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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
13 August 2009 (13.08.2009)

PCT

(10) International Publication Number
WO 2009/099844 A1

(51) International Patent Classification:
H04W 16/14 (2009.01)

(21) International Application Number:
PCT/US2009/032294

(22) International Filing Date:
28 January 2009 (28.01.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/025,515 1 February 2008 (01.02.2008) US
12/360,544 27 January 2009 (27.01.2009) US

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

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **JI, Tingfang** [CN/US]; 5775 Morehouse Drive, San Diego, CA 92121 (US).

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

[Continued on next page]

(54) Title: VIRTUAL SCHEDULING IN HETEROGENEOUS NETWORKS

(57) Abstract: Providing for virtual management of wireless resources in a mobile communication environment is described herein. By way of example, access terminals in the communication environment can maintain connections with nearby network transmitters and report factors pertinent to wireless scheduling to a central entity, such as a macro base station. The macro base station can employ those factors in improving wireless communications for other serving cells within or near to a macro coverage area served by the macro base station. By maintaining information pertinent to prevailing wireless conditions, quality of service requirements, pilot signal reports, mobility management considerations, and so on, of transmissions within the cell, significant interference reduction can be implemented for the macro coverage area, or nearby coverage areas.

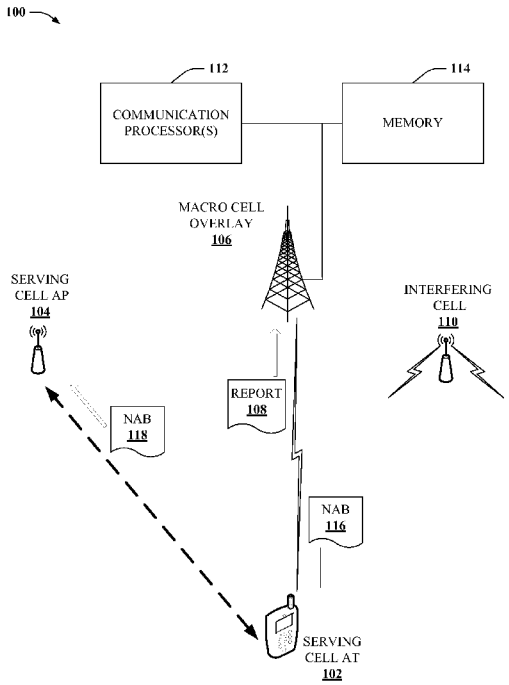


FIG. 1

WO 2009/099844 A1

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, MK, 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 (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*