

(51) International Patent Classification:
H04W 60/00 (2009.01)(21) International Application Number:
PCT/US2009/033151(22) International Filing Date:
5 February 2009 (05.02.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/026,637 6 February 2008 (06.02.2008) US
12/365,615 4 March 2008 (04.03.2008) 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): **GIARETTA, Gerardo** [IT/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **WANG, Jun** [US/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **AH-****MAVAARA, Kalle, I.** [FI/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **CASACCIA, Lorenzo** [IT/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **MAHENDRAN, Arungundram, C.** [IN/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **TSIRTISIS, Georgios** [GB/US]; 5775 Morehouse Drive, San Diego, California 92121 (US).(74) Agent: **JUNEAU, Darrell, Scott**; Attn: International Ip Administration, 5775 Morehouse Drive, San Diego, California 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.

[Continued on next page]

(54) Title: MOBILE IP MULTIPLE REGISTRATIONS AND PCC INTERACTIONS

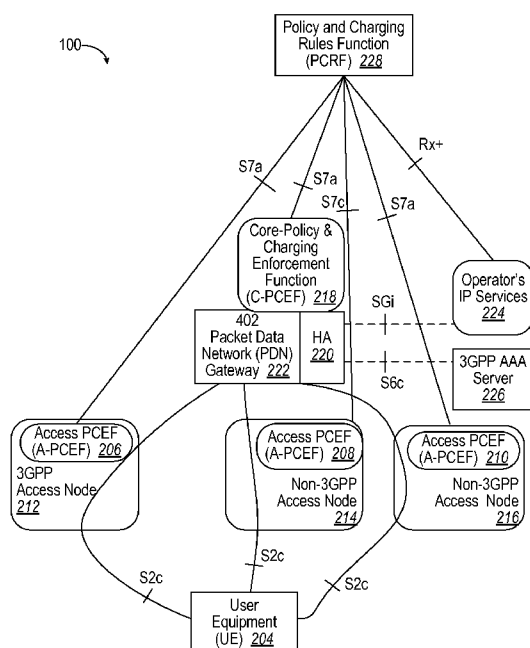


FIG. 2

(57) Abstract: In a wireless communication system having multiple access nodes, a home agent (HA) maintains home address (HoA) for a mobile node so that an IP session can be established. As the mobile node moves within a coverage area of various access nodes, the mobile node can establish a secure relationship with a local access gateway and thereby register a local IP address, referred to as a care-of-address (CoA), with the HA. Mobile IP protocol can be established so that multiple sessions can be conducted. In maintaining policy and charging control (PCC), HA informs a policy and charging rules function (PCRF), which in turn can then send the appropriate PCC rules (e.g., IP flows and related policies) to a policy and charging enforcement function (PCEF) for a particular access gateway. Coordination necessary to associate CoA and HoA can further include filter information as to application can run on a particular interface.



(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, 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))*