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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte YOSHIHIKO OGAWA,
DAICHI IMAMURA, TAKASHI IWAI, and TOMOFUMI TAKATA

Appeal 2015-006441
Application 12/597,491
Technology Center 2600

Before MAHSHID D. SAADAT, SCOTT E. BAIN, and
ALEX S. YAP, *Administrative Patent Judges*.

YAP, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the final rejection of claims 6–21,² which are all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b)

We AFFIRM.

¹ According to Appellants, the real party in interest is Panasonic Intellectual Property Corporation of America. (App. Br. 3.)

² Claims 1–5 were cancelled previously. (*See* Final Office Action (mailed July 14, 2014) (“Final Act.”) 2.)

STATEMENT OF THE CASE

Introduction

Appellants' disclosed and claimed invention relates "to a wireless communication terminal apparatus, wireless communication base station apparatus and wireless communication method." (Spec. ¶ 1.) Claim 6 is illustrative, and is reproduced below:

6. A wireless communication terminal apparatus comprising:
 - an applying section configured to apply, to a cyclic shift sequence that is generated by cyclically shifting a first sequence with a determined cyclic shift value and that is used as a reference signal, one of phase rotation and cyclic shift corresponding to a frequency difference between a determined frequency and a transmission band of the reference signal, the determined frequency being common between a plurality of cells; and
 - a transmitter configured to transmit the reference signal to which one of the phase rotation and the cyclic shift is applied.

Prior Art and Rejections on Appeal

The following table lists the prior art relied upon by the Examiner as evidence in rejecting the claims on appeal:

Baum et al. ("Baum")	US 2007/0189404 A1	Aug. 16, 2007
Kim et al. ("Kim")	US 2007/0133386 A1	June 14, 2007

Claims 6–21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Baum in view of Kim. (*See* Final Act. 4–9.)

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments that the Examiner has erred. We disagree with Appellants' conclusions. We adopt as our own the findings and reasons set forth by the Examiner in the action from which this appeal is taken and the reasons set forth by the Examiner in the Examiner's Answer in response to Appellants' Appeal Brief. (Ans. 2–3.) However, we highlight and address specific findings and arguments for emphasis as follows.

With respect to claim 6, the Examiner finds that:

Baum disclose[s] the pilot sequence implemented with constant amplitude and zero auto-correlation (CAZAC - first sequence) sequence . . . corresponds to CAZAC sequence applied with different cyclic shift as the reference signal disclosed in Applicant's specification paragraph [0005]) applied with different cyclic time shift (frequency difference) applied in either time domain or frequency domain. *Baum further disclose the applying different cyclic shift (frequency difference) for same pilot signal (reference signal) occupying the specific subcarriers (transmission frequency band of the reference signal) in either time domain (Fig. 8B) or frequency domain (Fig. 8C) where frequency offset applied from specific starting frequency [sic] (frequency common in cell)*

(Ans. 2–3, emphasis added.) The Examiner further finds that Kim teaches or suggests calculating the frequency difference between a determined frequency and a transmission band of the reference signal:

Kim further disclose the communication system in same endeavor [sic] where disclose the estimating the cell search and the synchronization using the position of pilot subcarriers (transmission band of the reference signal) having specific estimated cyclic shifting (frequency offset/difference) from same frequency reference point (determined frequency common between a plurality of cells) showing different cell have different cyclic shift from same reference point. . . .

(Ans. 3.) According to the Examiner, the “combined teachings of Baum and Kim as whole disclose the claimed limitation in claim 6 with a reasonable expectation of improving the cell search and the synchronization of the base station and mobile station during the handover between cells for mobile station with distributed pilot subcarriers.” (*Id.*)

Appellants contend that neither Baum nor Kim teaches or suggests “one of phase rotation and cyclic shift corresponding to a frequency difference between a determined frequency” (App. Br. 8–12.) Specifically, according to Appellants, neither Baum nor Kim teaches or suggests the limitation at issue because “Baum merely discloses a general cyclic shift sequence . . . [and] Kim does not disclose that the pilot sequence itself, which is mapped on the pilot subcarriers, is cyclic-shifted (i.e., phase rotation in the frequency domain.)” (Reply 4–5.) Appellants further contend that the Examiner “has resorted to impermissible hindsight reasoning using the applicants’ disclosure as a guide, in formulating the rejections. [Specifically, the Examiner] has impermissibly pieced together two distinct references by selectively picking various unrelated pieces of each reference and combining these pieces in a highly selective manner.” (App. Br. 13.)

Appellants have not persuaded us the Examiner erred. For example, Appellants do not explain with sufficient specificity why the cyclic shift sequence in the prior art is different from the limitation at issue. *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”); *In re Geisler*, 116

F.3d 1465, 1470 (Fed. Cir. 1997); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). To the extent the Specification provides explanation of the limitation at issue, Appellants do not point to the Specification to show how the claimed invention performs the limitation at issue differently from the cited references. Moreover, we do not find paragraphs 6 and 96 of the Specification, referenced by Appellants in their Reply Brief (page 4), informative on this issue. Furthermore, “one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.” *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

We are similarly not persuaded that the Examiner “has impermissibly pieced together two distinct references by selectively picking various unrelated pieces of each reference and combining these pieces in a highly selective manner.” (App. Br. 13.) Here, Examiner has articulated reasoning with a rational underpinning for why a person of ordinary skill in the art at the time of the invention would combine Baum and Kim. (Final Act. 5; Ans. 3.) *See KSR Int’l Co., v. Teleflex, Inc.*, 550 U.S. 398, 415, 418 (2007).

For the foregoing reasons, we are not persuaded the Examiner erred in rejecting claim 6 and thus, we sustain the 35 U.S.C. § 103 rejection of claim 6. Appellants do not make any separate, substantive patentability arguments regarding independent claims 10–12 and dependent claims 7–9 and 13–21, but instead rely solely on their arguments with respect to claim 6. (App. Br. 13.) Therefore, we also sustain the 35 U.S.C. § 103(a) rejections of claims 7–21.

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DECISION

We affirm the decision of the Examiner to reject claims 6–21.

AFFIRMED