

(51) International Patent Classification:
H04L 12/28 (2006.01)(21) International Application Number:
PCT/US2011/062796(22) International Filing Date:
1 December 2011 (01.12.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/275,800 18 October 2011 (18.10.2011) US
2755331 20 October 2011 (20.10.2011) CA(71) Applicant (for all designated States except US): **ITRON, INC.** [US/US]; 2111 N. Molter Road, Liberty Lake, WA 99019 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VAN WYK, Hartman** [ZA/FR]; 5, Quai Albert Baillet, F-37270 Mont Louis sur Loire (FR). **POPA, Daniel** [FR/FR]; 55 Boulevard Saint Marcel, F-75013 Paris (FR).(74) Agent: **MOOSE, Richard, M.**; Dority & Manning, P.A., P O Box 1449, Greenville, SC 29602-1449 (US).

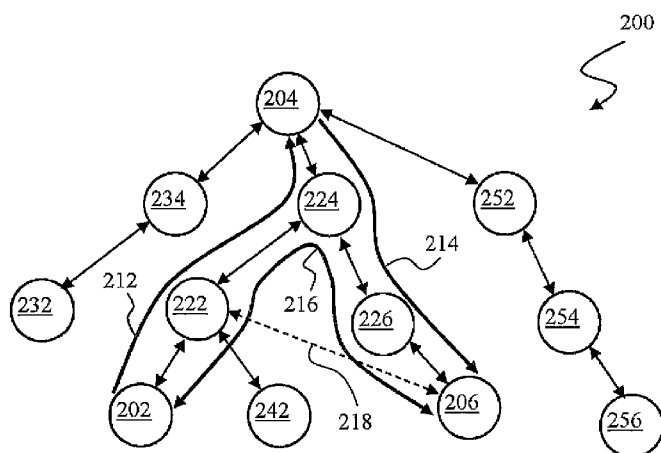
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, 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, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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))

(54) Title: PEER-TO-PEER COMMUNICATIONS IN AMI WITH SOURCE-TREE ROUTING



(57) Abstract: Methodologies are provided for establishing peer-to-peer communications between nodes in a tree structured network having plural nodes including a root node. A source node seeking to send a message to a destination node will first request a most advantageous available path from the source to the destination node, and then the root node (or possibly another node within the network that has additional storage resources) will provide a routing path to one or both of the source and destination nodes. Messages may then be sent between the source and destination nodes that may or may not include addressing information in the packet headers without having to request routing information again for additional messages between the same nodes.