



(51) International Patent Classification:

H04W 84/18 (2009.01) *H04W 36/14* (2009.01)
H04W 88/02 (2009.01)

(21) International Application Number:

PCT/US2012/036838

(22) International Filing Date:

7 May 2012 (07.05.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12166697.8 3 May 2012 (03.05.2012) EP

(71) Applicant (for all designated States except US): **ITRON, INC.** [US/US]; 2111 North Molter Road, Liberty Lake, WA 99019 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **POPA, Daniel** [RO/FR]; c/o 2111 North Molter Road, Liberty Lake, WA 99019 (US). **MAINAUD, Bastien** [FR/FR]; c/o 2111 North Molter Road, Liberty Lake, WA 99019 (US). **MANI, Mehdi** [IR/FR]; c/o 2111 North Molter Road,

Liberty Lake, WA 99019 (US). **NGUYEN, Viet-Hung** [FR/FR]; c/o 2111 North Molter Road, Liberty Lake, WA 99019 (US). **STUBER, Michael, T. Garrison** [US/US]; c/o 2111 North Molter Road, Liberty Lake, WA 99019 (US).

(74) Agents: **DIVINE, David, A.** et al.; Lee & Hayes, PLLC, 601 W. Riverside Ave, Suite 1400, Spokane, WA 99201 (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, CL, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,

[Continued on next page]

(54) Title: EFFICIENT DEVICE HANDOVER/MIGRATION IN MESH NETWORKS

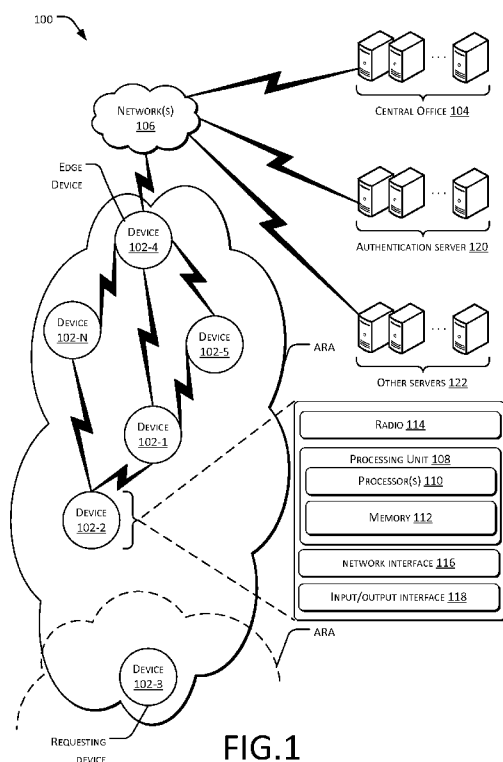


FIG.1

(57) **Abstract:** A new device is deployed to an area in which a network is provided. The new device may join the network using a single handshake via a neighboring device that is a member of the network and register with a network management system managing the network. If the network is overloaded or has limited bandwidth remaining, the network may refuse to admit the new device, or if the new device is isolated, may force some devices that are members of the network to leave or migrate from the network to allow the isolated device to join the network.



UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*