

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 September 2003 (18.09.2003)

PCT

(10) International Publication Number
WO 03/077444 A1

(51) International Patent Classification⁷: **H04B 7/005**,
H04L 1/00

(21) International Application Number: PCT/US03/06954

(22) International Filing Date: 4 March 2003 (04.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/090,712 4 March 2002 (04.03.2002) US

(71) Applicant: **QUALCOMM INCORPORATED** [US/US];
5775 Morehouse Drive, San Diego, CA 92121 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

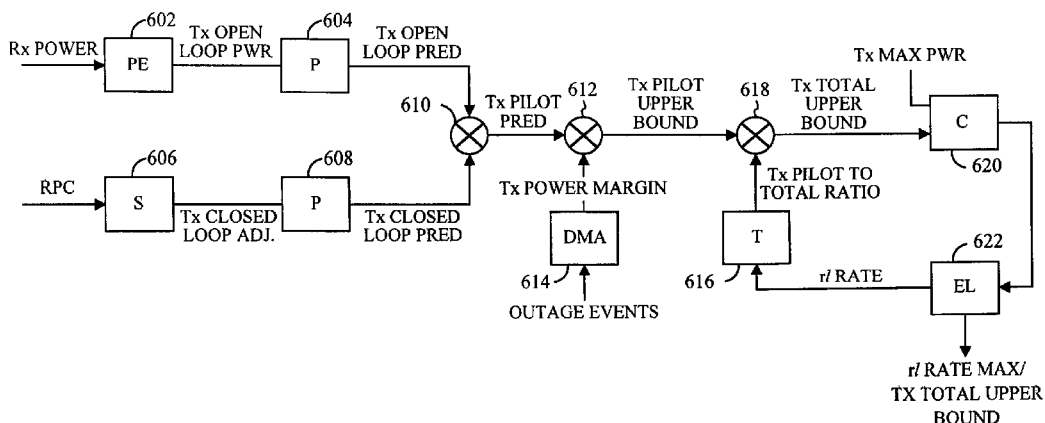
- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors: **SINDHUSHAYANA, Nagabhushana**; 7794 Roan Road, San Diego, CA 92129 (US). **BLACK, Peter J.**; 2961 First Avenue, San Diego, CA 92103 (US). **ATTAR, Rashid, A.**; 8520 Costa Verde Boulevard, #3112, San Diego, CA 92122 (US).

(74) Agents: **WADSWORTH, Philip R.** et al.; 5775 Morehouse Drive, San Diego, CA 92121 (US).

(54) Title: METHOD AND APPARATUS FOR ESTIMATING POWER REQUIRED FOR TRANSMISSION OF DATA AT A RATE IN A COMMUNICATION SYSTEM



(57) Abstract: Methods and apparatus for estimating maximum rate of data and for estimating a transmission power required for transmission of a data with a rate of data in a communication system are disclosed. A terminal determines a quality metric of a communication link, over which data are to be transmitted, and modifies the determined quality metric by a quality metric margin. The terminal then estimates the maximum rate of data in accordance with the modified quality metric. Alternatively, the terminal then estimates transmission power required for transmission of a data with a rate of data in accordance with the rate of data and the modified quality metric. The quality metric margin may be pre-determined or dynamically adjusted. The terminal dynamically adjusts the quality metric margin in accordance with a result of comparison of a transmit power corresponding to the estimated maximum rate of data with an actual transmit power used to transmit the data.



WO 03/077444 A1