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Row 3: Huawei Technologies Co., Ltd., c/o Wenjun Gu (Huawei ID 00229515), Building G1-2, Huawei Industrial Base, Bantian, Longgang District, Shenzhen, 518129, CHINA, ART UNIT: 2467, PAPER NUMBER
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ZHAOJIE ZHOU and QI LIU

Appeal 2014-003548
Application 13/332,097
Technology Center 2400

Before LINZY T. McCARTNEY, JOHN A. HUDALLA, and
JOYCE CRAIG, *Administrative Patent Judges*.

McCARTNEY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a rejection of claims 1–5, 7–13, and 15–24. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

The present patent application concerns “a method, apparatus, and system for radio resource scheduling.” Spec. ¶ 3. Claim 1 illustrates the claimed subject matter:

1. A method in a communication system, the method comprising:

receiving, by a user equipment (UE), a UE indication on absolute grant (AG) table choice from a base station control node;

receiving, by the UE, information on radio resource grant assigned for the UE for uplink data transmission from the UE to a base station;

obtaining, by the UE, the assigned radio resource grant by looking up the indicated AG table selected for the UE based on the received information on radio resource grant; and

transmitting, by the UE, uplink data to the base station according to the radio resource grant,

wherein the received UE indication is configured to indicate which one of at least two AG tables available to the UE is selected by the base station control node for the UE to use in the uplink data transmission, and

wherein the indicated AG table selected for the UE is configured to provide a same definition about the radio resource grant as an AG table selected by the base station control node from at least two AG tables available to the base station for the base station to use in assigning the radio resource grant for the UE, the AG table selected for the base station being indicated by a base station indication on AG table choice through a base station signaling from the base station control node.

REJECTIONS

Claims 1–3, 5, 7, 9–11, 13, and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kim et al. (US 2008/0187070 A1; Aug. 7, 2008) and Chang et al. (US 2005/0220042 A1; Oct. 6, 2005).

Claims 4, 12, and 17–24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kim, Chang, and Nakamata et al. (US 2007/0049277 A1; March 1, 2007).

Claims 8 and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kim, Chang, and Pelletier et al. (US 2009/0290559 A1; Nov. 26, 2009).

ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments, and we disagree with Appellants that the Examiner erred. We adopt the Examiner’s findings, reasoning, and conclusions as set forth in the Final Rejection, Advisory Action, and the Examiner’s Answer. We address Appellants’ arguments in turn.

Claim 1

Claim 1 recites “obtaining, by the UE, the assigned radio resource grant by looking up the indicated AG table selected for the UE based on the received information on radio resource grant.” Br. 12. Appellants contend Chang fails to teach or suggest this limitation because “nowhere in Chang is there any disclosure that the UE obtains the resources scheduled at step 1020 from the CTFC-TFCI mapping list as contended in the Final Office Action.” *Id.* at 5 (emphasis omitted). According to Appellants, Chang “is silent on

how the UE analyz[es] the TFCI to obtain scheduling command from CTFC-TFCI mapping list, let alone obtain any assigned radio resources by looking up an AG table selected for the UE based on received information on the assigned radio resource grant as recited by claim 1.” *Id.* at 5–6.

Appellants’ arguments ignore that the Examiner concluded that claim 1’s “obtaining” step would have been obvious in light a *combination* of Kim’s and Chang’s teachings. In particular, the Examiner found Kim discloses “use of Absolute Grant (AG) Tables” and that, given the purpose of the tables, one of ordinary skill in the art would have understood that Kim performs the disputed “obtaining” step, “although Kim is silent on certain details.” Ans. 3. The Examiner found Chang “show[s] a similar concept for another type of table or mapping” that teaches or suggests the missing details. *Id.* Specifically, the Examiner found Chang “clearly indicates that both [a] transmitter and [a] receiver have the same table . . . and further, that the ‘transmitter selects appropriate TFs for data transmission . . . and transmits TFCI bits indicating the selected TFs to a receiver.’” *Id.* at 4. Based on these findings, among others, the Examiner concluded that it would have been obvious to combine Kim’s and Chang’s teachings to perform claim 1’s “obtaining” step. *See* Final Act. 4–8; Ans. 2–4.

