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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte WANSHI CHEN, JELENA M. DAMNJANOVIC,
JUAN MONTOJO, and PETER GAAL

Appeal 2015-003857
Application No. 13/208,080
Technology Center 2400

Before MARC S. HOFF, SCOTT E. BAIN, and ALEX S. YAP,
Administrative Patent Judges.

HOFF, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a Final Rejection of claims 1–59. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Appellants' invention concerns techniques for reporting channel quality indicators in a multi-carrier wireless communication system. User equipment determines one or more reporting sets, wherein each reporting set includes a plurality of component carriers. On a downlink control channel, the UE receives a trigger for transmission of an aperiodic CQI report. On a corresponding uplink data channel, the UE transmits the aperiodic CQI report for component carriers in a reporting set selected by the trigger. Spec. ¶ 6.

Claim 1 is exemplary of the claims on appeal:

1. A method in a user equipment, comprising:
 - determining one or more reporting sets associated with a plurality of component carriers, wherein the one or more reporting sets are preconfigured for the user equipment;
 - receiving, on a downlink control channel, a trigger for the transmission of aperiodic channel quality information (CQI);
 - selecting, based on the trigger, a reporting set from the one or more reporting sets associated with the plurality of component carriers; and
 - transmitting, on an uplink data channel corresponding to the downlink control channel, an aperiodic CQI report for component carriers identified in the selected reporting set.

The Examiner relies upon the following prior art in rejecting the claims on appeal:

Khan	US 2006/0250938 A1	Nov. 9, 2006
Sayana	US 2010/0238984 A1	Sept. 23, 2010
Guo	US 2011/0143749 A1	June 16, 2011
Cai	US 2011/0249656 A1	Oct. 13, 2011
Xue	US 2012/0063401 A1	Mar. 15, 2012

Texas Instruments, *Transmission on PUSCH for Carrier Aggregation*, R1-103694, 3GPP TSG RAN WG1 #61bis (2010) (hereinafter “TI”).

Claims 1, 2, 4–6, 8–11, 13, 14, 20, 21, 25, 26, 30–33, 40–44, 48–53, and 56–59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over TI and Cai.

Claims 3, 15–19, 22–24, 27–29, 35–38, 46, 47, 54, and 55 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over TI, Cai, and Guo.

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over TI, Cai, and Sayana.

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over TI, Cai, and Xue.

Claims 34 and 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over TI, Cai, and Khan.

Claim 39 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over TI, Cai, Guo, and Khan.

Throughout this decision, we make reference to the Appeal Brief (“App. Br.,” filed Sept. 15, 2014), the Reply Brief (“Reply Br.,” filed Feb. 17, 2015), and the Examiner’s Answer (“Ans.,” mailed Dec. 17, 2014) for their respective details.

ISSUE

Appellants’ arguments present us with the following issue:

Does the combination of TI and Cai teach or suggest determining one or more reporting sets associated with a plurality of component carriers,

wherein the one or more reporting sets are preconfigured for the user equipment?

ANALYSIS

First, we note that Appellants' argument that TI "is essentially incompatible with the present claims" is not persuasive. Appellants contend that the "aperiodic CQI reporting configuration of TI is not flexible, wastes air link resources, and cannot efficiently scale," but none of these complaints are tied in any way to the language of the claims. *See* App. Br. 9.

Appellants' argument that Cai does not disclose reporting sets preconfigured for the user equipment is not persuasive. *See* App. Br. 10. Appellants have not defined the term "preconfigured" other than a broad recitation in the Specification, such as paragraph 74, cited in the "Summary of Claimed Subject Matter" of Appellants' Appeal Brief. *See* App. Br. 9. Moreover, Cai teaches that:

one set of CQI configuration parameters may be set for the carriers. CQIs for the two carriers may be repeated in a feedback channel. For example, CQI of the first carrier may be repeated in N_cqi_transmit (or N_cqi_transmit_1) consecutive sub-frames followed by repeating the CQI of the second carrier in next N_cqi_transmit (or N_cqi_transmit_1) sub-frames.

Cai ¶ 296. We agree with the Examiner that "[t]he N numbers of sub-frames are either pre-define/pre-configured." Ans. 17. We therefore also agree with the Examiner that the "one or more reporting sets" of Cai "are preconfigured for the user equipment," as recited in claim 1, within the broadest reasonable interpretation of the claim term.

Appellants argue that "combination of these features from TI with any other disclosure that would change their characteristics would be improper."

App. Br. 9. This argument is not persuasive, as it misstates the case law, which holds that a combination cannot render the prior art “unsatisfactory for its intended purpose.” *See In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). Appellants further argue that “TI could not be modified to include determining one or more reporting sets that are pre-configured for a UE without improperly changing its principal [sic] of operation . . . as the fixed bitmap taught in TI requires it to be fixed at a certain number of downlink CCs.” App. Br. 10. TI teaches, however, that “[f]or example, if 5 DL CCs are configured, a 5-bit map is required in the UL grant.” TI § 3.3. Clearly, TI suggests modification such that more, or fewer, downlink CCs are configured.

Appellants argue that “[t]rigger-based aperiodic CQI is different and patentably distinct from a feedback cycle involving a pre-configured number of subframes over which to transmit CQI.” App. Br. 10. This argument is unpersuasive because the Examiner relies on TI, rather than Cai, to teach aperiodic CQI reporting involving receiving a trigger. Ans. 3, citing TI § 3.3. The Examiner relies on Cai only for a teaching of reporting sets preconfigured for the user equipment.

We find that the Examiner did not err in rejecting claims 1, 2, 4–6, 8–11, 13, 14, 20, 21, 25, 26, 30–33, 40–44, 48–53, and 56–59. We sustain the Examiner’s § 103(a) rejection over TI and Cai.

We do not agree with Appellants that the rejection over TI and Cai contains deficiencies. Thus, we also sustain the Examiner’s § 103(a) rejection of claims 3, 7, 12, 15–19, 22–24, 27–29, 34–39, 45–47, 54, and 55, not separately argued with particularity.

CONCLUSION

The combination of TI and Cai suggests determining one or more reporting sets associated with a plurality of component carriers, wherein the one or more reporting sets are preconfigured for the user equipment.

DECISION

The Examiner's decision to reject claims 1–59 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED