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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 December 2009 (10.12.2009)

PCT

(10) International Publication Number
WO 2009/148410 A1

(51) International Patent Classification:
H04W 72/02 (2009.01) *H04B 7/26* (2006.01)
H04L 12/56 (2006.01) *H04W 40/02* (2009.01)
H04W 72/04 (2009.01) *H04W 72/12* (2009.01)

(21) International Application Number:
PCT/SG2009/000196

(22) International Filing Date:
4 June 2009 (04.06.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/059,591 6 June 2008 (06.06.2008) US

(71) Applicant *(for all designated States except US)*: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way #20-10, Connexis, Singapore 138632 (SG).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **WANG, Haiguang** [CN/SG]; c/o IPTO, Institute for Infocomm Research, 1 Fusionopolis Way #21-01, Connexis, South Tower, Singapore 138632 (SG). **ANG, Chee Wei** [SG/SG]; c/o IPTO, Institute for Infocomm Research, 1 Fusionopolis Way #21-01, Connexis, South Tower, Singapore 138632 (SG). **PATHMASUNTHARAM, Jaya Shankar** [MY/SG]; c/o IPTO, Institute for Infocomm Research, 1 Fusionopolis Way #21-01, Connexis, South Tower, Singapore 138632 (SG). **KONG, Peng Yong** [MY/SG]; c/o IPTO, Institute for Infocomm Research, 1 Fusionopolis Way #21-01, Connexis, South Tower, Singapore 138632 (SG). **GE, Yu** [CN/SG]; c/o IPTO, Institute for Infocomm Research, 1 Fusionopolis Way #21-01, Connexis, South Tower, Singapore 138632 (SG). **SU, Wen** [US/SG]; c/o IPTO, Institute for Infocomm Research, 1 Fusionopolis Way #21-01, Connexis, South Tower, Singapore 138632 (SG).

(74) Agent: **SCHIWECK, Wolfram**; Viering, Jentschura & Partner LLP, P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

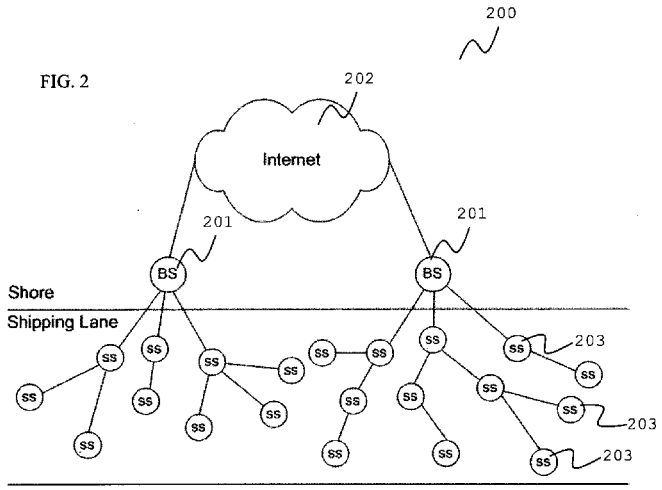
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,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

[Continued on next page]

(54) Title: COMMUNICATION DEVICES AND METHODS FOR SCHEDULING AND ALLOCATING OF RADIO RESOURCES AND COMMUNICATION DEVICES AND METHODS FOR ROUTING IN A COMMUNICATION NETWORK

FIG. 2



(57) Abstract: A method for a communication device to grant usage of a radio resource to a requesting communication device, comprising: receiving a request for the grant of usage of the radio resource by the requesting communication device, detecting whether usage of the radio has already been granted by another communication device, signalling a grant of the usage of the radio resource to the requesting communication device only if usage of the radio resource has not been granted by the other communication device.

WO 2009/148410 A1

Published:

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