Appellants’ arguments against Chang individually have not persuaded us the Examiner erred. “[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.” *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

Appellants also argue “that combining Kim with Chang . . . would *not necessarily* imply that only an indication on AG table choice is transmitted from a base station control node to both a UE and a base station, as recited in

claim 1” and therefore these limitations are not inherent. Br. 6 (emphasis modified). Appellants assert “Kim *expressly discloses* that, although it’s possible to send to a WTRU (which is alleged as the UE in [the] claim[s]) an index, *an entire grant table* can be signaled to the WTRU,” and “Chang discloses an RNC transmitting an *entire* TFCI-CTFC mapping list . . . *not* any index or indication on a TFCI-CTFC mapping list.” *Id.* (emphases modified).

We find Appellants’ arguments unpersuasive. Claim 1 does not recite “only an indication on AG table choice is transmitted from a base station control node to both a UE and a base station” as asserted by Appellants. Instead, claim 1 recites “receiving, by a user equipment (UE), a UE indication on absolute grant (AG) table choice from a base station control node” and “the AG table selected for the base station being indicated by a base station indication on AG table choice through a base station signaling from the base station control node.” Br. 12. The Examiner did not find these limitations are inherent in the prior art as argued by Appellants. Rather, as with claim 1’s “obtaining” step, the Examiner concluded these limitations would have been obvious in light of a combination of Kim’s and Chang’s teachings. *See* Final Act. 4–9; Ans. 5–6.

Moreover, “receiving . . . a UE indication on absolute grant (AG) table choice” encompasses receiving an entire AG table. Ans. 4–5. As explained by the Examiner, the received AG table is an “indication” of the AG table choice under the broadest reasonable interpretation of “indication.” *See id.* Similar reasoning applies to the “AG table selected for the base station being indicated by a base station indication on AG table choice through a base station signaling from the base station control node”

limitation. Regardless, as found by the Examiner, Kim teaches “[m]ultiple power grant tables are stored in a wireless transmit/receive unit (WTRU). The WTRU *receives a signal designating which table is to be used to grant power levels during a communication.*” Kim ¶ 9 (emphasis added). Accordingly, we disagree with Appellants that the cited art only teaches or suggests receiving entire tables.

For the above reasons, we sustain the Examiner’s rejection of claim 1. Because Appellants have not presented separate, persuasive patentability arguments for claims 2–4, 7, 9–12, 15, 17, 18, 21, and 22, we also sustain the Examiner’s rejections of these claims.

Claims 5 and 13

Claim 5 recites “[t]he method of claim 1, wherein the base station signaling is any one of RADIO LINK SETUP signaling, a RADIO LINK ADDITION signaling, a RADIO LINK RECONFIGURATION PREPARE signaling, and a RADIO LINK RECONFIGURATION REQUEST signaling.” Claim 13 recites a similar limitation. Appellants argue “Kim and Chang each do[] not mention any one of these [types of] signaling.” Br. 8. In particular, Appellants contend the Examiner did not “provide which signaling of Chang and how the signaling of Chang is modified to support . . . disclosing any one of the particular signaling recited in claims 5 and 13.” *Id.*

We find Appellants’ arguments unpersuasive. The Examiner construed claim 5 to encompass the following:

[T]he base station signaling is one of (a) signaling related to setup of a radio link (RADIO LINK SETUP signaling), (b) signaling related to the addition of a radio link (RADIO LINK

ADDITION signaling), (c) signaling related to preparing to reconfigure a radio link (RADIO LINK RECONFIGURATION PREPARE signaling), and (d) signaling requesting reconfiguration of a radio link (RADIO LINK RECONFIGURATION REQUEST signaling).

