobile phones) that includes measuring channel and interference information for subcarriers based on pilot symbols received from a base station. Ex. 1001, Abstract. Orthogonal frequency division multiplexing (OFDM) is an efficient modulation scheme for signal transmission over frequency-selective channels. *Id.* at col. 1, ll. 13–15. The invention employs orthogonal frequency division multiple access (OFDMA), which is a method for multiple access using the basic format of the OFDM modulation scheme. *Id.* at col. 1, ll. 26–41; *see generally id.* at col. 1, l. 5 col. 2, l. 19, col. 2, ll. 59–66.

C. Illustrative Claim

Claim 8, reproduced below, is illustrative.

8. A method for subcarrier selection for a system employing orthogonal frequency division multiple access (OFDMA) comprising:

a subscriber measuring channel and interference information for a plurality of subcarriers based on pilot symbols received from a base station;

the subscriber selecting a set of candidate subcarriers;

the subscriber providing feedback information on the set of candidate subcarriers to the base station;

the subscriber sending an indication of coding and modulation rates that the subscriber desires to employ for each cluster; and

the subscriber receiving an indication of subcarriers of the set of subcarriers selected by the base station for use by the subscriber.

D. Asserted Prior Art

Ritter	DE 19800953 C1	July 29, 1999	Ex. 1002 ¹
Hashem I	US 6,721,569 B1	Apr. 13, 2004	Ex. 1003
Hashem II	US 6,701,129 B1	Mar. 2, 2004	Ex. 1004
Frodigh	US 5,726,978	Mar. 10, 1998	Ex. 1005

IEEE Communications Magazine, vol. 38, no. 7, July 2000 (excerpts) (Ex. 1006) (“IEEE”).

¹ The parties refer to Exhibit 1002 as “Ritter,” which is an English translation of DE 19800953 C1. The German patent document has been entered as Exhibit 1023.

Chuang and Sollenberger, *Spectrum Resource Allocation for Wireless Packet Access with Application to Advanced Cellular Internet Service*, IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, vol. 16, no. 6 (Aug. 1998) (Ex 1007) (“Chuang”).

Cimini, et al., *Advanced Cellular Internet Service (ACIS)*, IEEE Communications Magazine (Oct. 1998) (Ex. 1008) (“Cimini”).

E. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability under 35 U.S.C. § 103(a) against claims 6, 8, 9, 11, and 19–22 (Pet. 4):

Prior Art	Claim(s)
Ritter, Hashem I, and Hashem II	6, 8, 9, and 19–22
Ritter and Frodigh	11
IEEE and Chuang	6, 8, 9, 11, and 19–22
IEEE and Cimini	6, 8, 9, 11, and 19–22

II. ANALYSIS

A. Claim Interpretation

In an *inter partes* review, the Board construes claim terms in an unexpired patent using their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,764 (Aug. 14, 2012).

Although Petitioner submits constructions for several terms (Pet. 8–12), for purposes of this Decision we do not find construction of any terms necessary at this stage in the proceeding. Further, Patent Owner in its

Preliminary Response does not contest Petitioner's construction of any terms that affect the necessary determinations in this Decision. *See* Prelim. Resp. 7–9.

B. Disclaimer — Claim 11

On the day Patent Owner filed the Preliminary Response (January 12, 2015), Patent Owner filed a statutory disclaimer for claim 11. Prelim. Resp. 2 n.1; Ex. 2003. Accordingly, claim 11 is not subject to any ground of unpatentability in this proceeding. *See* 37 C.F.R. § 42.107 (e) (“No inter partes review will be instituted based on disclaimed claims.”).

C. Proposed Grounds of Unpatentability

1. Section 103(a) — Ritter, Hashem I, and Hashem II

Petitioner submits that the subject matter of claims 6, 8, 9, and 19– 22 would have been obvious over the combination of Ritter, Hashem I, and Hashem II. Petitioner submits a detailed analysis of each of the claims, applies the prior art, and relies on the testimony of Professor Robert Akl. Pet. 18–27; Exhibit 1009.

