



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/020,583	12/22/2004	David Jonathan Julian	040887	5585
23696	7590	02/13/2013	EXAMINER	
QUALCOMM INCORPORATED			AHMED, ENAM	
5775 MOREHOUSE DR.			ART UNIT	PAPER NUMBER
SAN DIEGO, CA 92121			2112	
			NOTIFICATION DATE	DELIVERY MODE
			02/13/2013	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID JONATHAN JULIAN, AVNEESH AGRAWAL, and
EDWARD HARRISON TEAGUE

Appeal 2010-008259
Application 11/020,583
Technology Center 2100

Before JASON V. MORGAN, ERIC B. CHEN, and JOHN G. NEW,
Administrative Patent Judges.

CHEN, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-55, all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF THE CASE

Appellants' invention relates to transmission of information in a multiple access communication system. The information is transmitted using incremental redundancy and a determination is made as to whether reverse link performance drops below a predetermined threshold.

(Abstract.)

Claims 1 and 14 are exemplary, with disputed limitations in italics:

1. A method for transmission of information in a multiple access communication system, the method comprising:

transmitting information on a forward link using incremental redundancy;

determining if reverse-link performance drops below a predetermined threshold, the predetermined threshold being used to determine channel degradation on a reverse link; and

determining whether to respond to messages received on the reverse link for the information transmitted on the forward link if the reverse-link performance drops below the predetermined threshold.

14. In a wireless communication system, a method of determining whether a communication channel has degraded, the method comprising:

receiving a message indicative of an acknowledgment (ACK) or indicative of a not-acknowledgment (NACK) via the communication channel;

measuring quality of the received message; and

determining whether the communication channel has degraded as a function of the measured quality of the received message.

Claims 1-6, 10, 13-16, 18, 21-26, 29, 31, 33-37, 39, 42, 43-47, 54, and 55¹ stand rejected under 35 U.S.C. § 102(e) as being anticipated by Kim (U.S. Patent No. 7,200,789 B2; Apr. 3, 2007).

Claims 7 and 27 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kim and Tsunoda (U.S. Patent No. 6,675,346 B2; Jan. 6, 2004).

Claims 8 and 28 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kim and Sayeed (U.S. Patent No. 5,828,677; Oct. 27, 1998).

Claims 9, 17, 30, and 38 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kim and Haartsen (U.S. Patent No. 6,021,124; Feb. 1, 2000).

Claims 11, 12, 19, 20, 32, 33, 40, and 41 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kim and Gopalakrishnan (U.S. Patent No. 7,227,851 B1; June 5, 2007).

Claim 43 stands rejected under 35 U.S.C. § 103(a) as being obvious over Kim and Hetherington (U.S. Patent No. 6,859,456; Feb. 22, 2005).

Claims 48-51 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kim and Ketseoglou (U.S. Patent No. 6,138,260; Oct. 24, 2000).

Claims 52 and 53 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kim, Ketseoglou, and Hetherington.

¹ Both the Examiner and Appellants have inadvertently omitted dependent claims 23 and 44 from the statement of the rejection. (Ans. 3; App. Br. 7.)

ANALYSIS

§ 102 Rejection – Kim

We are persuaded by Appellant’s arguments (App. Br. 9-11) that Kim does not describe the limitation “determining whether to respond to messages received on the reverse link,” as recited in independent claim 1.

The Examiner found that step 305 in Figure 3A of Kim, in which the mobile station retransmits the traffic data according to the received traffic-to-pilot power ratio (TPR) value, corresponds to the limitation “determining whether to respond to messages received on the reverse link.” (Ans. 5, 16.) We do not agree.

Claim 1 recites a “determining” step. One relevant plain meaning of “determine” is “to settle or decide by choice of alternatives or possibilities.” MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 315 (10th ed. 1999). Accordingly, the multiple access communication system of claim 1 chooses between either responding or not responding, conditional upon whether “the reverse-link performance drops below the predetermined threshold.” Such an interpretation of the “determining” step is consistent with the explanation in the Specification that “[u]pon recognition of channel degradation, the access point may stop responding 412 to the ACK messages sent from the access terminal, and then switch 416 to transmission of data not using incremental redundancy.” (Spec. ¶ [0044].)

Kim relates to “transmitting data in a mobile communication system supporting hybrid automatic retransmission request (HARQ).” (Col. 1, ll. 23-26.) In one embodiment, Figure 3A of Kim illustrates a signal flow diagram during reverse data transmission in a mobile communication system. (Col. 5, ll. 8-11.) In step 302 of Kim, a base station determines if

there is an error in traffic data transmitted over a supplemental channel 105. (Col. 6, ll. 13-16.) The base station calculates an E_b/N_t (ratio of energy to interference per bit) value additionally required to retransmit traffic data over the supplemental channel 105 and also determines a traffic-to-pilot power ratio (TPR) value the mobile station (MS) should transmit traffic data, using the required E_b/N_t value. (Col. 6, ll. 30-38.) “[T]he mobile station receives the NACK signal and the new TPR value transmitted by the base station in step 304” and “[u]pon receiving the new TPR value, the mobile station proceeds to step 305 where it retransmits the traffic data over the supplemental channel 105 according to the received TPR value.” (Col. 6, ll. 43-49.)

Although the Examiner cited Kim for the disclosure of a mobile station that receives a new TPR value with a NACK signal (i.e., step 304) and retransmits traffic data using the new TPR value, the Examiner has provided insufficient evidence to support a finding that Kim discloses “determining whether to respond to messages received on the reverse link.” In other words, Kim provides no express disclosure that the mobile station chooses between either responding or not responding to the base station.