Ans. 6. Appellants have not persuasively challenged this construction. Under this construction, the Examiner found a combination of Kim and Chang teaches or suggests the limitation recited in claim 5 because the “signaling . . . in the combination . . . at least reconfigures the radio link by reconfiguring the AG table and thus adjusting the Absolute Grant values to be used by the devices on the radio link.” *Id.* Appellants’ arguments against Kim and Chang individually have not persuaded us the Examiner erred. *See Keller*, 642 F.2d at 426. We therefore sustain the Examiner’s rejection of claims 5 and 13.

Claims 8 and 16

Claim 8 recites “wherein the UE indication is received from a BetaEd gain E-AGCH table selection IE of the RRC signaling.” Br. 13. Claim 16 recites a similar limitation. *Id.* at 14. Appellants argue Pelletier fails to teach or suggest this limitation because Pelletier’s “‘gain factor β_{ed} ’ . . . is just a mathematical parameter or variable, which represents a kind of gain factor, *not* any IE or any message or signaling.” Br. 8 (emphasis modified). Moreover, according to Appellants, “nowhere in Pelletier is there any disclosure indicat[ing] that the ‘gain factor β_{ed} ’ indicates or carries any information about indication on AG table choice or an AG table selected for a UE.” *Id.* at 8–9.

We find Appellants’ arguments unpersuasive. The Examiner found “the combination of Kim and Chang disclose the functionality of [the

claimed] IE, but do not name the indication in the same manner.” Ans. 7. The Examiner also found “Pelletier discloses that the BetaEd gain parameter is known in the art. As this parameter is related to the Absolute Grant information, it would make sense to include these parameters in the same message.” *Id.* The Examiner concluded “it would have been obvious to one of ordinary skill in the art to modify Kim and [Chang] to name the information element BetaEd gain E-AGCH table selection.” *Id.* Appellants have not persuasively addressed this conclusion or its underlying findings, and Appellants’ arguments against Pelletier alone have not persuaded us the Examiner erred. *See Keller*, 642 F.2d at 426. Accordingly, we sustain the Examiner’s rejection of claims 8 and 16.

Claims 19, 20, 23, and 24

Claims 19, 20, 23, and 24 each recite a variation of the following: “wherein the base station indication” is either “carried via an information element (IE)” or “included in an E-AGCH table choice IE,” the IE either “of the E-DCH FDD Information to Modify of the base station signaling” or “named as E-DCH FDD Information to Modify, of the base signaling to notify the base station the selected AG table for the base the station.” *Id.* at 14–15. With respect to these claims, Appellants argue Nakamata does not mention “E-DCH FDD Information to Modify IE,” much less using this IE in the manner recited in these claims. Br. 9–10.

We find Appellants’ arguments unpersuasive. As with claims 8 and 16, the Examiner found the combination of Kim and Chang teaches or suggests the *functionality* of the claimed “base station indication” but does not teach or suggest the “base station indication” *name*. Ans. 8–9. The

Examiner found Nakamata discloses using an IE named “E-DCH FDD Information Elements.” *See* Final Act. 16 (discussing Nakamata Figures 6 and 7); Ans. 8–9. The Examiner found “[t]he indication is further an indication indicating that the UE modify its configuration and as such, it reasonable to conclude that one of ordinary skill in the art would name the information element sending the base station indications as ‘E-DCH FDD Information to Modify.’” Ans. 8 (emphasis omitted). For similar reasons, the Examiner also concluded “that one of ordinary skill in the art would name the information element an ‘E-AGCH table choice IE.’” *Id.* at 9. Appellants have not persuasively challenged these conclusions or their associated findings. Moreover, Appellants’ arguments against Nakamata alone have not persuaded us the Examiner’s *combination* of Kim, Chang, and Nakamata fails to teach or suggest the disputed limitations. *See Keller*, 642 F.2d at 426. We therefore sustain the Examiner’s rejection of claims 19, 20, 23, and 24.

DECISION

For the above reasons, we affirm the Examiner’s rejection of claims 1–5, 7–13, and 15–24.

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