(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
19 February 2009 (19.02.2009)

PCT

(10) International Publication Number
WO 2009/023604 A3

(51) International Patent Classification:
H04W 52/24 (2009.01)

(21) International Application Number:
PCT/US2008/072717

(22) International Filing Date: 8 August 2008 (08.08.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/955,301	10 August 2007 (10.08.2007)	US
60/957,967	24 August 2007 (24.08.2007)	US
12/187,310	6 August 2008 (06.08.2008)	US

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

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **YAVUZ, Mehmet** [TR/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **BLACK, Peter J.** [AU/US]; 5775 Morehouse Drive, San Diego, 92121 (US). **NANDA, Sanjiv** [US/US]; 5775 Morehouse Drive, San Diego, California 92121 (US).

(74) Agent: **CORIE, Florin C.**; Attn: International IP Administration, 5775 Morehouse Drive, San Diego, Califonia 92121 (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, ST, 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,

[Continued on next page]

(54) Title: AUTONOMOUS ADAPTATION OF TRANSMIT POWER

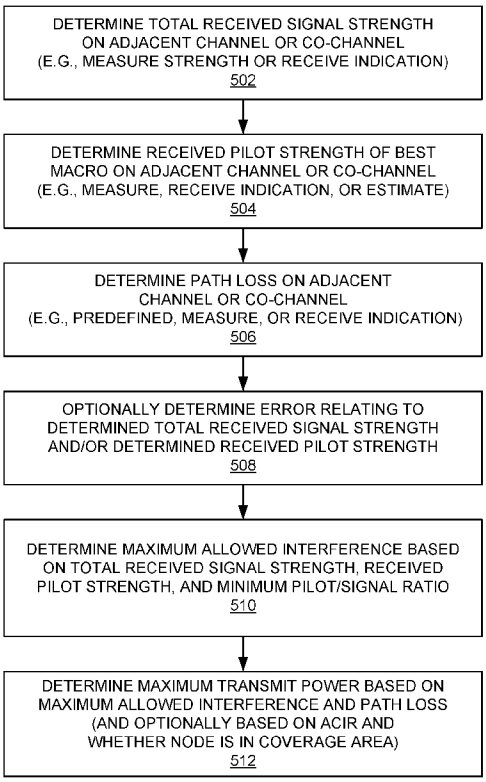


FIG. 5

(57) Abstract: Transmit power (e.g., maximum transmit power) may be defined based on the maximum received signal strength allowed by a receiver and a minimum coupling loss from a transmitting node to a receiver. Transmit power may be defined for an access node (e.g., a femto node) such that a corresponding outage created in a cell (e.g., a macro cell) is limited while still providing an acceptable level of coverage for access terminals associated with the access node. An access node may autonomously adjust its transmit power based on channel measurement and a defined coverage hole to mitigate interference. Transmit power may be defined based on channel quality. Transmit power may be defined based on a signal-to-noise ratio at an access terminal. The transmit power of neighboring access nodes also may be controlled by inter-access node signaling.

WO 2009/023604 A3

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))*

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*

(88) Date of publication of the international search report:
22 May 2009