

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 September 2008 (25.09.2008)

PCT

(10) International Publication Number
WO 2008/115826 A1

(51) International Patent Classification:

H04L 1/00 (2006.01)

(21) International Application Number:

PCT/US2008/057122

(22) International Filing Date: 14 March 2008 (14.03.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/895,388 16 March 2007 (16.03.2007) US
12/042,901 5 March 2008 (05.03.2008) US

(71) Applicant (for all designated States except US): **QUALCOMM Incorporated** [US/US]; ATTN: International IP Administration, 5775 Morehouse Drive, San Diego, CA 92121-1714 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DAYAL, Pranav** [IN/US]; 5775 Morehouse Drive, San Diego, CA 92121-1714 (US). **Ji, Tingfang** [CN/US]; 5775 Morehouse Drive, San Diego, CA 92121-1714 (US).

(74) Agent: **ZHU, Peng**; ATTN: International IP Administration, 5775 Morehouse Drive, San Diego, CA 92121-1714 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

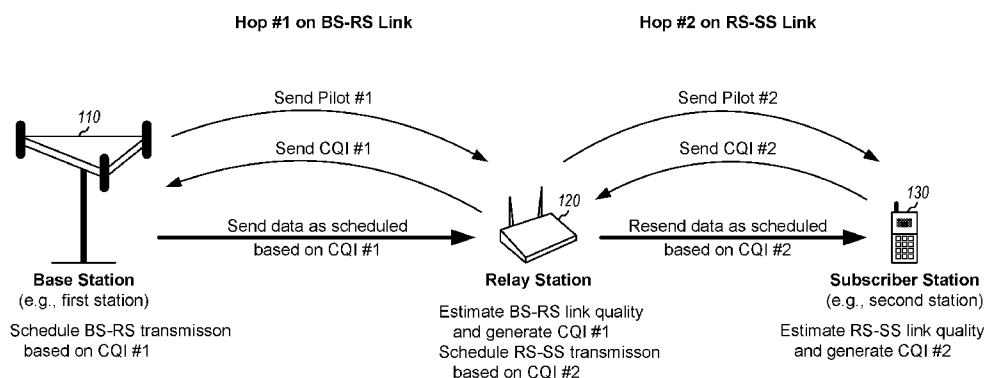
Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: DATA TRANSMISSION AND POWER CONTROL IN A MULTIHOP RELAY COMMUNICATION SYSTEM

Distributed Scheduling for Data



(57) Abstract: Techniques for transmitting data with distributed and centralized scheduling in a multihop relay communication system are described. For distributed scheduling, a relay station may generate and send first channel quality information (CQI) to a base station and receive second CQI from a subscriber station. The relay station may receive data sent by the base station based on the first CQI and may resend the data to the subscriber station based on the second CQI. For centralized scheduling, the relay station may generate first CQI for the base station, receive second CQI from the subscriber station, and send both CQIs to the base station. The relay station may receive data sent by the base station based on the first CQI and may resend the data to the subscriber station based on a scheduling decision determined based on the second CQI. Techniques for distributed and centralized power control are also described.

WO 2008/115826 A1



Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*