

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 March 2009 (26.03.2009)

PCT

(10) International Publication Number
WO 2009/038545 A1

(51) International Patent Classification:
H04J 9/00 (2006.01) *H04Q 7/00* (2006.01)

(21) International Application Number:
PCT/SG2008/000357

(22) International Filing Date:
19 September 2008 (19.09.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/973,591 19 September 2007 (19.09.2007) 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): **SUBRAMANIAN, Ananth** [IN/SG]; IPTO, Institute for Infocomm Research, 21 Heng Mui Keng Terrace, Singapore 119613 (SG). **PENG, Xiaoming** [CN/SG]; IPTO, Institute for Infocomm Research, 21 Heng Mui Keng Terrace, Singapore

119613 (SG). **CHIN, Po Shin Francois** [SG/SG]; IPTO, Institute for Infocomm Research, 21 Heng Mui Keng Terrace, Singapore 119613 (SG).

(74) Agent: **GOH, Su Lin, Audrey**; Vierung, 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, 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,

[Continued on next page]

(54) Title: METHODS FOR NETWORK THROUGHPUT ENHANCEMENT

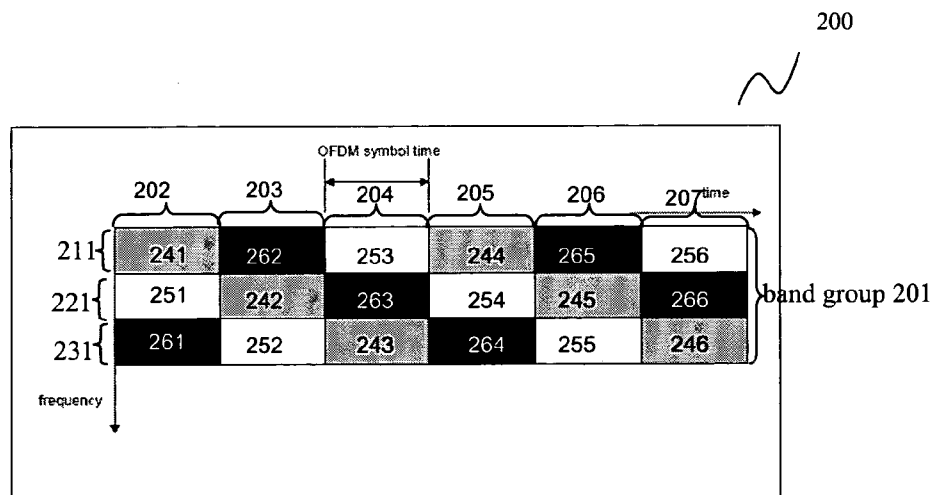


Figure 2

(57) Abstract: A method for transmitting OFDM symbols by a plurality of ad-hoc radio communication devices in an ad-hoc radio communication devices' group is provided. The method includes a first ad-hoc radio communication device of the ad-hoc radio communication devices' group transmitting a first OFDM symbol in a first frequency sub-range of a frequency range selected for transmission in accordance with a frequency hopping pattern, the frequency range comprising a plurality of frequency sub-ranges, and in the same transmission time period, a second ad-hoc radio communication device of the ad-hoc radio communication devices' group transmitting a second OFDM symbol in a second frequency sub-range of the frequency range, wherein the second frequency sub-range is different from the first frequency sub-range.

WO 2009/038545 A1



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).

Published:

— *with international search report*