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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 June 2009 (25.06.2009)

PCT

(10) International Publication Number
WO 2009/079533 A1

(51) International Patent Classification:
*H04W 74/08* (2009.01)

(21) International Application Number:
PCT/US2008/087083

(22) International Filing Date:
17 December 2008 (17.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/014,649 18 December 2007 (18.12.2007) US
12/243,151 1 October 2008 (01.10.2008) 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) Inventor; and

(75) Inventor/Applicant *(for US only)*: **MEYLAN, Arnaud** [CH/US]; 5775 Morehouse Drive, San Diego, California 92121 (US).

(74) Agent: **JUNEAU, Darrell Scott**; 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, 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:** METHOD AND APPARATUS FOR SENDING AND RECEIVING RANDOM ACCESS RESPONSE IN A WIRELESS COMMUNICATION SYSTEM

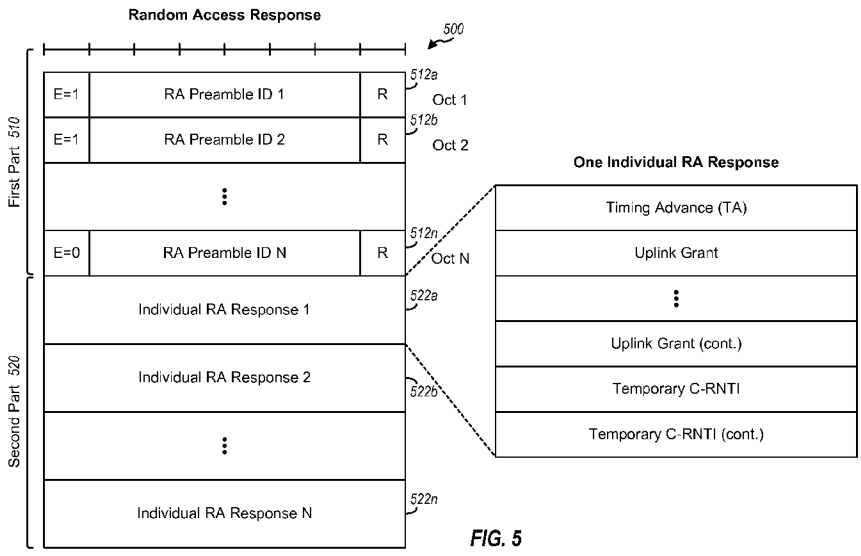



FIG. 5

(57) **Abstract:** Techniques for supporting random access by user equipments (UEs) in a wireless communication system are described. In one design, a UE transmits a random access (RA) preamble for random access. The UE thereafter receives a random access response composed of a first part and a second part. The first part includes a list of N RA preamble IDs for N RA preambles being responded to by the random access response, where $N \geq 1$. The second part includes N individual RA responses for the N RA preambles being responded to. The UE processes the first part to detect for an RA preamble ID of the RA preamble transmitted by the UE. If this RA preamble ID is not detected, then the UE skips the second part. Otherwise, the UE processes the second part to obtain an individual RA response for the transmitted RA preamble.

WO 2009/079533 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*