Accordingly, we do not sustain the rejection of independent claim 1 under 35 U.S.C. § 102(e). Claims 2-6, 10, 54, and 55 depend from independent claim 1. We do not sustain the rejection of claims 2-6, 10, 54, and 55 under 35 U.S.C. § 102(e) for the same reasons discussed with respect to independent claim 1.

Independent claims 21 and 45 recite limitations similar to those discussed with respect to independent claim 1. We do not sustain the

rejection of claims 21 and 45, as well as dependent claims 22-26, 29, 31, 33, 46, and 47, for the same reasons discussed with respect to claim 1.

We are also persuaded by Appellant's arguments (Reply Br. 3-4) that Kim does not describe the claim limitations "receiving a message indicative of an acknowledgment (ACK) or indicative of a not-acknowledgment (NACK) via the communication channel" and "measuring quality of the received message," as recited in independent claim 14.

The Examiner found that the Cyclic Redundancy Code (CRC) check of Kim corresponds to the claimed "receiving a message indicative of an acknowledgment (ACK) or indicative of a not-acknowledgment (NACK) via the communication channel" and "measuring quality of the received message." (Ans. 17.) We do not agree.

In an embodiment, Figure 4B of Kim illustrates a flowchart for controlling retransmission of a reverse link by a base station. (Col. 10, ll. 15-16.) "[I]n step 412, the base station performs CRC [Cyclic Redundancy Code] check on the decoded data" such that "[t]he data can be either traffic data or control data." (Col. 10, ll. 19-22.)

In another embodiment, Figure 5A of Kim illustrates a flowchart for controlling retransmission of a reverse link by a mobile station. (Col. 11, ll. 24- 25.) Kim explains that "the mobile station determines in step 502 whether the decoded control information includes an ACK signal indicating that there is no error in the traffic data transmitted over the supplemental channel or a NACK signal indicating that an error has occurred in the transmitted traffic data." (Col. 11, ll. 33-38.)

Although the Examiner cited the Figure 4B embodiment for the disclosure of a CRC check of decoded data (i.e., traffic data or control data)

and the Figure 5A embodiment for disclosure of ACK/NACK signals, the Examiner has provided insufficient evidence from a single embodiment to support a finding that Kim discloses “measuring quality of the received message” such that the “message [is] indicative of an acknowledgment (ACK) or indicative of a not-acknowledgment (NACK).” In other words, Kim provides no express disclosure that the CRC check is performed on an ACK signal or a NACK signal.

Accordingly, we do not sustain the rejection of independent claim 14 under 35 U.S.C. § 102(e). Claims 15, 16, and 18 depend from claim 14. Therefore, we do not sustain the rejection of claims 15, 16, and 18 under 35 U.S.C. § 102(e), for the same reasons discussed with respect to independent claim 14.

Independent claims 35 and 42 recite limitations similar to those discussed with respect to independent claim 14. We do not sustain the rejection of claims 35 and 42, as well as dependent claims 36, 37, 39, and 44, for the same reasons discussed with respect to claim 14.

§ 103 Rejection – Kim and Tsunoda

Claims 7 and 27 depend from claims 1 and 21. Tsunoda was cited by the Examiner for teaching additional features of claims 7 and 27. (Ans. 7-8.) However, the Examiner’s application of Tsunoda does not cure the above noted deficiencies of Kim.

§ 103 Rejection – Kim and Sayeed

Claims 8 and 28 depend from claims 1 and 21. Sayeed was cited by the Examiner for teaching additional features of claims 8 and 28. (Ans. 8.)

However, the Examiner's application of Sayeed does not cure the above noted deficiencies of Kim.

§ 103 Rejection – Kim and Haartsen

Claims 9, 17, 30, and 38 depend from claims 1, 14, 21, and 35. Haartsen was cited by the Examiner for teaching additional features of claims 9, 17, 30, and 38. (Ans. 9-10.) However, the Examiner's application of Haartsen does not cure the above noted deficiencies of Kim.

§ 103 Rejection – Kim and Gopalakrishnan

Claims 11, 12, 19, 20, 32, 33, 40, and 41 depend from claims 1, 14, 21, and 35. Gopalakrishnan was cited by the Examiner for teaching additional features of claims 11, 12, 19, 20, 32, 33, 40, and 41. (Ans. 10-11.) However, the Examiner's application of Gopalakrishnan does not cure the above noted deficiencies of Kim.

§ 103 Rejection – Kim and Hetherington

Claim 43 depend from claim 42. Hetherington was cited by the Examiner for teaching additional features of claim 43. (Ans. 11-12.) However, the Examiner's application of Hetherington does not cure the above noted deficiencies of Kim.

§ 103 Rejection – Kim and Ketseoglou

Independent claim 48 recites recite limitations similar to those discussed with respect to independent claim 1, and claims 49-52 depend from claim 48. Ketseoglou was cited by the Examiner for teaching

Appeal 2010-008259
Application 11/020,583

additional features of claim 49. (Ans. 12-13.) However, the Examiner's application of Ketseoglou does not cure the above noted deficiencies of Kim.

§ 103 Rejection – Kim, Ketseoglou, and Hetherington

Claims 52 and 53 depend from claim 48. Hetherington was cited by the Examiner for teaching additional features of claims 52 and 53. (Ans. 13-14.) However, the Examiner's application of Hetherington does not cure the above noted deficiencies of Kim and Ketseoglou.

DECISION

The Examiner's decision to reject claims 1-55 is reversed.

REVERSED

ELD