Patent Owner argues that because Hashem I and Hashem II are directed to a “single-user” OFDM system, as opposed to a multiple-user OFDMA system (as in Ritter), one of ordinary skill in the art would not combine the teachings of Ritter and the Hashem references because OFDM can be used to support multiple users without using OFDMA. Prelim. Resp. 15–20. Patent Owner's argument, however, is not responsive to the ground proposed by Petitioner. Ritter teaches OFDMA. *See, e.g.*, Pet. 21; Ex. 1002, 4. The ground proposed does not rely on the Hashem references as

teaching OFDMA, nor does it submit that those references should be modified in view of any of Ritter's teachings. Moreover, Patent Owner's allegation (Prelim. Resp. 20) that OFDM systems as taught by Hashem I and Hashem II are "entirely different" from, "if not contrary" to, the claimed invention is not consistent with the intrinsic evidence. According to the '748 patent, OFDMA was known as "another method for multiple access, *using the basic format of OFDM.*" Ex. 1001, col. 1, ll. 29–31 (emphasis added).

Patent Owner also employs a patent law term of art in alleging that the Hashem references "teach away" from OFDMA and combination with Ritter, although the arguments are not consistent with what may constitute a "teaching away." *See* Pet. 17–20. "A reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.*, 73 F.3d 1085, 1090 (Fed. Cir. 1995) (alteration in original) (quoting *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994)). Patent Owner's allegations of "teaching away" are based on the view that the Hashem references describe OFDM systems. However, the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of the alternatives when the disclosure does not criticize, discredit, or otherwise discourage the solution claimed. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (quoting *In re Gurley*, 27 F.3d. at 553). Patent Owner does not point to any disclosure in Hashem I or Hashem II that criticizes, discredits, or otherwise discourages use of OFDMA as taught by Ritter.

Patent Owner argues, further, that it would not have been obvious to combine an “overhead-consuming” pilot-symbol approach that Ritter avoided, such that the combination would “defeat the purpose of Ritter avoiding pilots and increase system overhead.” Prelim. Resp. 22; *see also id.* at 26. As evidentiary support, Patent Owner refers to paragraphs 50 and 51 of Exhibit 2002. *Id.* at 22, 26. Exhibit 2002 purports to be an expert report of Michael Caloyannides, Ph.D. (“the Caloyannides Report”) filed in related U.S. District Court actions.

The Caloyannides Report is, however, an expert report directed to rebuttal of another expert report. *See* Ex. 2002, 1. The Caloyannides Report merely refers to the other expert report, not of record in this proceeding, which is alleged to “note[] that Ritter proposed a novel measurement technique that specifically avoided the use of known, non-data-bearing pilot symbols from the base station so as to save ‘overhead.’” *Id.* ¶ 50. Neither Patent Owner, nor the Caloyannides Report at the indicated paragraphs, establishes that Ritter “avoided” the “pilot-symbol approach” in the interest of not consuming “overhead,” or for any other reason.

Patent Owner submits that Ritter teaches neither an index indication of a candidate cluster with its SINR (signal-to-interference-plus-noise ratio) value nor an indication of coding and modulation rates. Prelim. Resp. 24. Yet, Patent Owner acknowledges that Petitioner does not rely on Ritter for those teachings. *Id.* at 23; *see, e.g.*, Ex. 1009 ¶ 144 (relying on Hashem references), ¶ 150 (pp. 66–67) (claim chart referring to Hashem references). We are, therefore, not persuaded that Ritter’s deficiencies are fatal to the proposed ground of rejection.

2. Secondary Considerations

Patent Owner submits that there are “objective indicia” that demonstrate non-obviousness of the invention. We address first the evidence that Patent Owner places under the category of “skepticism of the experts.” Prelim. Resp. 53, 54–57.

Patent Owner submits that Exhibit 2004 is a “[c]oncept evaluation” that discusses four proposed concepts to be pursued, at that time, as the next Universal Mobile Telecommunication System standard. *Id.* at 54. According to Patent Owner, the document “explains three OFDMA based approaches referred to collectively as ‘Concept β .’” *Id.* Patent Owner continues that in the first meeting of the European Telecommunication Standards Institute (“ETSI”) delegates were asked to vote for one of the “four proposed concepts,” which included Concept β . Prelim. Resp. 55. Concept β received zero percent of the votes, while votes went to other “approaches” that did not include OFDM or OFDMA. *Id.* at 55–56. In the next ETSI meeting, again, Concept β received zero percent of the votes. *Id.* at 56. Patent Owner provides technical committee reports of the meetings as Exhibits 2005 and 2006.

Patent Owner does not, however, point to evidence that establishes *why* Concept β was disfavored by the ETSI delegates. Nor does Patent Owner explain how any of the “three OFDMA based approaches” might relate to the claimed invention, other than the fact that the claims recite “OFDMA.” Because Patent Owner characterizes the evidence as showing “skepticism of the experts,” the evidence is presented, presumably, to demonstrate that the Concept β “OFDMA based approaches” were thought to represent impossible or impractical technologies as late as the ETSI

second meeting, January 1998 (Ex. 2006, 1). At the time of invention,² however, OFDMA was known to be a method that supports multiple access for multiple subscribers. Ex. 1001, col. 1, l. 26 – col. 2, l. 5.

Referring to the Caloyannides Report, Patent Owner submits further that a long-felt but unmet need “to provide a new generation of wireless technology that would improve throughput” was met by “4G/LTE” mobile phones that “may” achieve data transmission rates that are “10 to 100 times faster than 3G mobile phones.” Prelim. Resp. 58–59; Ex. 2002 ¶ 340. Patent Owner does not correlate the claimed invention to the asserted evidence of meeting a “long-felt need” beyond the claims reciting “OFDMA,” which was not an unmet need because it was known at the time of invention. Ex. 1001, col. 1, l. 26 – col. 2, l. 5.

Patent Owner also refers to the Caloyannides Report as demonstrating commercial success of “4G/LTE based products.” Prelim. Resp. 59–60. The Caloyannides Report, however, does not refer to any evidence in this record of commercial success of “4G/LTE based products,” nor does it refer to any evidence in this record tending to show that limitations from claim 8, which are reproduced in the Caloyannides Report, were responsible for any “commercial success.” *See* Ex. 2002 ¶ 344 (“Further information and evidence about the commercial success that has followed the use of these aspects of the [’748 patent] is provided in my infringement report involving the same patent[.]”). The “infringement report” referenced by Exhibit 2002 has not been provided as an exhibit in this proceeding. Expert testimony

² On this record, the date of invention is the filing date of the ’748 patent application, December 15, 2000, or nearly three years after the second ETSI meeting.

that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight. 37 C.F.R. § 42.65(a).

Moreover, even if commercial success were established, Patent Owner's allegations would not support a prima facie case of nexus.

A prima facie case of nexus is generally made out when the patentee shows both that there is commercial success, and that the thing (product or method) that is commercially successful is the invention disclosed and claimed in the patent. When the thing that is commercially successful is not coextensive with the patented invention—for example, if the patented invention is only a component of a commercially successful machine or process—the patentee must show prima facie a legally sufficient relationship between that which is patented and that which is sold.

Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 1392 (Fed. Cir. 1988). However, “if the commercial success is due to an unclaimed feature of the device” or “if the feature that creates the commercial success was known in the prior art, the success is not pertinent.” *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006). The Caloyannides Report (§ 344) alleges that limitations of claim 8 represent, at most, an “essential element” of only one part of “current LTE networks.” Further, to the extent that OFDMA might contribute to “commercial success,” OFDMA was known in the prior art and, thus, not pertinent. *See* Ex. 1001, col. 1, l. 26 – col. 2, l. 5.

For the foregoing reasons, we find Patent's Owner's evidence of secondary considerations to be entitled to little weight in support of non-obviousness. We emphasize, however, that our weighing of the evidence in support of non-obviousness is for purposes of this Decision only, as we are

limited to consideration of the record that exists at this preliminary stage of the proceeding.

*3. Section 103(a) — Ritter, Hashem I, and Hashem II —
Conclusion*

Upon consideration of the Petition and weighing the evidence in this record, we determine that Petitioner has demonstrated a reasonable likelihood that claims 6, 8, 9, and 19–22 would have been obvious over the combination of Ritter, Hashem I, and Hashem II.

4. Section 103(a) – Other Asserted Grounds

In view of the ground on which we institute *inter partes* review of claims 6, 8, 9, and 19–22, we do not institute review based on the additional asserted grounds that these claims are unpatentable for obviousness over combinations of references that involve IEEE, Chuang, or Cimini. *See* 35 U.S.C. 314(a); 37 C.F.R. § 42.108(a).

III. CONCLUSION

The Petition demonstrates a reasonable likelihood of prevailing on the ground of obviousness over Ritter, Hashem I, and Hashem II as to claims 6, 8, 9, and 19–22.

The Board has not made a final determination on the patentability of any challenged claim.

IV. ORDER

In consideration of the foregoing, it is

ORDERED that an *inter partes* review is instituted as to claims 6, 8, 9, and 19–22 of the '748 patent on the ground of obviousness under 35 U.S.C. § 103(a) based on Ritter, Hashem I, and Hashem II;

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '748 patent is instituted with trial commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is given of the institution of the trial; and

FURTHER ORDERED that the trial is limited to the grounds identified immediately above, and no other ground is authorized for the '748 patent claims.

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